2015-16
Undergraduate
Bulletin

The purpose of this bulletin is to provide information about CMU's academic programs available in the 2015-16 academic year and information concerning admissions, academic regulations and requirements, services available to students, and CMU staff and faculty.

Students are responsible for ensuring that all requirements for graduation have been met. It is expected that students will regularly discuss their plans of study with academic advisors. Central Michigan University reserves the right to modify curricula, rules, policies, fees, program requirements, and courses offered and other information contained in this Bulletin at any time, without notice. The provisions of this bulletin do not constitute a contract, express or implied.

CMU, an AA/EO institution, strongly and actively strives to increase diversity and provide equal opportunity within its community. [https://www.cmich.edu/about/Pages/Diversity-at-CMU.aspx](https://www.cmich.edu/about/Pages/Diversity-at-CMU.aspx)

Tobacco Free Policy: Central Michigan University (CMU) is committed to the health and wellness of its students, faculty, staff and visitors. The tobacco-free policy will ensure that every student, employee and visitor has a healthy living, learning, and working environment.
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See the Index for specific topics.
It is my honor to welcome you to Central Michigan University.

I often say that at the end of the day, CMU graduates leaders.

Your success is the university’s top priority. You will discover this when you choose to take advantage of the opportunities and education available for you here. As you give us your best effort, we’ll support you in gaining real-world experiences and developing career-related skills to guide your personal path to learning.

Founded in 1892, CMU continues its mission to proactively offer students enhanced learning experiences inside and outside the classroom.

We’ve demonstrated this in many ways. Our $95 million Biosciences Building currently under construction is the largest construction project in CMU history and will open for classes in January 2017. This facility and its programs will address escalating student demand and deliver state-of-the-art education and research opportunities.

If you need classes that fit into your busy schedule, CMU Global Campus offers online programs that U.S. News & World Report ranks among the best in the nation and the highest in Michigan. These rankings demonstrate that you will have access to the same top quality programs, faculty and student support systems that are available on CMU’s main campus.

No matter which academic programs you choose, you will learn from accomplished professors who are dedicated to engaging you in the university learning experience. Then, you soon will join the proud network of more than 212,000 CMU alumni worldwide.

Education has the power to transform lives, communities, nations and the world. On behalf of the entire university family, I welcome you to CMU and am excited to see how you will put your stamp on the world.

Best regards,

George E. Ross
President
## Board of Trustees

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<td>Mr. John D. Hurd, Petoskey</td>
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## Administration 2015

**George E. Ross** (2002) President; B.A., M.B.A., Michigan State University; Ph.D., University of Alabama

**David E. Ash** (2005) Interim Vice President for Research and Dean of Graduate Studies; B.S., Pennsylvania State University; Ph.D., University Of Pennsylvania

**Raymond L. Christie** (1998) Senior Vice Provost for Academic Administration; B.A., Saginaw Valley State University; M.B.A., Central Michigan University; Ph.D., Georgia State University

**Roger L. Coles** (1973) Interim Associate Vice Provost for Community Engagement; B.A., Western Washington State College; M.A., Ed.S., Central Michigan University; Ed.D., Columbia Pacific University

**Charles T. Crespy** (2010) Dean, College of Business Administration; B.U.S., M.A., M.B.A., Ph.D., University of New Mexico

**Ian R. Davison** (2008) Dean, College of Science and Technology; B.Sc., University of London; Ph.D., University of Dundee

**Claudia B. Douglass** (1976) Vice Provost for Academic Effectiveness; B.S., M.A.T., Indiana University; Ph.D., Purdue University

**Carolyn M. Dunn** (2014) Associate Vice President/Institutional Diversity; B.A., Humboldt State University; M.A., University of California - Los Angeles; Ph.D., University of Southern California

**John S. Fisher** (1975) Associate Vice President/Residences & Auxiliary Services; B.S., Central Michigan University; M.B.A., Central Michigan University; Ed.S., Central Michigan University

**Pamela S. Gates** (1987) Dean, College of Humanities and Social and Behavioral Sciences; B.S., M.A., Central Michigan University; Ph.D., Michigan State University

**Michael A. Gealt** (2013) Executive Vice President/Provost, B.A., Temple University; M.A., Harvard Graduate School of Education; Ph.D., Rutgers University

**David Wood Heeke Jr.** (2006) Associate Vice President/ Director Of Athletics; B.A., Albion College; M.A., Ohio State University

**Lori L. Hella** (1996) Associate Vice President/Human Resources; B.A., Alma College; M.S.A., Central Michigan University

**Mary Moran Hill** (1986) Associate Vice President/Financial Services & Reporting/Controller; BSBA, Central Michigan University

**Janet Hethorn** (2015) Dean, College of Communication and Fine Arts; B.A, B.A.Ed., Central Washington University; Ph.D., University of Minnesota

**Steven L. Johnson** (2012) Vice President for Enrollment and Student Services; A.B., Davenport University; B.B.A., Davenport University; M.A., Eastern Michigan University; M.LED., Harvard University

**George Kikano** (2015) Dean, College of Medicine; B.S., American University of Beirut; M.D., American University of Beirut

**Sherry S. Knight** (2012) Associate Vice President of University Communications; B.A.A., Central Michigan University

**Thomas J. Masterson, Jr.** (1999) Interim Dean/Health Professions, The H.H. & G.A. Dow College Of Health Professions; B.A., University Of Wisconsin At Madison; M.A., University Of Wisconsin At Madison; Ph.D., University Of Wisconsin At Madison

**Thomas J. Moore** (1988) Dean of Libraries; A.B., Belmont Abbey College; M.A., State University of New York at Binghamton; M.S.L.S., Syracuse University

**Dale-Elizabeth Pehrsson** (2012) Dean, College of Education and Human Services; B.S., University of the State of New York; M.Coun., Ed.D., Idaho State University

**Roger E. Rehm** (1975) Vice President/Technology/CIO; B.M., M.M., Cleveland Institute of Music

**Peter G. Ross** (1991) Vice President/Global Campus; B.A., Polytechnic Of Wales; M.S., Southern Illinois University At Carbondale; Ph.D., Southern Illinois University At Carbondale

**Manuel R. Rupe** (2009) Vice President and General Counsel; B.A, Kalamazoo College; J.D., DePaul University; Ph.D., Western Michigan University

**Anthony A. Voisin** (1985) Associate Vice President for Student Affairs; B.A.A., M.A., Central Michigan University

**Kathleen M. Wilbur** (2002) Vice President for Development and External Relations; B.A., Michigan State University, M.A., Michigan State University

**Barrie J. Wilkes** (1992) Vice President for Finance and Administrative Services; B.A., Michigan State University

*The year in parentheses indicates the date first employed by the University.*
Accreditation

Regional accreditation has been granted to more than 2,500 higher education institutions throughout the United States. This accreditation must be awarded by one of six organizations, each focusing on a specific region of the country. Accreditation is recognized by the United States Department of Education and federal financial aid is available to students attending schools that are accredited.

Central Michigan University was first accredited in 1915 by the North Central Association of Colleges and Schools (NCA) as Central State Teachers College and has been accredited since, with the exception of 1922-23. NCA accredited the first master’s program in 1957 and approved the offering of doctoral programs in 1992. The last comprehensive evaluation took place in 2005-2006, at which time CMU was reaccredited for 10 years. The current accrediting body is now known as The Higher Learning Commission (HLC) and is located at 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1411; www.hlcommission.org.

A number of CMU programs have been reviewed and accredited by one or more specialized accrediting organizations. The teacher education programs are accredited by the Teacher Education Accreditation Council (TEAC). CMU’s education programs leading to certification are also approved by the Michigan Department of Education. The College of Business Administration is accredited by the AACSB International - The Association to Advance Collegiate Schools of Business. This accreditation covers all undergraduate and masters degree programs in business offered by the College. AACSB International is the premier accrediting agency and service organization for business schools.

Other programs hold national accreditation by one or more of the following organizations: National Association of Schools of Art and Design; Commission on Accreditation of Athletic Training Education; Accreditation Commission for Audiology Education; Council on Academic Accreditation in Audiology and Speech-Language Pathology; American Chemical Society; Engineering Accreditation Commission of ABET (http://www.abet.org); National Environmental Health Science & Protection Accreditation Council (EHAC); National Council on Family Relations; Association of University Programs in Health Administration; Council for Interior Design Accreditation; Accrediting Council of Education in Journalism and Mass Communication; Liaison Committee on Medical Education, National Association of Schools of Music; Accreditation Council for Education in Nutrition and Dietetics; Council on Accreditation of Parks, Recreation, Tourism, and Related Professions; Commission on Accreditation in Physical Therapy Education; Accreditation Review Commission on Education for the Physician Assistant, Inc. (see page 92 regarding this accreditation); American Psychological Association; National Association of School Psychologists; National Association of Schools of Public Affairs and Administration; Council on Social Work Education; Commission on Sport Management Accreditation, Association of Technology Management and Applied Engineering. The National Association for the Education of Young Children (NAEYC) accredits CMU’s Human Growth and Development Pre-School lab.

‘Questions related to Psychology programs’ accredited status should be directed to:
Commission on Accreditation:
Office of Program Consultation and Accreditation
American Psychological Association
750 First Street, NE, Washington, DC 20002
Phone: 202-336-5979
E-mail: apaaccred@apa.org
Web: www.apa.org/ed/accreditation
CMU is also on the approved list of the American Association of University Women of Michigan.

Individuals who wish to review the accreditation documents should contact the office of Academic Effectiveness. Further information regarding specific program accreditation status is located at: https://www.cmich.edu/office_provost/AcademicAffairs/Accreditation/.

Student Learning Outcomes Assessment

To assure that Central Michigan University’s programs are strong and that students in them are attaining appropriate levels of knowledge, skills, beliefs and attitudes, the faculty and staff of Central Michigan University have developed ongoing processes to assess the learning and academic achievement of students in academic programs. Through this process, faculty carefully articulate program goals and learning outcomes while focusing experiences and assignments to prepare students to achieve those outcomes. An assessment plan is developed to measure progress toward the student learning outcomes, data are collected, and annual reports are developed and discussed by department faculty, chairs, and deans. An action plan is designed to drive program improvement.

Students participate in a wide range of assessment activities designed to provide useful information about the effectiveness of academic programs. From time to time during their courses of study, CMU students may be asked to demonstrate the breadth and depth of their knowledge, skill, beliefs and attitudes. We ask alumni their views about programs and their careers since graduation with regard to how well CMU’s programs have met their needs. In addition, we ask employers what qualities they desire and expect of CMU’s graduates. These efforts all combine to improve student learning and program quality and form the basis of our culture of continuous improvement in support of CMU’s commitment to excellence.
University Calendar

Tentative

**Summer Sessions**

**First Session (Six Weeks)**
- Classes Begin: May 18, May 16, May 15
- Registration - Drop/Add Ends: May 19, May 17, May 16
- Memorial Day Recess: May 25
- Classes End: June 25, June 23, June 22

**Second Session (Six Weeks)**
- Classes Begin: June 29, June 27, June 26
- Independence Day Recess: July 3, July 4, July 4
- Classes End: Aug. 6, Aug. 4, Aug. 3

**Fall Semester**
- Classes Begin: Aug. 31, Aug. 29, Aug. 28
- Registration - Drop/Add Ends: Sept. 4, Sept. 2, Sept. 1
- Labor Day Recess: Sept. 7, Sept. 5, Sept. 4
- Thanksgiving Recess: Nov. 25-30, Nov. 23-28, Nov. 22-27
- Classes End: Dec. 12, Dec. 10, Dec. 9
- Semester Ends: Dec. 19, Dec. 17, Dec. 16
- Commencement: Dec. 19, Dec. 17, Dec. 16

**Spring Semester**
- Classes Begin: Jan. 11, Jan. 9, Jan. 8
- Registration - Drop/Add Ends: Jan. 15, Jan. 13, Jan. 12
- Martin Luther King Jr. Day (no classes): Jan. 18, Jan. 16, Jan. 15
- Spring Recess: March 5-14, March 4-13, March 3-12
- No Classes: March 31 & April 1, March 30-31, April 5-6
- Classes End: April 30, April 29, April 28
- Examination Week: May 2-6, May 1-5, April 30-May 4
- Semester Ends: May 7, May 6, May 5
- Commencement: May 7, May 6, May 5

See [https://www.cmich.edu/ess/registrar/RegistrarCalendars/Pages/default.aspx](https://www.cmich.edu/ess/registrar/RegistrarCalendars/Pages/default.aspx) for updates to the calendar.
Central Michigan University is in its second century as an institution of higher learning focused on creating a caring and engaging environment for students to achieve success.

Central opened its doors on September 13, 1892, as the Central Michigan Normal School and Business Institute, with classes in teaching, business and stenography. At that time, few of the state’s teachers received any formal training in teaching, so school founders made teacher training their mission in founding the state’s second normal school.

Thirty-one students attended classes in second-floor rooms over an office on the corner of Main and Michigan streets in downtown Mount Pleasant. Most students at the time were eighth-grade graduates, attending the “Normal” for a few weeks or months prior to beginning their careers as teachers. Within the first two years, land was acquired and a $10,000 Normal School Building was constructed where Warriner Hall now stands.

In 1895, the Michigan State Board of Education assumed control of the school, which had grown to 135 students, renaming it Central Michigan Normal School. By 1918, the campus consisted of twenty-five acres with five buildings, one of which — Grawn Hall — is still in use, though substantially remodeled. Enrollment had more than tripled in ten years to 450 students. In 1925, a fire destroyed the school’s main building, and Warriner Hall was built to replace it.

Throughout this time, Central’s educational offerings also were growing more comprehensive. Students completing two years of schooling beyond high school began receiving their life teaching certificates in 1903. The school was accredited by the North Central Association for the first time in 1915. In 1918, the Bachelor of Arts degree was first awarded, followed by the Bachelor of Science in 1927. Central’s first graduate courses were offered in 1938.

Prior to World War II, the school’s name changed again — first to Central State Teachers College, then to Central Michigan College of Education — while enrollment rose to more than 1,800 students.

In the post-war years of 1949-59, the first large student residence halls were built, and Central’s first master’s degree was accredited by the North Central Association.

On June 1, 1959, with forty buildings standing on a 235-acre campus and an enrollment of 4,500 students, Central was renamed Central Michigan University, a designation that reflected growth in the complexity of the school’s academic offerings as well as its physical growth in the post-war period.

Through the 1960s, enrollment grew from 4,500 to more than 14,000 students. The enormous rate of growth caused significant change in the character of the university. Buildings were constructed on the land south of Preston Street, more than doubling the physical size of the campus.

The gift of Neithercut Woodland near Farwell and the establishment of CMU’s Biological Station on Beaver Island gave the university valuable facilities for specialized studies.

The number and variety of programs also grew. Programs in business and communications were developed and expanded. In 1971, the Institute for Personal and Career Development was established to provide academic programs for students with limited access to traditional forms of education.

The Bachelor of Arts degree marked CMU’s entry into training beyond the master’s degree level. In the early 1970s, CMU began offering doctoral programs in Psychology. Today, CMU provides more than 50 master’s degree programs, two specialist degrees, and 14 doctoral programs.

The technological advances of the 1980s spurred further program expansion, especially throughout the sciences. Other construction followed, including the Dow Science Complex, Applied Business Studies Complex and Student Activities Center. CMU’s Global Campus continued to grow as well, and the university offered its first online courses in 1994, offering courses to students around the world.

Central continued to expand with the addition of academic, athletic and residential buildings through the 1990s and the early 21st century. The modern Music Building was opened in 1997, followed by a $50 million expansion of Park Library in 2002, and the state-of-the-art Health Professions Building and several residence halls in 2003.

CMU’s newest buildings are the technologically advanced and LEED-certified Education and Human Services Building, which opened in 2009, and the CMU Events Center, which opened in December 2010 and also includes environmentally friendly features. In 2012, CMU opened its College of Medicine Building, where the first class of medical students began taking courses in summer 2013.

In September 2014, CMU broke ground for its four-story, 169,000-square-foot Biosciences Building. This $95 million facility is the largest capital project in CMU’s 120-plus year history. It will address escalating student demand and dramatically improve the quality and quantity of instructional learning and scientific research space. Forty research-active faculty members will be housed in the facility as well as classrooms and laboratories. Students will start taking classes in the new building beginning in January 2017.

And even though so much has changed over the last two centuries, Central Michigan University’s values today do not stray from those inscribed upon its seal in 1892: Sapientia, Virtus, Amicitia – wisdom, virtue, and friendship.

Presidents of the University

Charles F.R. Bellows  1982 - 1896
Charles McKenny  1896 - 1900
Charles T. Grawn  1900 - 1918
Eugene C. Warriner  1918 - 1939
Charles L. Anspach  1939 - 1959
Judson W. Foust  1959 - 1968
William B. Boyd  1968 - 1975
Harold Abel  1975 - 1985
Arthur E. Ellis  1985 - 1988
Edward B. Jakubauskas  1988 - 1992
Michael Rao  2000 - 2009
Kathleen M. Wilbur  2009 - 2010
George E. Ross  2010 - Present

The technological advances of the 1980s spurred further program expansion, especially throughout the sciences. Other construction followed, including the Dow Science Complex, Applied Business Studies Complex and Student Activities Center. CMU’s Global Campus continued to grow as well, and the university offered its first online courses in 1994, offering courses to students around the world.

Central Michigan University is in its second century as an institution of higher learning focused on creating a caring and engaging environment for students to achieve success.

Central opened its doors on September 13, 1892, as the Central Michigan Normal School and Business Institute, with classes in teaching, business and stenography. At that time, few of the state’s teachers received any formal training in teaching, so school founders made teacher training their mission in founding the state’s second normal school.

Thirty-one students attended classes in second-floor rooms over an office on the corner of Main and Michigan streets in downtown Mount Pleasant. Most students at the time were eighth-grade graduates, attending the “Normal” for a few weeks or months prior to beginning their careers as teachers. Within the first two years, land was acquired and a $10,000 Normal School Building was constructed where Warriner Hall now stands.

In 1895, the Michigan State Board of Education assumed control of the school, which had grown to 135 students, renaming it Central Michigan Normal School. By 1918, the campus consisted of twenty-five acres with five buildings, one of which — Grawn Hall — is still in use, though substantially remodeled. Enrollment had more than tripled in ten years to 450 students. In 1925, a fire destroyed the school’s main building, and Warriner Hall was built to replace it.

Throughout this time, Central’s educational offerings also were growing more comprehensive. Students completing two years of schooling beyond high school began receiving their life teaching certificates in 1903. The school was accredited by the North Central Association for the first time in 1915. In 1918, the Bachelor of Arts degree was first awarded, followed by the Bachelor of Science in 1927. Central’s first graduate courses were offered in 1938.

Prior to World War II, the school’s name changed again — first to Central State Teachers College, then to Central Michigan College of Education — while enrollment rose to more than 1,800 students.

In the post-war years of 1949-59, the first large student residence halls were built, and Central’s first master’s degree was accredited by the North Central Association.

On June 1, 1959, with forty buildings standing on a 235-acre campus and an enrollment of 4,500 students, Central was renamed Central Michigan University, a designation that reflected growth in the complexity of the school’s academic offerings as well as its physical growth in the post-war period.

Through the 1960s, enrollment grew from 4,500 to more than 14,000 students. The enormous rate of growth caused significant change in the character of the university. Buildings were constructed on the land south of Preston Street, more than doubling the physical size of the campus.
Central Michigan University is among the nation’s 100 largest public universities, with more than 19,000 students on its Mount Pleasant campus. CMU also has nearly 9,000 students enrolled online and at more than 50 locations across North America, including 16 centers and sites across the state of Michigan.

CMU offers academic programs at the undergraduate, master’s, specialist and doctoral levels, including nationally recognized programs in entrepreneurship, journalism, music, audiology, teacher education, psychology and physician assistant medical and health sciences. CMU also established a College of Medicine in 2012, which has already been recognized across the nation for its life sciences program and prime location.

With accomplished professors, there are countless opportunities for students to engage in applied research in world-class facilities. CMU is committed to providing students with a superior learning environment and global perspective to compete in an increasingly complex world.

CMU’s impact and influence extend far beyond its main campus into the state, nation and world.

- CMU has been nationally recognized for its Leadership Institute and academic minor in leadership, the first one to be offered by a Michigan university.
- The award-winning Honors Program administers the prestigious Centralis Scholarship Program and oversees approximately two hundred faculty-mentored honors undergraduate research projects annually.
- Thousands of students work through the Mary Ellen Brandell Volunteer Center to help others locally, nationally and around the world. More than 12,700 CMU students (68 percent) volunteer each year. This exceeds the national average of 59 percent for all universities.
- CMU ranks 14th in the country for the number of Native Americans earning baccalaureate degrees and 15th for the number of African Americans earning graduate and professional degrees.
- CMU is the nation’s foremost university authorizer of charter public schools, with 64 schools educating more than 30,000 students in grades K-12.
- CMU academic residential halls enhance learning and community in business, education and human services, health professions, science and technology, music, honors, leadership and public service.
- Thirteen new academic, athletic and residential buildings have been built on CMU’s campus in the last thirteen years, including the College of Medicine Building, which opened in September 2012; the Graduate Housing Apartments, which opened in July 2013; and the Biosciences building, which is under construction.
- CMU is classified by the Carnegie Foundation for the Advancement of Teaching as a Doctoral Research University and currently provides more than 70 graduate programs at the master’s, specialist, and doctoral levels. CMU also provides 10 Accelerated Master’s Degree Programs, which allow undergraduate students at CMU to reduce the total number of credits required to complete their undergraduate and graduate degrees by applying up to 12 credit hours at the 500-600 level toward graduation requirements of both degree programs.

Cutting-edge Student Research

Students have helped conduct cutting-edge research in Parkinson’s and Alzheimer’s diseases, the creation of biofuels and longer-lasting batteries, and developing improved methods of water purification. In addition, through the university’s Institute for Great Lakes Research, CMU researchers acquired the only unmanned helicopter in Michigan equipped with a hyperspectral camera to advance research imaging of Great Lakes wetlands—the world’s largest group of freshwater lakes.

Culture, Community, Resources

CMU is located in Mount Pleasant, Michigan, a classic college town at the heart of central lower Michigan. Mount Pleasant serves as the county seat for Isabella County and is home to 26,000 of the county’s more than 70,000 people and growing. Mount Pleasant offers a blend of natural features, family attractions and small-town life complemented by university culture. Friends, family members, siblings and visitors are always welcome to come explore CMU’s park-like campus or to attend plays, concerts, speeches, athletic events, library exhibits, summer camps and much more. Features include:

Culture and Entertainment. University Theatre, University Events, the School of Music and the student-run Program Board offer year-round world-class plays, entertainment and other exciting activities. With more than 94,000 square feet of available space, the Events Center serves the cultural and entertainment needs of the campus and community, hosting a wide variety of events, from commencement to concerts and speaking engagements to business expos.

Athletics. Central Michigan University competes in 7 men’s and 11 women’s sports with the addition of women’s golf and women’s lacrosse. CMU’s NCAA Division I student-athletes are accomplished both on the field and in the classroom. CMU has won more than 80 MAC championships in 15 different sports and the football program has participated in a postseason bowl game six of the past nine years. The Chippewas are regular contenders for the MAC’s award for the highest institutional GPA and CMU’s soccer and field hockey programs have had unprecedented success in the classroom as both squads have posted the nation’s highest GPA among all NCAA Division I programs in the past few seasons. CMU won the league’s inaugural Cartwright Award for overall program excellence in 2009.

Charles V. Park Library. Central Michigan University library houses more than one million print volumes on 33 miles of electronically movable shelving, but it doesn’t take a personal visit to acquire these resources. The library’s Global Campus Library Services is a well-established model of extended electronic access for higher education. The Clarke Historical Library, located along the main corridor of the library, regularly displays items from its extensive list of historical holdings.

Tours of campus are available weekdays and many Saturdays and are arranged through the Admissions Office. Call 989-774-3076 or 888-292-5366.
Vision, Mission, Values, and Priorities

Vision Statement

Central Michigan University, an inclusive community of scholars, is a national leader in higher education inspiring excellence and innovation.

Adopted by the Board of Trustees, December 6, 2012

Mission Statement

At Central Michigan University, we are a community committed to the pursuit of knowledge, wisdom, discovery, and creativity. We provide student-centered education and foster personal and intellectual growth to prepare students for productive careers, meaningful lives, and responsible citizenship in a global society.

Adopted by the Board of Trustees, December 2, 2010

Core Values

To achieve our mission, we adhere to the core values of integrity, respect, compassion, inclusiveness, social responsibility, excellence, and innovation.

Adopted by the Board of Trustees, December 2, 2010

Definition of Mission Statement Core Values

• **Integrity**: A steadfast adherence to the principles of honesty, trustworthiness, reliability, transparency, and accountability.

• **Respect**: Consideration of the rights, opinions, and ideas of others in a civil, fair, and thoughtful manner.

• **Compassion**: Empathy, concern and support for the needs and challenges of others.

• **Inclusiveness**: Conducting the activities of the university in a way that embraces shared governance, inspires tolerance, and welcomes diversity into our community.

• **Social Responsibility**: Fostering citizenship to promote the public good, environmental sustainability, global understanding, and informed political engagement.

• **Excellence**: Expectation that all activities are conducted with attention to quality and the highest levels of academic and professional standards.

• **Innovation**: Supporting progressive and meaningful research, creative activity, and teaching. Addressing challenges and issues from multiple perspectives to solve problems and advance knowledge.

Strategic Priorities

**Priority 1: Student Success**

Challenge our students to develop the knowledge, skills, and values to be successful and contributing global citizens.

**Priority 2: Research and Creative Activity**

Promote excellence in research and creative activities.

**Priority 3: Quality Faculty and Staff**

Foster a vibrant, innovative, intellectual community of high quality faculty and staff who value inclusiveness, diversity, shared governance, and respect.

**Priority 4: Community Partnerships**

Develop and strengthen learning experiences through collaboration with local, national, and global partners to enhance cultural awareness, the natural environment, health and wellness, and local economies.

**Priority 5: Infrastructure Stewardship**

Align university resources and infrastructures to support the university’s mission and vision.

Adopted by the Board of Trustees, December 6, 2012

The Enduring Philosophy

In its 120 years as an institution of higher learning, Central Michigan University has supported a liberal arts education as the common base for all degree programs. In the words of a founder, “Education in its best and truest sense is a much larger thing than any or even all of the so-called practical uses that may be made of it. Accordingly...the school shall stand squarely and strongly for the larger idea, that education is a rightful heritage of the human soul...Breadth and liberality of scope will always prove the better investment in the long run.”
Undergraduate Degree Offerings
Bachelor of Applied Arts
Bachelor of Arts
Bachelor of Fine Arts
Bachelor of Individualized Studies
Bachelor of Music
Bachelor of Music Education
Bachelor of Science
Bachelor of Science in Athletic Training
Bachelor of Science in Business Administration
Bachelor of Science in Computer Engineering
Bachelor of Science in Education
Bachelor of Science in Electrical Engineering
Bachelor of Science in Engineering Technology
Bachelor of Science in Mechanical Engineering
Bachelor of Social Work

Undergraduate Certificates:
An Undergraduate Certificate signifies completion of certain prescribed coursework. Certificates are offered in African and African Diaspora Studies, American Indian Studies, Creative Writing, Citizenship Engagement, Cultural Competency, Cybersecurity, East Asian Studies, European Studies, Fermentation Science, Human Geography, Latin American and Latino Studies, and Middle East and Islamic Studies. (Some programs are offered through Global Campus only)

Accelerated Master’s Degree Program
The Accelerated Master’s Degree Program (AMDP) allows students to reduce the total number of credits required to complete their undergraduate and graduate degrees by applying up to 12 credits (500 and 600 level courses) towards graduation requirements on both degree programs. Generally, courses required on the undergraduate major may not be counted on the graduate program. Students must enroll for the courses at the graduate level and may not be enrolled in more than 15 credit hours (graduate and undergraduate combined) per semester. Not all programs offer the AMDP. If you are admitted to an AMDP, your financial aid may be affected. Contact the Office of Scholarships & Financial Aid for information (989-774-3674 or cmuosfa@cmich.edu).

Administration* (MSA - Any concentration for Global Campus Integrated Leadership Studies Majors only)
Apparel Product Development and Merchandising Technology
Business Administration (MBA): Accounting Concentration
Computer Science
Economics
Engineering
Geographic Information Science
Higher Education Administration
History
Mathematics
Political Science
Psychology, Experimental
Spanish

Graduate Degrees
See the next page.

Colleges of the University
College of Business Administration
School of Accounting
Department of Business Information Systems
Department of Economics
Department of Entrepreneurship
Department of Finance and Law
Department of Management
Department of Marketing and Hospitality Services Administration

College of Communication and Fine Arts
Department of Art and Design
School of Broadcast and Cinematic Arts
Department of Communication and Dramatic Arts
Department of Journalism
School of Music

College of Education and Human Services
Department of Counseling and Special Education
Department of Educational Leadership
Department of Human Environmental Studies
Department of Recreation, Parks, and Leisure Services Administration
Department of Teacher Education and Professional Development

College of Graduate Studies
See next page for a list of programs.

The Herbert H. and Grace A. Dow College of Health Professions
Department of Communication Disorders
School of Health Sciences
School of Rehabilitation and Medical Sciences
Department of Physical Education and Sport

College of Humanities and Social & Behavioral Sciences
Department of English Languages and Literature
Department of Foreign Languages, Literatures, and Cultures
Department of History
Department of Military Science
Department of Philosophy and Religion
Department of Political Science and Public Administration
Department of Psychology
Department of Sociology, Anthropology, and Social Work

College of Medicine
College of Science and Technology
Department of Biology
Department of Chemistry and Biochemistry
Department of Computer Science
Department of Earth and Atmospheric Sciences
School of Engineering & Technology
Department of Geography
Department of Mathematics
Department of Physics

Global Campus
See the 2015-2016 Global Campus Bulletin.
David Ash, Interim Vice President for Research and Dean of Graduate Studies
104 Foust; 989-774-GRAD; E-mail: orgs@cmich.edu; Web page: www.grad.cmich.edu
Central Michigan University enrolls graduate students from all areas of the United States and from around the world. Students interested in graduate degree programs are encouraged to visit the College of Graduate Studies website at www.grad.cmich.edu. Students may also send an email to orgs@cmich.edu or call 989-774-4723 for more information. Graduate course descriptions and detailed information on graduate programs are available in the Graduate Bulletin.

Concurrent Enrollment (Undergraduate and Graduate)
Undergraduate students who have been admitted to an Accelerated Master's Degree Program or who have no more than twelve undergraduate credits remaining to complete their bachelor's degree may apply for Concurrent Admission, which enables students to register for graduate credit for the semester or session in which requirements will be completed for their bachelor's degrees. Concurrent admission is granted only to those who would qualify for admission to graduate study at the end of the concurrent session.

College of Graduate Studies

Master of Science in Administration
- MSA Acquisitions Administration
- MSA Engineering Management
- MSA General Administration
- MSA Health Services Administration
- MSA Human Resources Administration
- MSA Information Resource Management
- MSA International Administration
- MSA Leadership
- MSA Philanthropy and Fundraising
- MSA Public Administration
- MSA Recreation and Park Administration (online program)
- MSA Research Administration
- MSA Sport Administration

Graduate Certificates
- Acquisitions Administration
- Engineering Management
- General Administration
- Health Services Administration
- Human Resources Administration
- Information Resource Management
- International Administration
- Leadership
- Philanthropy and Fundraising
- Public Administration
- Recreation and Park Administration
- Research Administration

College of Business Administration
- MBA Business Administration (some areas offered online)
- Graduate Certificate in Enterprise Systems
- Graduate Certificate in Logistics Management

Department of Business Information Systems
- MS Information Systems
- Graduate Certificate in Cybersecurity

Department of Economics
- MA Economics

College of Communication and Fine Arts

School of Broadcast and Cinematic Arts
- MA Broadcast and Cinematic Arts: Electronic Media Mgt.
- MA Broadcast and Cinematic Arts: Electronic Media Prod.
- MA Broadcast and Cinematic Arts: Electronic Media Studies
- MA Broadcast and Cinematic Arts: Film Theory & Criticism

Department of Communication and Dramatic Arts
- MA Communication

School of Music
- MM Composition
- MM Conducting
- MM Music Education
- MM Performance

College of Education and Human Services

Interdisciplinary and Interdepartmental Programs
These programs are offered online:
- MA Education: Community College
- MA Education: Curriculum and Instruction
- MA Education: Guidance and Development
- MA Education: Integrated Science
- MA Education: Training and Development

Department of Counseling and Special Education
- MA Counseling: School Counseling
- MA Counseling: Professional Counseling
- MA Special Education: The Master Teacher
- Graduate Certificate in Autism

Department of Educational Leadership
- MA Educational Leadership
- MA Higher Education Administration
- MA Teacher Leadership (online program)
- EdS General Educational Administration
- EdD Educational Leadership (online program)
- Ph.D. Educational Leadership
- Graduate Certificate in College Teaching

Department of Human Environmental Studies
- MS Apparel Product Development & Merchandising Technology
- MS Nutrition & Dietetics
- Graduate Certificate in Nutrition and Dietetics

Department of Teacher Education & Professional Development
- MA Early Childhood Education
- MA Educational Technology
- MA Reading and Literacy K-12
- DET Educational Technology
- Graduate Certificate in Educational Technology

(continued)
The Herbert H. and Grace A. Dow
College of Health Professions

Department of Communication Disorders
MA  Speech-Language Pathology
AuD  Audiology

Department of Health Sciences
MA  Exercise Physiology
MPH  Public Health
DHA  Health Administration (online program)
Graduate Certificate in Health Systems Leadership
Graduate Certificate in International Health

Department of Physical Education & Sport
MA  Sport Administration

School of Rehabilitation and Medical Sciences
MS  Physician Assistant
DPT  Physical Therapy

College of Humanities and Social &
Behavioral Sciences

Interdisciplinary and Interdepartmental Programs
MA  Cultural Resource Management
MA  Humanities
MS  Neuroscience
Ph.D.  Neuroscience
Graduate Certificate in Cultural Resource Management

Department of English Language and Literature
MA  English Language & Literature
MA  English Language & Literature: Creative Writing
MA  English Language & Literature: Children’s/Young Adult Literature
MA  Composition & Communication
MA  Teaching English to Speakers of Other Languages

Department of Foreign Languages, Literatures and Cultures
MA  Spanish

Department of History
MA  History
MA  History - Joint
PhD  History - Joint
Graduate Certificate in European History
Graduate Certificate in Modern History
Graduate Certificate in United States History

Department of Political Science and Public Administration
MA  Political Science
MPA  Public Administration
MPA  Public Administration: Public Management
MPA  Public Administration: State & Local Government
Graduate Certificate in Professional Development in Public Administration
Graduate Certificate in Citizen Engagement

Department of Psychology
MS  Experimental Psychology
MA  Industrial/Organizational Psychology
SPsyS  Psychological Services
PhD  Clinical Psychology
PhD  Applied Experimental Psychology
PhD  Industrial/Organizational Psychology
PhD  School Psychology

College of Medicine
MD  Medicine

College of Science and Technology
Interdisciplinary and Interdepartmental Programs
MAT  Integrated Science
PhD  Earth and Ecosystem Science
PhD  Science of Advanced Materials
Graduate Certificate in Data Mining

Department of Biology
MS  Biology
MS  Biology - Conservation

Department of Chemistry and Biochemistry
MS  Chemistry
MA  Teaching Chemistry: College

Department of Computer Science
MS  Computer Science

School of Engineering and Technology
MS  Engineering

Department of Geography
MS  Geographic Information Science

Department of Mathematics
MA  Mathematics
PhD  Mathematics: Teaching College Mathematics

Department of Physics
MS  Physics

For a list of accelerated degree programs, see page 11.
Students who earn credit through the Prior Learning Assessment Program must complete five (5) semester hours of credit from CMU before the prior learning credits will be recorded on their transcripts. On-campus undergraduate students may also apply for Prior Learning Assessment Credit.

Planned Experiences

Planned experiences, available to undergraduate students, provide an individualized learning experience which synthesizes the theoretical and practical in one learning context. The planned experience is a student-formulated project on an approved topic (or topics) in the student’s area of study. The project integrates experience with principles and theories in the field. Projects are formulated with the assistance of an advisor, and both the proposal and the final form are reviewed by the Undergraduate Extended Degree Programs Council.

CMU Online Courses

Online course delivery provides each student with a virtual classroom where lectures, multimedia study materials and class discussion are all provided using the latest technology, over the internet. Interactive online tools offer students the opportunity to connect with faculty and peers to discuss course content in cyberspace. Online courses still have specific start and end dates and assignment/exam due dates. Careful review of the course syllabus prior to the enrollment of a course will provide these dates. Questions regarding online courses should be directed to staff at cmuonline@cmich.edu or 989-774-1129. See Online Courses in the Index for more information.

Online Learning Environment

To ensure success in online classes, CMU encourages students to familiarize themselves with the online learning environment prior to enrolling in CMU Online courses. Preview a sample online class, run a diagnostics check on your computer and take the Online Learning Assessment on our website at: http://global.cmich.edu/cmuonline/assessment/.

Drop and Withdrawal Policy for Online Courses

All CMU Online courses start on a Monday and end on a Friday. Students are encouraged to frequently and consistently log into their online course, ideally every day. Tuition refunds requested prior to the start date of the course shall be made in full. The start time for CMU Online courses is 12:01 a.m. on the first day of class. Drop/withdrawal requests received after that will be assessed a $50 fee. Each new week for an online class begins on Monday at 12:01 a.m. and ends on the following Sunday at 12:00 midnight. The amount of tuition refunded is based on the week the request is received within. Holidays do not have any effect on this definition of a week. Students may not withdraw after the midpoint of the course.

Students who cease/fail to attend (virtual or otherwise) and have not formally withdrawn from the course will receive a grade of “E.” A charge-back for financial aid may be incurred based on student’s last date of academic participation in the class. See Scholarships and Financial Aid section of this Bulletin for additional information.
Faculty and Advisors

The distinctive character of flexible offerings and course scheduling by Global Campus attracts recognized leaders in a number of fields who serve as instructors and advisors. Instruction is provided by university faculty and by faculty drawn from universities throughout the nation. Instructors are also selected from the executive ranks of government, business and industry and are individually appointed on a contract basis for each class.

In addition to its full-time advising staff, Global Campus specially selects academic advisors from its pool of qualified instructors, all of whom are approved to teach based on the same rigorous standards applied to campus faculty. Academic advisors are official representatives of the university. Advisors work closely with students to create an individual program plan each student must use as a guide to attain his or her academic goals.

Library Services

Global Campus makes the extensive CMU libraries’ resources available to students and faculties through its Global Campus Library Services (GCLS) Program.

GCLS is staffed with professional librarians, support staff and student assistants who work closely with Global Campus students and faculty to meet their information needs. GCLS librarians provide reference assistance including direction to appropriate materials for course research assignments; explanation of the use of library print materials and electronic databases and answers to specific reference questions. Librarians also visit classes to explain GCLS and to provide instruction in research methods.

GCLS provides toll-free telephone and fax numbers, e-mail and fax addresses which enable students to request the loan of any circulating book in the library, photocopies of articles in journals held in the library, and reference assistance from the librarians. Requests for specific materials are processed with the goal of meeting a 24-hour turnaround time from the time the request is received until it is ready to be mailed from campus.

Servicemember’s Opportunity College

Central Michigan University recognizes the unique nature of the military lifestyle and is committed to ensuring the transfer of relevant credits, scheduling courses at convenient times and locations, offering online courses, and providing credit opportunities for prior learning experiences and military education relevant to the degree. In keeping with these goals, CMU supports the Servicemember’s Opportunity College (SOC) Consortium, an organization jointly developed by educational representatives of each of the Armed Services, the Office of the Secretary of Defense and a consortium of leading institutions of higher education, to provide flexibility to service members, their families, and veterans seeking college degrees.

Bulletin

Students participating in programs offered through Global Campus should refer to the current Global Campus Bulletin for regulations and fees.
Carolyn M. Dunn, Associate Vice President
Warriner 319; 989-774-3700;

The Office for Institutional Diversity (OID) serves a leading role in promoting an institutional culture that values and supports diversity and inclusion. Historical legacies on inclusion and exclusion have determined pathways to education that have served to be closed to many potential students, staff, and faculty. Diversity within the academic and educational setting reflects a community that is reflective of all aspects of society, so that all community members can share in our differences and our similarities a part of our life-long learning process. We prepare our students through leadership development the skills necessary for impacting an increasingly more global society that preserves knowledge from all communities that is inherent to prepare graduates for a more complex and diverse society. Through the following offices and services, the OID offers campus-wide programs and activities for students, faculty, and staff to enhance their cultural competence and global perspectives. In addition, the OID monitors progress of CMU’s academic, social, and cultural diversity programs and initiatives, including the Strategic Plan for Advancing Diversity.

The main campus offices, which report to the Associate Vice President for Institutional Diversity, are located in the Center for Inclusion and Diversity (CID - Bovee University Center 108; 989-774-3711). The CID includes a conference room and a space for exhibits and receptions. Students are encouraged to visit the Center during the week to learn about program offerings and view the exhibits.

For the following departments, go to the website above and click on Diversity Units.

Multicultural Academic Student Services
The Office of Multicultural Academic Student Services (MASS) provides assistance to students with academic, personal, social concerns and cultural support. To empower and retain students, the staff provides and enhances a campus environment where diversity is understood and celebrated. The office coordinates student activities and retention services and serves as a representative voice for CMU’s students of color. The office works closely with diverse student groups in planning and implementing academic, social, and recreational activities. Programs and scholarships offered through the office include cultural celebrations, the Multicultural Award of Distinction, Lloyd M. Cofer and Multicultural Advancement scholarships. The office also offers mentoring through the Men About Change program along with the Women’s Initiative of Strength and Hope (WISH) program. Additional objectives include establishing strong working relationships with existing university offices and departments on matters regarding educational policies and procedures, developmental program planning and evaluation, and student services relating to minorities. Contact information: Bovee University Center 112; 989-774-3945; e-mail: mass@cmich.edu.

Office of Diversity Education
The Office of Diversity Education’s (ODE) mission is to assist in building a more inclusive and respectful community on campus. The programs coordinated through ODE provide opportunities for learning about the diversity of people and cultures represented at CMU, and help students prepare for a more diverse and interconnected world. ODE coordinates the Intergroup Dialogue and Recognition of Institutional Diversity Units.

Office for Institutional Diversity

Native American Programs
The cultural and social programs offered by the Native American Programs office allow the campus community to come together to learn about Native American people and share in a rich culture and traditions. The office serves several purposes. It attracts American Indian students to CMU and helps them achieve their educational goals; it serves as a liaison to Michigan’s Indian communities to determine their educational needs; and it sponsors programs that provide opportunities for everyone to experience native cultures through activities, organizations and events. Contact Information: Bovee University Center 110C; 989-774-2508; e-mail: NAP@cmich.edu.

The Office of Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) Services
The purpose of the Office of Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) Services is to coordinate programs, to participate in educational forums to raise awareness of LGBTQ concerns, and to meet the needs of CMU’s LGBTQ community. Programs address issues of heterosexism, homophobia, transphobia, coming out and other issues related to the experience of sexual orientation and gender identity/gender expression. The office also keeps a resource file of educational, social, and political articles and brochures of interest to LGBTQ individuals and the university community. Contact information: Bovee University Center 110A; 989-774-3637.

MI GEAR UP Program
MI GEARUP (Michigan Gaining Early Awareness & Readiness for Undergraduate Programs) is a grant awarded to Central Michigan University. It is funded by the King-Chavez-Parks Initiative Workforce Development Agency. The program facilitates student tutoring, mentoring, and offers workshops on college preparation, and financial aid. It also assists schools and teachers to better prepare middle and high school students for college studies. The MI GEAR UP grant serves over 1200 students in six schools with the goal of providing information and encouraging students to graduate and go on to college prepared to succeed. MI GEAR UP coordinates with CMU departments to provide on campus experiences for project students. CMU students gain valuable mentoring, volunteer and hands-on experience working with MI GEAR UP student programs. Contact information: Bovee University Center 108-B; 989-774-1585; e-mail: gearup@cmich.edu.

Pathways
Pathways (Pathways to Academic Student Success) is a grant awarded to Central Michigan University. It is funded by the King-Chavez-Parks Initiative Workforce Development Agency. The program will serve a cohort of 150 low-income and/or first generation CMU students each year with the goal of achieving increased grade point averages, advancement of academic standing, increased acceptance into majors and increased graduation rates. Pathways will coordinate with campus partners to provide academic guidance, leadership development and mentoring. Contact information: Center for Inclusion and Diversity, Bovee University Center 108A; 989-774-1585.
Upward Bound
The CMU Upward Bound is a federally funded pre-college program through the U.S. Department of Education and is designed to help economically disadvantaged and/or first generation college-bound students complete high school and prepare for college. CMU is the host institution for Upward Bound. The program intent is to encourage youth to complete high school and enter post-secondary education. Resource and assistance is offered in all aspects of the college admissions process, including, but not limited to, financial aid and scholarships completion, college applications and visits, as well as academic support workshops. It is here that students are offered free tutoring in all subjects. Weekly programs that highlight education, career, and social awareness are provided to open the eyes, hearts, and minds of the students. The Upward Bound motto is “Where Preparation Meets Opportunity!” We strive to give each student opportunities to allow them to be prepared for every opportunity and assist them in their ambitions toward a college education. Contact information: 313-215-0738.

Student Transition Enrichment Program (STEP)
The Student Transition Enrichment Program (STEP), a MiCUP (Michigan College University Partnership) grant funded by the King-Chavez-Parks Initiative Workforce Development Agency, provides support services for first-generation and/or Pell Grant-eligible students who transfer into Central Michigan University. Programs and events include: Academic Advising, Summer Conference, CMU Campus Visits, and Academic Workshops. The goal of STEP is to promote knowledge of the transfer process, academic programs and resources at CMU; build relationships; and develop academic, self-confidence, and career planning skills. Contact information: Bovee University Center 110C; 989-774-2508; e-mail: micup-step@cmich.edu.

Office of International Affairs

International Affairs
Ronan Hall 330; 989-774-4308; www.oia.cmich.edu

Mission
The mission of the Office of International Affairs (OIA) is to support the University’s central purpose of educating students who will be responsible global citizens and effective world leaders. OIA provides campus-wide leadership in coordinating, planning and developing international programs and initiatives. OIA’s role includes international student recruitment, undergraduate international student and English language student admissions, services to international students and faculty, and coordination of linkage agreements with universities and other educational institutions outside of the United States.

To achieve its goals, OIA:
1. develops recruiting strategies to increase the number of international students studying at CMU, as well as the cultural diversity of the international student population;
2. provides comprehensive support services to international students and faculty so that they will have a smooth transition to CMU life and a successful stay at CMU;
3. enhances the level of international understanding among members of the CMU community by sponsoring, organizing, and developing international programs that are academically, culturally, and socially beneficial; and
4. maintains an up-to-date CMU International Education Information Clearinghouse.

The OIA serves as a resource to the international community at Central Michigan University by providing orientation services for new international students, serving as an advocate on campus and providing support for its needs. The Office assists international students, scholars and faculty in understanding immigration regulations and maintaining valid legal status in the United States. The OIA is responsible for maintaining university compliance with federal reporting regulations for international students and scholars.

For more information
To see more information on any of these programs, see cmich.edu/office_provost/OID.
CMU’s Office of Study Abroad offers over 150 approved study abroad programs in more than 50 countries. Study abroad provides students with opportunities to expand their view of the world and prepare them for a career in the global workforce. International study enhances students’ education in many ways; students have an opportunity to meet people with diverse cultural backgrounds, to gain global knowledge that is highly valued by modern employers, and to develop a sense of independence and self-confidence that leads to a lifetime of success.

There are a variety of programs available to suit different needs. Students can study abroad for an academic year, a semester, a summer or participate in a short-term study abroad program led by CMU faculty. Students wishing to study a foreign language have a significant number of options available that include intensive language programs, academic subjects in a foreign language, as well as an option to learn languages not taught at CMU. Knowledge of a foreign language is not a requirement to study abroad because there are many programs around the world that offer courses taught in English. For the full list of options available, please visit the Office of Study Abroad website at www.studyabroad.cmich.edu.

A study abroad advisor will help students choose an appropriate program to match their budget and academic needs. All students participating in a CMU approved program will receive academic credit for their program. Students can get all their courses pre-approved by their academic department, so they will know in advance the course credits that will be awarded by CMU. With careful planning, students can study abroad for a semester or even a year and still graduate on schedule. Students must be in good standing at CMU and have a GPA of 2.5 or higher to apply.

Studying abroad does not have to be expensive. Students looking for affordable programs can choose from a variety of tuition exchange programs offered around the world. Tuition exchange programs allow students to pay CMU tuition and enroll in courses at the foreign university at no additional charge. There are also a number of resources available to help fund study abroad. The Office of Study Abroad offers a large number of study abroad scholarships each year. In addition, there are scholarships available through on-campus departments and from sources outside the university to help students fund their international study. Students participating in a CMU-approved study abroad program may also continue to receive financial aid and may apply for additional assistance to cover the study abroad program costs. See the “Fund Study Abroad” section of our website for the list of scholarships available.
Office of Student Affairs

Tony Voisin, Associate Vice President for Student Affairs
Ronan Hall 290; 989-774-3346; https://www.cmich.edu/ess/studentaffairs/Pages/default.aspx

The Office of Student Affairs provides coordination of student service programs and serves as an advocate for students and their concerns. The student services staff promotes a campus atmosphere that fosters intellectual and personal growth of students. Student Affairs encourages students to communicate their needs and interests to enhance the quality of programs, services, and student life at Central Michigan University. Students may contact the Office of Student Affairs for assistance with courtesy notifications to instructors regarding extended absence from campus due to illness or other personal issues.

The Office of Student Affairs has the responsibility to advocate, promote, and facilitate the delivery of support services to students in ways that maximize meeting students' needs in a timely and courteous manner. The philosophy of the office includes the recognition that students are progressing through developmental stages and emphasizes the structuring of the campus environment to enhance student learning and personal development. Staff members seek to understand and communicate students' interests to the campus community and serve as a liaison in addressing students' concerns. The office has the responsibility to coordinate and enhance student recruitment and retention efforts. Student Affairs promotes a campus environment that encourages diversity, community, and mutual respect for the rights and property of others.

The Office of Student Affairs coordinates student development experiences and co-curricular activities for students, as well as enhances the interaction, cooperation, and collaboration of student service units with the academic deans and departments. Staff members are responsive to students' needs and seek to promote integration of students' curricular and co-curricular experiences. The office enables the university to focus on fostering students' intellectual, professional, and social development.

Office of Student Activities and Involvement

Students connect with many aspects of university life through the Office of Student Activities and Involvement. Student activities are handled within this office. Students may contact the Office of Student Activities and Involvement for assistance with policies and procedures, such as the weekly STUDENTNEWS e-mail distribution.

Student Activities and Organizations

Central Michigan University provides students with opportunities to become involved in more than 400 student organizations. Activities outside the classroom are an integral part of the total development process, and students are encouraged to take part in activities of interest to them. A wide range of interests can be pursued through organizations that focus on social issues, student governance, pre-professional development, entertainment, community service, hobbies, club sports, or religion. Involvement in student organizations is an excellent way to develop leadership skills. Many academic departments sponsor student organizations and honor societies. Fraternities and sororities exist on CMU's campus to provide opportunities for social and service experiences. Additionally, each residence hall has a hall council or association which provides social and educational programs or events for residents of a respective hall.

The Student Government Association (SGA) is recognized as the representative governing body for CMU students. By becoming active in SGA, any student can participate in the formation of policies, procedures, and programs which affect his or her education. The Student Government Association represents the interests and needs of all students, whether its focus is on new ideas or a concern to the university community. People who have an interest in working with an issue that relates to the student body or are interested in serving on university committees may contact SGA. SGA elections are held every year to select officers and representatives; however, any student may participate in committees without being an elected member.

The Student Involvement Center (SIC), located on the lower level of the Bovee University Center acts as a gathering place for the nearly 400 student organizations on campus. Here you will also find offices for Program Board (PB), Student Government Association (SGA), Residence Hall Assembly (RHA), and Alternate Breaks (AB).

Students interested in participating in campus activities should contact the Office of Student Activities and Involvement in the Bovee University Center. See http://www.cmich.edu/sgi for more information.

Program Board

Program Board is a student committee which reports to the Office of Student Activities and Involvement. It is a learning experience for students interested in all aspects of the entertainment field, such as contract negotiations, marketing, promotions, graphic design, and special events. Program Board plans, schedules, and conducts social and educational events that occur outside of the classroom, and complement the academic curriculum. Programming includes performing artists and speakers, as well as major concerts and films. Students have the opportunity to participate in selecting which performers come to campus, and to learn how to effectively plan and co-sponsor events with other campus organizations.

Office of Student Conduct

The Office of Student Conduct upholds the Code of Student Rights, Responsibilities and Disciplinary Procedures (the Code). The Office of Student Conduct is committed to ensuring students due process through a fair and just educational experience. Located in the lower level of the Bovee University Center, you may contact the Office of Student Conduct to ask questions, file a disciplinary report, or to make an appointment with a Conduct Proceedings Officer. Contact 989-774-1345 or StudentConduct@cmich.edu.

University Policy for Student Conduct

The university's philosophy of a student's relationship to CMU is expressed in the Code of Students Rights, Responsibilities, and Disciplinary Procedures (see Appendix 1). Anyone wishing to use the procedures or who has questions concerning them should contact the Conduct Proceedings Officer, Office of Student Conduct, who administers the policies and procedures.

Sexual Aggression Services

The Sexual Aggression Services Director, through the Office of Student Affairs, coordinates services and educational programs on campus relating to sexual assault, stalking, and dating violence. The university encourages a proactive approach to this problem through educational programs and counseling to both men and women. Concerns and reports of sexual aggression should be made to the Office of Student Conduct, the CMU Police Department, the Office of Civil Rights and Institutional Equity Title IX Coordinator, a counselor in the Counseling Center, or SAPA (Sexual Aggression Peer Advocates). For more information, see https://www.cmich.edu/ess/studentaffairs/SAPA/Pages/default.aspx.
Civil Rights & Institutional Equity

CMU is an affirmative action/equal employment (AA/EO) institution, providing equal opportunity to all persons, including minorities, females, veterans and individuals with disabilities. CMU strongly and actively strives to increase diversity and provide equal opportunity within its community. CMU encourages diversity and provides equal opportunity in education, employment, all of its programs, and the use of its facilities. CMU is committed to protecting the constitutional and statutory civil rights of persons connected with the university.

The Office of Civil Rights and Institutional Equity coordinates and monitors CMU’s AA/EO efforts and programs to assure compliance with Americans with Disabilities Act, Titles VI and VII of the 1964 Civil Rights Act, Title IX of the Education Amendments of 1972, Executive Order 11246, Section 504 of the Rehabilitation Act of 1973, the Violence Against Women Reauthorization Act of 2013, Elliott-Larsen Civil Rights Act and other relevant state and federal statutes. The Office of Civil Rights and Institutional Equity also supervises the maintenance of all related reports and records, provides and develops related educational programs and materials, offers guidance and advice to all community members on CMU’s nondiscrimination and affirmative action policies and procedures, and assists departments with recruitment and retention activities. For more information, contact the Office of Civil Rights and Institutional Equity, Bovee UC 306, Central Michigan University, Mt. Pleasant, MI 48859, 989-774-3253 (fax: 989-774-2022); https://www.cmich.edu/office_president/OCRIE/Pages/default.aspx.

NonDiscrimination Policy

CMU’s NonDiscrimination Policy and Equal Opportunity and Affirmative Action Protocol prohibit acts of discrimination or harassment on the basis of age, color, disability, gender, gender identity/sex expression, genetic information, familial status, height, marital status, national origin, political persuasion, race, religion, sex, sexual orientation, veteran status, or weight by members of the university community. Prohibited acts of discrimination or harassment include discrimination or harassment in employment, education, housing, public accommodations, public services, and telecommunications. In addition, retaliation for the participation in a protected activity is also expressly prohibited under CMU’s policies.

The Office of Civil Rights and Institutional Equity receives and resolves complaint of discrimination or harassment from students, employees, and others. To file a complaint of harassment or discrimination, contact the Office of Civil Rights and Institutional Equity (see above). To view the Board of Trustees Nondiscrimination Policy, see https://www.cmich.edu/office_president/OCRIE/ Pages/NondiscriminationStatement.aspx. To view CMU’s Equal Opportunity and Affirmative Action Protocol, see https://www.cmich.edu/office_president/OCRIE/Pages/Equal_Opportunity_and_Affirmative_Action_Protocol.aspx.

Sexual Misconduct Policy

CMU’s Sexual Misconduct Policy prohibits sexual misconduct, including dating violence, domestic violence/intimate partner violence, sexual assault, sexual exploitation, sexual harassment, stalking, and retaliation by members of the university community. CMU employees, except those named as a confidential resource in the Sexual Misconduct policy, are responsible employees who are required, under CMU’s policies, to report any information they know about possible sexual misconduct to the CMU Title IX Coordinator. Individuals who do not want their concerns reported to the Title IX Coordinator can contact confidential resources identified in the Sexual Misconduct policy, such as the CMU Sexual Aggression Peer Advocates or the CMU Counseling Center. To file a complaint of sexual misconduct or to learn more information about the policy, contact the Director of the Office of Civil Rights and Institutional Equity, who is the Title IX Coordinator for CMU. To view CMU’s Sexual Misconduct Policy, https://www.cmich.edu/office_president/ocrie/documents/Sexual-misconduct-policy-w-appendices-webcopy.pdf.

Student Disability Services

Central Michigan University is committed to providing equal opportunity for success to students with disabilities. Student Disability Services offers support for students with disabilities.

Services are available to assist students in their effort to learn and grow from their college experience. Students with disabilities are urged to register with Student Disability Services.

For more information about facilities and services for students with disabilities, contact Student Disability Services, 120 Park Library, 989-774-3018.; https://www.cmich.edu/ess/studentaffairs/SDS/Pages/default.aspx

University Libraries

Thomas J. Moore, Dean
Park 407; University Library

The University Library in the Charles V. Park Library building offers a wide range of collections and services for CMU students, faculty, and staff. Its collections contain more than 1,000,000 books and other print items, 50,000 electronic books, 125 electronic periodical article databases, electronic access to the full-text content of more than 30,000 journals, and more than 15,000 multimedia items. Electronic collections are accessible around the clock, on or off campus, at library.cmich.edu. Additionally, the Park Library is a selective federal and state government document depository library, providing access to items published by the United States Government and the State of Michigan. Items not owned by the library may be obtained from other institutions through the library’s interlibrary loan service, Documents on Demand.

More than just a collection of materials, the University Library provides a wide array of library services and study spaces. More than 300 computer workstations are available within the building, and wireless access is available for laptops and mobile devices. Printers, photocopiers and scanners are also available. Students can check out study rooms for individual and group study; some rooms include multimedia equipment. The building is open nearly 100 hours/week, and an extended-hours study room offers additional hours of study space.

Reference librarians are available to assist students, faculty, and staff with research projects and to help users effectively access library resources. Users may consult with a librarian in person at the reference desk on the second floor of the library and also by email, chat, and telephone. The librarians also provide formal, course-specific library instruction to classes upon request by a faculty member.

Several academic support services are located in the library: the CMU Writing Center, the Mathematics Assistance Center, Student Disabilities Services, the Faculty Center for Innovative Teaching, and the Test Proctoring Center.

Hours of service are posted in the library, at the entrances, and online at https://www.cmich.edu/library/hours/. Users also may call 989-774-3294 to hear the current library hours. For more information about the library, call 989-774-1100.

Clarke Historical Library

The Clarke Historical Library collects print and manuscript items regarding Michigan and the Old Northwest Territory. The Library’s holdings are extensive. Over 76,000 printed items, 3,570 manuscript collections, 11,000 reels of microfilm, 16,000 visual images, and 2,300 maps document all aspects of life in Michigan. In addition to this main area of concern, the Clarke Historical Library has also developed a variety of “special” collections. These include the Lucile Clarke Memorial Children’s Library, one of the finest collections of children’s literature in the country, the Class of 1967 Presidential Campaign Biographies collection, Native American material, the Central Michigan University archives, and the Wilbert Wright Collection of Africana and Afro-American. Because of the uniqueness of much of the material in the Clarke Historical Library, items in the Library are not available for circulation but must be consulted in the Clarke Historical Library’s reading room located in 142 Park Library. Hours of service are posted, but patrons may dial 774-3352 for Library hours or 774-3864 for reference assistance.

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The Clarke Historical Library was established in 1954 with the gift of 1,575 volumes from Dr. Norman E. Clarke Sr., who received his bachelor’s degree from Central in 1920. In subsequent years Dr. Clarke Sr. supported the Library through the donation of a large number of books, the establishment of the Lucile M. Clarke Memorial Children’s Library, named in honor of his first wife, and the creation of an endowment to partially underwrite the Library’s ongoing needs. Dr. Clarke Sr. died in 1984 but his family continues to be actively engaged in the Library’s work.

## Information Technology

**Roger Rehm, Vice President/Technology/CIO**

Warriner 215; 989-774-1474

Central Michigan University has a wide variety of technology resources and technology support available for students, faculty, and staff. The Office of Information Technology (OIT) is responsible for providing the CMU community with a diverse and technically rich learning and research environment. CMU and OIT support innovative learning and teaching and maintain a planned investment strategy to keep CMU technology resources at their highest level possible and available to students and faculty. In addition, CMU is working to fully enable mobile computing for its students and faculty with efforts focused on these areas:

- **CMU is expanding and strengthening an already robust wireless network.**
- **CMU students receive a printing allocation that is usable in labs and print stations across campus.**
- **CMU provides 5GB of network-based storage (U:Drives) to students, faculty, and staff, with additional storage options available through CMail and SharePoint.**
- **CMU is employing a number of strategies to deliver required software to its students and faculty.**
- **CMU services are being designed for delivery to a variety of mobile devices.**
- **CMU provides cross-platform text chat and automated remote support tools that allow students to access technical support directly from their personal computers.**
- **CMU provides cost-effective student purchase plans for laptop computers and other mobile devices.**

### E-mail Services for Students:

Upon acceptance to CMU, students are assigned a CMU e-mail address. This e-mail address is the official address to which course-related correspondence and billing notices are sent. It is very important that students check their CMU e-mail address regularly, and they will be held responsible for mailings issued to that address.

CentralLink: Central Michigan University offers a web portal located at: [https://centrallink.cmich.edu](https://centrallink.cmich.edu). CentralLink is designed with CMU students, faculty and staff in mind, and provides the CMU community comprehensive information in a number of different areas, such as activities, academics, employment, available services and access to a variety of individual records.

OIT Help Desk: The Office of Information Technology Help Desk is housed in the first floor of Park Library, and is the first point of contact for all technology related questions. The OIT Help Desk assists students, faculty, and staff with university-sponsored technology services, general computing questions, and computer repairs. Contact the Help Desk at 989-774-3662, by email at helpdesk@cmich.edu, or visit [http://it.cmich.edu](http://it.cmich.edu) and click the remote chat button.

**The CMU Network:** CMU maintains a very comprehensive networking infrastructure to support the work of its students, faculty and staff. In addition to the traditional wired Ethernet network, wireless access is available in all of CMU’s residence halls and academic buildings. Computer users are required to register their machines to use the network and are presented with the online registration process when they first access the CMU network.

### Emergency Notification System

CMU has implemented measures to enhance communication in the event of an emergency. Students, faculty, and staff can register to receive phone calls, text messages, or alternative email address alerts through CMU’s Central Alert system. Registration for this system is accessed by going to [https://centrallink.cmich.edu](https://centrallink.cmich.edu) and accessing My Account and going to “My Profile.”

### Cellular Phone Services

OIT offers Verizon, AT&T, and Sprint cellular phone service and equipment through the Telecom Service Center. Competitive rates are available to all students, faculty, and staff. For additional information, contact the Telecom Service Center at 989-774-3087, or visit [http://connect.cmich.edu](http://connect.cmich.edu).

### Media Services

A large collection of Mediated Equipment is available for use in CMU classes, and are also available for checkout by students. Media consultation and A/V equipment maintenance are also available. Contact Media Services at 989-774-3891.

### Computer Purchases

CMU offers discounted and highly competitive purchasing opportunities with several major computer manufacturers. These opportunities are available to all CMU students, faculty, and staff. Find out more by visiting [http://purchasing.cmich.edu](http://purchasing.cmich.edu) and choose “purchasing” from the menu on the right.

### Public Computer Labs

State-of-the-art instructional and student technology labs are strategically located throughout the campus to provide easy access for students and faculty. Many of the instructional and student labs operate extended daily hours and weekends. Find out more by visiting [http://labs.cmich.edu](http://labs.cmich.edu).

### Acceptable Use Policies

All users who operate or use any of the computing systems and networks of the university must abide by the Responsible Use of Computing policy. The Responsible Use of Computing policy and other OIT policies are published on the OIT website (visit [http://it.cmich.edu](http://it.cmich.edu)). The policies are intended to supplement other existing university and external policies, regulations and laws.

For information about OIT services, or if you have questions, please call the OIT Help Desk at 989-774-3662 or visit [http://it.cmich.edu](http://it.cmich.edu).

## Student Ombuds Office

989-774-3010; ombuds@cmich.edu

The Student Ombuds Office is part of the office of the Vice President for Enrollment and Student Services and is a place for student voices to be heard. When your problem does not have a simple solution, it can be difficult finding someone who can help. Most of the time, your problem can be handled through normal academic or administrative channels. Academic advisors, department heads and deans can help you resolve problems that occur. Sometimes you may not know what the “normal” administrative channel is. This is where the Student Ombuds Office can help. The Ombuds Office will listen to your situation and may take one or several courses of action: 1) explain the process you might follow to resolve your situation; 2) refer you to the appropriate person who can help you; and/or 3) informally look into your situation and make recommendations. Online: [https://www.cmich.edu/ess/ombuds/Pages/contact.aspx](https://www.cmich.edu/ess/ombuds/Pages/contact.aspx).

## CMU Police

**Chief Bill Yeagley, Jr., Director of Police Services**

Combined Services Building; 989-774-3081

The Central Michigan University Police Department works in partnership with the entire university community to maintain a safe, secure and orderly living and learning environment. The CMU Police Department offers a diverse group of highly trained sworn police officers who are certified by the State of Michigan. For more information, see [https://www.cmich.edu/fas/police/Pages/default.aspx](https://www.cmich.edu/fas/police/Pages/default.aspx).

## University Policy for Use of Motor Vehicles

Students must register any motor vehicle which they park on the university campus with the CMU Police Department. Parking permits must be displayed by the first day of classes. Students parking only for
Saturday classes and evening classes between 4:00 p.m. and 2:00 a.m., Monday through Friday, are exempted from registering their vehicles, although they may not park at Washington Apartments at any time.

Any student who has a vehicle on campus is expected to become familiar with, and abide by, university traffic and parking regulations. Regulations and designation of parking areas for specific groups are published with the campus map in a brochure available at the CMU Police Department. Bicycles are also registered free at the CMU Police Department.

**Counseling Center**

Ross Rapaport, Director  
Michelle Bigard, Associate Director  
Foust Hall Suite 102; 989-774-3381

To make an appointment, call 989-774-3381. Hours are 8 a.m. to 5 p.m., Monday through Friday during Fall and Spring semesters, including the week before each semester. When the University is open during other periods, the hours are 8-12 noon and 1-5 p.m. The Counseling Center's website (www.counsel.cmich.edu) provides information on center services and counselors, current student support groups, community resources, confidential on-line mental health screening, emergency services and links to a wide variety of mental health and related information. Counseling Center faculty includes licensed professional counselors, psychologists, and social workers. On occasion, trainees who are advanced graduate students in various counseling related graduate programs may also provide counseling services. Call or stop by Foust 102 to schedule an appointment with a counselor. Daily urgent and emergency appointment times are available. Please tell our receptionist if you need to see a counselor the same day you are calling. In these situations, contact the center as early in the day as possible.

The Counseling Center provides free and confidential personal counseling services for currently enrolled CMU students for various issues and concerns that may negatively impact one's academic success, interpersonal relationships, health or safety. Services include: short-term/time-limited individual and group counseling, consultation and referral for: 1) dealing with personal issues such as an urgent situation or crisis, anxiety, depression, loneliness, transition to college concerns, identity, alcohol/drug abuse, eating concerns, stress management, relationship concerns, couples concerns, family stress, loss, relapse prevention, sexual orientation, strengthening coping skills, and personal growth and development; 2) improving academic success by reducing stress and focused anxiety (e.g., test, math, speech), and learning time management skills; and 3) assisting primary and secondary survivors of sexual and domestic violence, stalking, and harassment. Group services are designed to address many topics and vary depending upon student needs from semester to semester.

Other Counseling Center services include providing consultation and referral information for students, parents, faculty and staff; groups and workshops; limited in-service training; limited outreach programs; referral to on and off-campus agencies and services; providing a supervised practicum or internship site for psychology, counselor education and social work students; and selected mental health screening. During the academic year counselors are on-call after hours and weekends to assist students and CMU faculty and staff when there are urgent / emergency student mental health concerns. Call CMU Police at 989-774-3081 to contact the on-call counselor. There is no charge for counseling, consultation and related services.

**Residence Life Counselors in Residence**

Counseling assistance may also be obtained through Counselors in Residence who work in offices at various residence hall locations. Counselors in Residence may be contacted in the:
- East Area Student Success Center (989-774-1879)
- North Area Student Success Center (989-774-3947)
- South Area Student Success Center (989-774-3089)
- Towers Student Success Center (989-774-6601)

Sponsored by the Office of Residence Life, the Counselors in Residence program places licensed professional counselors and/or social workers directly in the residence halls. Their mission is to provide staff consultation, support, crisis intervention, and proactive prevention efforts addressing mental health issues, and to act as a bridge to partner offices supporting the personal growth and academic progress of students.

**University Health Services**

Kevin Karbowsk, Director  
Foust Hall; 989-774-3944

**Emergencies:** Dial 911 on campus for CMU police and ambulance assistance. Care for life threatening emergencies is provided by the McLaren Central Michigan Hospital.

**Mission:** The mission of University Health Services is to focus on improving the health and wellness of CMU students and the University community by providing personalized medical care, disease prevention and health promotion services tailored to their dynamic needs.

**Eligibility:** All regularly enrolled CMU students, CMU faculty, staff, their spouses and dependents 14 years of age or older, and other authorized users are eligible to use University Health Services.

**Location and Parking:** Conveniently located on campus in Foust Hall at the corner of Preston Street and East Campus Drive, University Health Services offers easy access to services. Free parking for UHS patients is available at designated signs in Lot 29 on the east end of Foust Hall. Additional parking is available in Lot 33 on the south side of Foust and metered parking is located in Lot 28 at the west end of Foust. There are automatic doors at the north and west entrances.

Clinic Hours: University Health Services has two convenient locations for your health care needs.

1. **Campus Health Clinic** is located in 200 Foust Hall and is open Monday-Friday from 8:00am to 5:00pm. To schedule an appointment (same day or future appointment) call 989-774-5693. A registered nurse is also available at 989-774-6591 to answer questions about health-related concerns, including the quickest and most appropriate way to obtain care.

2. **Towers Health Clinic** is located in 103 Troutman Hall. This satellite clinic operates on a walk-in basis for urgent care needs and is normally open Monday – Thursday from 12:30 pm to 4:30 pm.

**Clinical Services Available:** Our staff consists of physicians, physician assistants and nurse practitioners who are all board-certified and are fully qualified to provide primary care services. Our medical staff is here to help you get the treatment you need when you need it. We’ll work with your family doctor or specialist as necessary.

Our emphasis is on educating the student to become an informed health care consumer as well as an active partner in their treatment plan, and on supporting healthy decision making. Services include the diagnosis and treatment of the following:
- Illnesses (sore throat, flu, infections, etc.)
- Injuries (sprains, cuts or wounds, etc.)
- Immunizations
- Travel health clinic: before traveling abroad
- Physical exams
- Anxiety, depression, sleep disturbances management
- Allergy shots
- Acute and chronic care management
- Laboratory testing
- Prescriptions
- Sexual health services: such as gynecological exams, birth control, pregnancy testing and sexually transmitted infection testing

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There is a laboratory and pharmacy on site. Both accept orders from outside providers. X-rays and other diagnostic imaging services are available through an agreement with a local radiology clinic. Some services are available at Foust location only.

**Clinical Services Not Available:** major or elective surgery; hospital inpatient care; emergency room care for life-threatening injuries and illnesses; obstetrical care; physical therapy; fitting of glasses or vision care; and dental care are not provided. Referrals to specialists and other health care providers are arranged as needed.

**Health Education Services Available:** A Health Educator is available to assist with programs and to act as a resource for students. RA's, MA's, and other students may request presentations on various health topics by visiting the Health Services website and clicking on the “request presentation” link. Emphasis is on creating and maintaining an environment that fosters healthy decision making and lifestyles. Self-ordered HIV testing and light therapy appointments are also available. Check our Facebook page and website regularly for information on our free monthly educational health and wellness presentations.

**Payment:** There are fees for the care provided, but payment is not required on the date of service. The charges may be paid by cash, check, money order, credit or debit card in the Business Office, Foust 202 within three business days or be placed on the student’s personal CMU account and paid by the statement due date. If the student provides proof of current health insurance coverage (a health insurance card or photocopy of it) and signs an authorization permitting Health Services to bill the health plan for the services, insurance billing is provided. The student remains responsible for payment of any co-pays, deductibles and non-covered services. Health Services participates with a number of health insurance and prescription drug plans. For additional information, contact the Business Office at 989-774-3059.

**Student Health Insurance:** It is highly recommended that all CMU students carry health insurance coverage. While college students are generally a healthy population, an accident or serious illness can happen to anyone at any time and can result in a significant financial burden. Insurance helps protect the student’s physical and financial health.

The student should carry their health insurance card or a photocopy of it and have at least a basic understanding of how the plan works, e.g., benefits, exclusions, pre-authorization requirements, co-pays and deductibles. A national health insurance provider offers vision coverage and administers a health insurance plan for CMU students, their spouses and dependents at a very competitive cost. Plan benefits, premium costs, enrollment deadlines and application forms are available at the Health Services Business Office, Foust 202.

**Medical Records:** Medical records are maintained for students and other authorized users of University Health Services. At age eighteen, students are legally adults. The information in their medical record is confidential and will not be released to anyone without the student’s knowledge and written authorization, except as required or permitted by law. Students are asked to complete a pre-entrance health history report and pre-matriculation immunization record to provide a baseline of important health information to help assure safe, effective, and appropriate care when the student is seen at Health Services or in the event of a medical emergency.

**Concerns, Comments, Suggestions:** University Health Services seeks to continually improve services. Feedback from CMU students is valuable in that process. Concerns, comments and suggestions regarding the services can be shared by completing a Patient Satisfaction Survey at the time of the visit, speaking with a staff member or unit manager, or contacting the Director by calling 989-774-3944 or sending an email to healthservices@cmich.edu.

For additional information about University Health Services visit the UHS website at www.healthservices.cmich.edu.

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**Living on Campus**

**Campus Residency Policy**

Central Michigan University’s campus residency policy requires that freshmen and sophomore students live in a residence hall. Those who reach the four-semester requirement at midyear are still required to complete the full term of the agreement for the academic year (fall and spring semester). The four-semester requirement may be waived in years when space is not available on campus.

**Residency Policy for 2015-2016**

The four-semester requirement will be waived for the 2015-2016 academic year with these exceptions:

- Students who have not completed 24 credit hours by the end of spring 2015.
- Students on CMU merit and talent-based scholarships of $2,500 or greater.

These students are required to live on campus their sophomore (second) year.

Exceptions to the policy will usually be granted if special circumstances are outlined prior to the signing of the residence hall agreement. Exceptions include:

1. Living at home with parents and commuting within a 60-mile radius.
2. Married and living with your spouse.
3. Veteran with one or more years of active service.
4. Enrolled for six semester hours of credit or less.
5. Special or guest student.
6. 21 years of age or older.

All on-campus residence hall contracts are for one academic year. If a student does not qualify for an exception to the policy at the beginning of the year, the student must fulfill the contract even though he or she may become eligible for an exception during the year. Requests for exception must be submitted in writing to the Office of Residence Life.

Each student is expected to abide by the on-campus residency policy. Those who fail to do so will not be considered officially registered and will be dematriculated.

**Residence Halls**

Almost 6,000 students live in residence halls on campus. Several lifestyle options are offered in the residence halls and students may choose the one most comfortable for them. All residence halls are smoke and tobacco free. Also available are residential colleges and theme halls, which may enhance a student’s area of study or connection to campus.

There are currently four Student Success Centers located in the residence halls. A Success Center is just that, a place where student services professionals work together to help residents become successful. An Academic Advisor, a Counselor in Residence, and a Success Coach are available in each Success Center, while a Community Police Officer is available in two of the areas. All Residence Hall Directors are also trained academic advisors to further help the residents of their halls succeed.

Our residence halls do far more than house and feed students. Residents have the opportunity to attend educational, social, recreational and community building programs, as well as develop lifelong friendships.

The physical arrangements of the 22 residence halls vary, but the suites in all but one hall contain a private bath, one, two or four bedrooms and a study room. Study areas are also provided on most residence hall floors.

Professional and paraprofessional residence hall staff members are selected, trained, and supervised by the Office of Residence Life. The ability to understand and communicate with students as well as the capability of providing positive leadership is an important criteria in the selection of staff. Staff training is geared toward further development of these qualities.
Questions concerning the residence halls should be addressed to the Office of Residence Life, Ronan Hall, Room 270, Central Michigan University, Mt. Pleasant, MI 48859; 989-774-3284, fax 989-774-6410 or e-mail at Reslife@cmich.edu.

Residential Colleges
As a joint venture with faculty members in several departments, the Office of Residence Life will offer the following residential colleges for the 2015-2016 academic year:
- College of Business Administration in Calkins Hall.
- College of Education and Human Services in Sweeney Hall.
- College of Health Professions in Emmons Hall.
- College of Science and Technology in Woldt Hall.
- School of Music in Herrig Hall.

Theme Halls
In addition to Residential Colleges, several halls are also home to students who have a common interest or are recipients of a specific scholarship. Anticipated theme areas include:
- Honors Program in Larzelere Hall.
- Leader Advancement Scholars in Barnes Hall.
- Multicultural Advancement and Lloyd Cofer Scholars in Troutman Hall.
- Transfer Student Community in Kulhavi Hall.

Note: Residential Colleges and Theme Halls comprise one or more floors in a residence hall, so students who do not have an interest in a specific academic program may still apply for these halls.

University Apartments
There are 390 university apartments available on campus. One, two, three, and four bedroom apartments are assigned according to date of application. Application forms are available at the beginning of each semester and application should be made well in advance of desired occupancy. The majority of family and graduate housing units are furnished. Rates include utilities, cable hook-up, internet hook-up, and local telephone service.

There are also a limited number of single student apartments available on campus. One bedroom units typically house one student and two bedroom units house two students. Single student apartments are reserved for juniors, seniors, and graduate students, with graduate students receiving first priority. Applications are available at the beginning of each semester for the next semester.

Questions concerning the University Apartments should be addressed to the University Apartments Office, Ronan Hall, Room 270, Central Michigan University, Mt. Pleasant, MI 48859; 989-774-3284, fax 989-774-6410, or e-mail at apts@cmich.edu.

Campus Dining
Campus is conveniently covered with 15 dining locations that open as early as 7:00 a.m. and close as late as 2:00 a.m. From residential restaurants, to the food court, convenience stores, coffee houses, and more...the dining options at CMU allow you quality, variety, and convenience-all at a great value-no matter where you're located on campus. We offer a satisfying mix of products, locations, and menus that are state of the art, trend topping, and often nationally recognized.

Four residential restaurants on campus provide sit-down, all-you-care-to-eat meal service to both on- and off-campus students, faculty, and staff through the use of flexible meal plans. Numerous retail stores on campus, including the food court, coffee houses, and convenience stores, offer the flexibility of paying with FLEX Dollars, among other forms of payment, for quick snacks or complete meals. Off-campus students, faculty, and staff can log on to www.cmucampusdining.com to enroll in the convenience of a meal plan that offers the right mix of meals and FLEX Dollars to fit your busy campus schedule. Load additional FLEX Dollars onto your plan online at any time to ensure you're set for the semester.

For health conscience students, CMU Campus Dining serves up online nutritional analysis for on-campus residential restaurants at www.cmucampusdining.com. Computer kiosks at the entrance to each residential restaurant allow guests to make educated dining decisions by reviewing the nutritional content for the foods they plan to eat. The Campus Dining website also offers current hours of operation, daily menus for on-campus restaurants, voluntary meal plan sign-up, reloading of FLEX Dollars, Campus Dining contact information, email special subscriber offers, employment information, catering guides, and much more.

On-campus restaurants include: Real Food on Campus (RFoC), Fresh Food Company (FFCo.), Robinson Residential Restaurant, Merrill Residential Restaurant, the Down Under Food Court, Goodies To Go, Einstein Bros. Bagels, Java City Coffee House - Park Library & Health Professions Building, C3 Convenience Store, C3 Express, the Market, Northside Market, Trackside at the SAC, Tidbits snack store, and athletic concessions. Visit www.cmucampusdining.com for a campus map with all dining locations.

Questions regarding dining on campus should be directed to the CMU Campus Dining office, located in Ronan Hall 260, at 989-774-6406. To enroll in a meal plan or complement your current plan with additional FLEX Dollars, visit www.cmucampusdining.com. We all eat on campus, why not save money doing it!

Bovee University Center
The Bovee University Center is located in the center of campus, which makes it a popular gathering place for students, faculty and staff. The Center provides the University community opportunities for involvement in group discussions, meetings, conferences, informal conversations, and social activities, with meeting and conference rooms and catering services available. A variety of entertainment and special events are sponsored in the University Center throughout the year, making it an exciting place to be.

Services and offices that are located at the Bovee University Center include the Campus Information desk, Student Service Court, the Campus ID Office, the Office of Student Activities and Involvement, the Office of Student Conduct, Student Employment Services, the Volunteer Center, and the Center for Inclusion and Diversity. Also housed there are the Student Government Association, Program Board and many other student organizations. Several retail operations are provided, such as the Bookstore, which carries a full line of required class materials, student supplies, CMU clothing, and gift items; Independent Bank; MEDIAgraphix, and a copy center.

Complete food service operations are offered, including the Down Under Food Court (open Monday-Friday) and Quiznos® Subs, Freshens EnergyZone smoothies, Pretzel Logic, and Starbucks Coffee.

Printing Services/Copy Centers
Printing Services is a full service, four color operation equipped to handle the university's on- and off-campus printing needs. Printing Services also offers full pre-press services, including computerized image assembly, and full bindery services with various options in finish work. The university's standard class bulk mailing operations are also a part of Printing Services. Classes interested in printing are welcome to arrange tours of the printing facility.

Copy Centers to accommodate faculty, staff, and students are located in the Bovee University Center, and the main printing facility located in the Combined Services Building. See https://www.cmich.edu/fas/ ras/printing/Pages/default.aspx.
University Recreation (URec)
Stan Shingles, Director
SAC 200; 989-774-3686

University Recreation (URec) manages the Student Activity Center (SAC), the Outdoor Sports Complex, the outdoor tennis courts, two satellite fitness facilities in the Towers and East Area residence halls and an 18-Hole Championship Disc Golf Course.

The SAC is 180,000 square feet of recreation space and has hosted more than 13 million visitors since it opened in 1990. With a spacious and dynamic environment, the SAC provides fitness and recreation programming meeting the needs of our diverse student population.

URec is dedicated to providing outstanding recreation, leisure and wellness programs, services and facilities for our students, members and guests in a safe environment that promotes healthy lifestyles, values diversity, and contributes to co-curricular learning and leadership opportunities.

Facilities are provided for aquatics, fitness and weight training, group fitness, racquetball courts, an Injury Care Center and sports forums for basketball, volleyball, and CMU's 18-hole Disc Golf course.

In addition, URec offers comprehensive fitness programs designed to meet all fitness levels and wellness interests. URec offers over thirty group fitness classes and personal trainers are available to provide assessments, goal-setting and specialized programs.

Learn to Swim programs (USwim) are available throughout the year. The SAC manages two pools, one in the SAC and one in the Rose Center.

The Intramural Sports program offers more than thirty leagues with something for everyone, from one-day special events to semester long individual and team sports. Activities are offered in three divisions: men, women, and co-recreational.

Club Sports compete at an extramural level with over thirty sports offered, providing an excellent opportunity to practice leadership, organization and teaching skills.

URec offers a wide variety of employment opportunities, employing over 300 students during the academic year.

Special events are held in the SAC, including Special Olympics Michigan, Alumni events, SIBS weekend, CMU Up All Night and Leadership Safari. We are a premier recreation provider with a national reputation for excellence. For more information about URec programs and facilities, contact University Recreation at 989-774-3686 or see www.urec.cmich.edu.

Varsity Athletics
David Heeke, Athletic Director
Rose Center 100A; 989-774-3041

Many students participate in the men's and women's athletic programs under the guidance of experienced coaches. It is our intention to field teams composed of student athletes who compete with excellence, integrity, intensity, and teamwork. The ultimate justification and aim of the programs is to affect human growth in the participant. Athletics at Central Michigan is regarded as an integral part of the educational offering of the university. Two of the primary purposes of the athletics program are to provide a variety of intercollegiate sports to meet the participation needs of both men and women, while at the same time meeting the desires of the general student to view athletic events, and to provide common, unifying college activities which contribute to the morale and spirit of the university community.

The Athletic Committee of the CMU Academic Senate makes recommendations regarding athletics standards, programs, and facilities, and has important responsibilities in their review.

The men's and women's programs have Division IA classification in the NCAA and the University complies with the code of that association. All CMU teams are affiliated with the Mid-American Conference.

The men's program sponsors baseball, basketball, cross country, football, indoor and outdoor track, and wrestling.

The women's athletic program includes basketball, cross country, field hockey, golf, gymnastics, lacrosse, soccer, softball, indoor and outdoor track, and volleyball.

Students must be enrolled full time and be in good standing with the university to participate in intercollegiate athletics for CMU. Contact the head coach for additional information on any particular sport. See www.cmuchippewas.com/
Student Enrichment

Biological Station on Beaver Island

Central Michigan University Biological Station (CMUBS) is located on Beaver Island in northern Lake Michigan about 32 miles northwest of Charlevoix. These facilities, nestled among 48 acres of pristine habitat, are located on the eastern shore of Beaver Island, and are about six miles south of the island’s only village, St. James. CMUBS offers a diversity of academic courses during the spring and summer months and provides research facilities throughout the year. A spacious Academic Center with state-of-the-art teaching laboratories, computer laboratory, library, and full-mediated lecture room is available and equipped to accommodate courses that rely on both laboratory and field experiences. A bookstore, natural history museum and research buildings are also provided as classroom support. Additionally, CMU owns 310 acres elsewhere on the island that serve a variety of field courses offered at the station by providing highly diverse sites for field trips, research and other activities. CMU also owns the completely renovated former Coastguard boathouse, located on Whiskey Point in St. James at the north end of the island, which houses research vessels and a state-of-the-art experimental mesocosm facility.

Students reside in either dormitories or rustic cabins in the modern CMU campground, eat in the cafeteria and relax and study in the spacious Matt and Ellie Hohn main lodge. Its location among a variety of natural habitats makes CMUBS an ideal location for a biological station. For more information, contact cmubs@cmich.edu or see https://www.cmich.edu/colleges/cst/cmubs/Pages/default.aspx.

Neithercut Woodland

Neithercut Woodland, an area of approximately 252 acres, is located about four and a half miles northwest of the village of Farwell on Michigan Route 115. This natural woodland area was a gift to CMU by William A. Neithercut, class of 1909.

The McNeel Nature Center on the tract, and the surrounding environs are used by students and the public for conservation education and environmental interpretation.

The Woodland contains three hiking trails. Exhibits, demonstrations, and experimental facilities for developing innovative approaches to environmental education are also available at Neithercut Woodland. The McNeel Center building is constructed of cedar logs and its 1,900 square feet of floor space provides a central meeting room, kitchenette, laboratory, storage area and rest rooms. Up to 50 people can be accommodated in the center. Neithercut Woodland is available for students and the public on a year-round basis. For information, call 989-774-3227.

The Museum of Cultural & Natural History

The Museum of Cultural & Natural History in Rowe Hall is devoted to formal and informal learning through the study of real objects. The museum’s foundation rests on its extensive collections of anthropology and archaeology, geology, Michigan history, and zoology. Collection items are available for use by faculty, staff and students to enhance classroom learning and are loaned to school groups in the region. The museum also serves as the home for the Museum Studies minor program.

Faculty in anthropology, art, biology, geology and history regularly make use of collections, exhibits and learning laboratories. In addition, programs are scheduled in the Gerald L. Poor School Museum, a one-room schoolhouse located at the corner of Preston and West Campus Drive. Museum exhibits and visual collections storage are located in Brooks Hall, Beaver Island Biological Station, and Neithercut Woodland as well as the main exhibit hall and temporary exhibit gallery in Rowe Hall.

For more information, visit the office in 103 Rowe Hall, see https://www.cmich.edu/colleges/chsbs/mcnh/Pages/default.aspx, or call 989-774-3229.

Mary Ellen Brandell Volunteer Center

The Mary Ellen Brandell Volunteer Center is dedicated to developing active citizenship among CMU students by providing unique and dynamic programs, coordinating civic engagement efforts and facilitating networking among service leaders across campus. The Volunteer Center houses a searchable online database of volunteer opportunities for CMU students (OrgSync) coordinates civic engagement efforts across campus, and administers many programs, including America Reads, Lunch Buddies, Alternative Breaks, the Safer Sex Patrol, the David Garcia Project, and Adopt-a-Grandparent. Additionally, the Volunteer Center provides leadership for special events throughout the academic year, including: Nicholas Pietrunti Day of Service, Issue Day, Valentines for Veterans, Be My Neighbor Day, and various other events.

For more information: Bovee UC 106; 989-774-7685; volunteer.center@cmich.edu; https://www.cmich.edu/ess/volunteer/Pages/default.aspx.
**Office of Research and Graduate Studies**

The Office of Research and Graduate Studies (ORGS) supports research and creative activities by faculty, staff, and students. Faculty and staff research is supported through the Early Career Investigator Award, New Research Initiative Award, Creative and Scholarly Support Award, Research Incentive Award, Proposal Match, Vice Provost’s Discretionary Fund, and grants through the Faculty Research and Creative Endeavors program. Programs to support undergraduate student research are the Summer Scholars Program, Research and Creative Endeavors Grants, and Presentation Grants. ORGS organizes the annual Student Research and Creative Endeavors Exhibition held near the end of each academic year and the Faculty Excellence Exhibition held each March. In addition, the office provides a number of workshops regarding internal and external research funding and research conduct issues, and provides oversight and function for all phases of the research process.

For additional information on the programs or services, contact the Office of Research and Graduate Studies at 989-774-6777 or see [https://www.cmich.edu/office_provost/ORSP/Pages/default.aspx](https://www.cmich.edu/office_provost/ORSP/Pages/default.aspx).

**Musical Events**

The School of Music offers a wide variety of musical events, most of which are available at no charge to students and the general public. For a listing of upcoming events, see [https://www.cmich.edu,colleges/CCFA/CCFANewsandEvents/Pages/default.aspx](https://www.cmich.edu,colleges/CCFA/CCFANewsandEvents/Pages/default.aspx).

**Special Olympics Michigan**

Since 1972, Special Olympics Michigan has been headquartered on the campus of CMU. Special Olympics Michigan provides year-round sports training and athletic competition in 23 sports for children and adults with intellectual disabilities. CMU students can help change lives by volunteering at the State Summer Games held on campus in June or at the State Winter Games in February, being a Unified Sports team athlete for inclusive opportunities, becoming an intern, or serving as a general office assistant at the Special Olympics Michigan headquarters. CMU volunteers can become involved in the local Special Olympics program either in Mount Pleasant or in their home communities. For more information or to become a volunteer, call 989-774-3911 or visit the website at [www.somi.org](http://www.somi.org). Be a Fan of Special Olympics!

**University Theatre**

Each year, the University Theatre presents a season of productions offering a range of periods and styles. Open auditions are held for every area of the production. Audiences enjoy discounts on multiple ticket purchases, and there are special student rates for performances. For information, call Ticket Central at 989-774-3000 or see [https://www.cmich.edu,colleges/CCFA/CCFANewsandEvents/Pages/default.aspx](https://www.cmich.edu,colleges/CCFA/CCFANewsandEvents/Pages/default.aspx).

**University Art Gallery**

The mission of the University Art Gallery is to provide an opportunity for the University community and mid-Michigan communities to view exhibitions of contemporary art. UAG generates and provides educational access to exhibitions featuring both emerging and established regional, national, and international artists. UAG works to promote the discussion of contemporary art through artist lectures, residencies, and workshops. As part of the Department of Art & Design, the gallery serves as a unique classroom for students, providing opportunities for exhibitions, hosting a juried student exhibition, and providing internships. Central Michigan University faculty and alumni are routinely exhibited. In addition, the UAG provides exhibition tours and works with area schools to develop appropriate educational outreach programs for K-12 students.

The University Art Gallery is located in the A-Frame building at the corner of Franklin and Preston Streets. The gallery is open Tuesday through Friday, 11 a.m. to 6 p.m. and Saturday, 11 a.m. to 3 p.m. or by appointment (989-774-3800). For a schedule of exhibitions, please see [https://www.cmich.edu,colleges/CCFA/CCFAArtGallery/Pages/default.aspx](https://www.cmich.edu,colleges/CCFA/CCFAArtGallery/Pages/default.aspx).

**Student Media**

**Student Publications**

Moore Hall 436
989/774-3493
Fax: 989/774-7805
www.cm-life.com
David Clark, Director of Student Publications
Kathy Simon, Assistant Director of Student Publications

- **Central Michigan Life**
  
  Celebrating 96 years on campus, CM Life is a nationally-recognized, student-run media company that employs more than 100 students. Editors and reporters publish university, local and state news on cm-life.com, in print editions twice per week and produce podcasts. The company also employs advertising students who sell print and digital products, public relations students who offer promotional services and a creative services team that offers graphic design solutions. Advertising students also staff Social Café, an ad agency that offers print, digital and social media products to campus and community customers. Follow CM Life on Twitter, Facebook, Instagram, Snapchat, Pinterest and iTunes.

- **The Central Review**
  
  The creative arts magazine of the university, The Central Review, is edited and published by students. It is published each semester and contains commentary, poetry, and creative writing. The magazine’s website is [http://www.thecentralreview.com/](http://www.thecentralreview.com/).

**Cocurricular Electronic Media**

Located in Moore Hall, the School of Broadcast and Cinematic Arts operates the following facilities to provide BCA students with a broad spectrum of professional training opportunities:

- **Moore Hall Television** is a full-time cable television station transmitting to the campus on channel 34 and the community on channel 189, MHTV offers practical experience in all phases of television programming, including News Central 34, mid-Michigan’s only daily television newscast. Other featured series regularly include sports, game and reality shows, as well as scripted entertainment productions.

- **WMHW-FM** is a two-service HD station broadcasting digitally and at 91.5 and 101.1 on the analog band. Moore Rock 91.5 provides multiple counties with cutting edge music and extensive sports coverage. Mountain 101 offers the greater Mt. Pleasant area an Album Adult Alternative format. Both stations are streamed worldwide at [www.wmhw.org](http://www.wmhw.org) and provide student broadcasters with intensive immersion in every aspect of programming and managing a dual station cluster.
Alumni Relations

The association was established to create opportunities for both alumni and students with CMU in a productive and positive manner. Development and Development seeks to ensure the continuity of the fundraising effort and to achieve objectives for resource acquisition. At the same time, Development seeks to ensure the continuity of the fundraising effort and to achieve a continual and substantial growth in gift revenues throughout the university. For assistance or additional information, contact the Vice President of Development and External Relations at 989-774-2382.

Alumni Relations

The Alumni Relations Office exists to perpetuate and enhance the lifelong relationship between the university and its graduates. The office develops multiple avenues to involve graduates and current students with CMU in a productive and positive manner. Alumni are encouraged to return to campus and participate in traditional campus activities such as Homecoming and Alumni Reunion Weekend. Additionally, we encourage CMU alumni to get involved in their local Alumni Association chapters and clubs.

The Alumni Office helps foster a sense of spirit and pride in Central Michigan University students through the Future Alumni Association. The association was established to create opportunities for both alumni and students to build relationships and assist with the growth and development of CMU.

The Alumni Relations Office also publishes Centralight, the alumni magazine, four times yearly and online as a source of campus and alumni news to communicate with graduates of CMU.

CMU encourages alumni to enjoy an ongoing relationship with the university and to remain active with their alma mater. In recognition of this lifelong relationship, Central Michigan University has dedicated the Carlin Alumni House on campus to welcome over 210,000 graduates. For further information, please contact the Executive Director of Alumni Relations, located in the Carlin Alumni House at telephone 989-774-3312 or toll free 800-358-6903.

Governmental Relations

The Government Relations office works closely with state, federal and local officials on funding and policy issues that impact the CMU community. The office also works closely with students, faculty and administrators, in planning and developing CMU’s response to proposed legislation, agency policies and developing relationships with key policy makers. The office also facilitates meetings with policy makers and handles inquiries from legislators regarding CMU’s academic and research activities on campus. For additional information please contact the Governmental Relations Office at 989-774-3871.

Public Broadcasting

Central Michigan University operates the largest university-owned public broadcasting network in the United States. With five television and seven radio stations, CMU Public Broadcasting is one of the university’s primary public service initiatives.

Television. Central Michigan University owns and operates public television station WCMU-TV, channel 14, Mt. Pleasant; WCML-TV, channel 6, Alpena; WCMW-TV, channel 21, Manistee/Ludington; and WCMV-TV, channel 27, Cadillac, and WCMZ-TV, channel 26, Flint.

CMU Public Television broadcasts 24 hours per day, the year around, servicing a potential audience of over 5 million people. The stations are also on cable systems throughout the state.

Radio. CMU Public Radio operates seven transmitters serving central and northern Michigan, and portions of Ontario, Canada. These include: WCMU-FM (89.5 MHz) from Mt. Pleasant; WCML-FM (91.7 MHz) from Alpena; WCMB-FM (95.7 MHz) from Oscoda; WWCM (96.9) from Standish; WUCX-FM (90.1 MHz) from Bay City; WCMZ-FM (98.3 MHz) from Sault Ste. Marie; and WCMW-FM (103.9 MHz) from Harbor Springs.

The stations broadcast 24 hours a day, 365 days a year, providing programming of an informational and cultural nature. The broadcast schedule includes NPR news, and classical music, traditional music, jazz, opera, and radio drama.

CMU Public Television and Radio are staffed by professional personnel, as well as by students seeking a practical background in broadcasting. The network is affiliated with the Public Broadcasting Service and National Public Radio. CMU Public Broadcasting is located in the Public Broadcasting Center on the corner of Mission and Broomfield.

University Communications

Sherry Knight, Associate Vice President
West 202; 989-774-3197

University Communications serves as the official voice of Central Michigan University and promotes the university through strategic messaging using digital, print, video and multimedia communications. Engaging in ongoing collaborative relationships with other university partners, including colleges, programs and organizations, UComm offers a full complement of award-winning publication services, media tools and data-driven marketing strategies. UComm works with university entities to develop impactful communication and marketing projects that advance CMU’s goals, mission and national reputation.

UComm promotes the activities of the university community – such as scholarly achievements, groundbreaking research and public service initiatives – to broad audiences across the state, region and world. It is a primary point of contact for members of the news media requesting interviews with university personnel or seeking information about administrative, academic or student matters. UComm also provides creative consultation and production coordination to assist CMU faculty and staff.
Admissions
Complete an application for admission obtained through the following:
- https://apply.cmich.edu/
- e-mail: cmuadmit@cmich.edu
- Phone: 1-888-292-5366
- FAX: 989-774-7267
- Office hours: M-F 8:00-4:30 p.m.

We are Centered on Your Success!
We are pleased at your interest in Central Michigan University. Some of the best students from Michigan and beyond have earned their degrees at Central. Students tell us they select Central because of:
- Our size. CMU’s highly qualified faculty and staff provide personalized attention for our students.
- Our fine academic reputation and variety of degree programs. We have over 150 fields of study available.
- Students at Central are able to obtain a high quality education at a reasonable price.
- Central’s beautiful campus. Stately traditional buildings are blended with high-tech facilities and modern equipment.

If you attend Central Michigan University, one of your first contacts will be with the Admissions Office. Please let us know if we can be of any service. You may contact the Admissions Office at 1-888-292-5366 or through e-mail at cmuadmit@cmich.edu.

One hour walking tours are offered Monday through Friday beginning hourly from 10:00 a.m. to 2:00 p.m. from mid September to mid April and beginning at 11:00 a.m. and 1:00 p.m. from mid April through mid September. Weekday campus visits, tours, and advising appointments may be arranged with the Admissions Office, as well as information on weekend and special visit events.

The Admissions Office receives all applications and supporting information used to determine undergraduate admission to Central Michigan University. Each application receives individual attention. The admissions process takes into account the following: grades, ACT or SAT test scores, caliber of high school program, school official recommendations, exceptional talents, involvement beyond the classroom, leadership potential, and record of good citizenship.

Applicants who have strong high school records supported by comparable test scores will be given priority. The Associate Vice President for Student Affairs has authority to grant waivers of entrance requirements.

Academic Background
Your academic success at Central Michigan University is greatly enhanced when your preparation includes a solid academic foundation. To prepare for university admission and academic challenge, you will want to strive for high achievement in rigorous subjects.

Recommended high school background:
- English 4 years
- Fine and Performing Arts 2 years or more
- Foreign Language 2 years or more
- Mathematics 4 years
- Biological and Physical Science 4 years
- History and Social Science 4 years
- Computer Literacy 1 year

A student may enter Central Michigan University at the beginning of any one of the following annual sessions:
- Fall Semester (August - December, 16 weeks)
- Spring Semester (January - May, 16 weeks)
- Summer Session I (May - June, 6 weeks)
- Summer Session II (June - August, 6 weeks)

Your admission and matriculation at this university are privileges with certain responsibilities. The university reserves to itself, and the student concedes to the university, the right to cancel admission and matriculation and to require withdrawal whenever it becomes evident that the student is not conforming to the standards of scholarship or conduct established by the university.

You may be admitted in one of the following ways:

Freshman Admission
Admission Requirements. If you are a graduate of a high school, academy, or equivalent, you may be admitted provided a prediction of success at CMU can be determined from your high school performance, ACT scores and all other facts included in the application.

When to Apply. We encourage you to file your application at the beginning of your senior year in high school. If you have completed high school, we encourage you to apply at least six months in advance of your anticipated semester or session.

How to Apply. You may obtain an application form from your high school counselor, the CMU Admissions Office, or apply online at https://apply.cmich.edu. An application will automatically be sent to you if you have taken the American College Test (ACT), scored well and have also indicated CMU as one of your top three choices.

To apply:
- Complete the paper application and give it to your high school counselor or use the online application.
- Be sure to include the $35.00 application fee.
- Your official school records must be sent directly to the Admissions Office.
- Entering freshmen are required to take the American College Test (ACT). Contact your high school counselor for information about the testing procedure. Send the test results to CMU.

Transfer Admission
Admission Requirements. If you are transferring from a community college, or other college or university, you will be considered for admission to CMU provided your official records to date demonstrate your ability to successfully complete academic coursework.

A student who is dismissed from another collegiate institution is ineligible for consideration at CMU for at least one semester following dismissal.

When to Apply. Please plan to apply as soon as possible, with preference for at least two months in advance of anticipated enrollment. Students should note that financial aid applicants must apply by February 15 for fall and summer and by October 1 for spring.

How to Apply. Complete an application for admission obtained from your college counseling office, from the Admissions Office at CMU, or online at https://apply.cmich.edu. Be sure to include the $35.00 application fee.
Have an official transcript from each college you have attended sent directly from each college to the CMU Admissions Office.

If you have earned less than 24 semester hours of academic credit at the time of application, have your high school send a copy of your record to our Admissions Office.

**Transfer of Credit.** Your courses from other regionally accredited colleges will be considered for transfer credit if they are relevant to a program at Central. We encourage you to review the transfer credit policy found in the Undergraduate Bulletin (see index for page number). At least sixty academic hours of your bachelor degree requirements must be earned at a fully accredited four-year, degree-granting institution like Central Michigan University.

**Transfer Credit Evaluation.** Transfer students are required to submit official transcripts directly from all previous colleges attended, at least one month in advance of their scheduled orientation. Courses and credits from institutions not declared on the application for admission will not be allowed on a Central Michigan University degree program. Willful failure to list all colleges or universities you have attended or are attending at time of application may result in dismissal from CMU.

Your Transfer Credit Evaluation showing transfer of credit and Central Michigan course numbers and equivalencies will be provided prior to registration at the required orientation and advisement program. If transcripts are not submitted early, delays in processing Transfer Credit Evaluations may be unavoidable. Students may also access the website [https://www.cmich.edu/ess/registrar/RegistrarTransferCreditEquivalency/Pages/default.aspx](https://www.cmich.edu/ess/registrar/RegistrarTransferCreditEquivalency/Pages/default.aspx) to review how courses transfer from a Michigan community college.

**College Transfer Agreements**

If you transfer from a community college in Michigan with a transcript documented as having satisfied the MACRAO or MTA Agreement, you will also have satisfied the University Program portion of the general education requirements at CMU. All other students may refer to the General Education Requirements section of the Undergraduate Bulletin for guidelines on the applicability of their transfer credit toward University Program requirements.

**Advisement and Registration for Freshmen and Transfer Students**

If you are a new freshman or transfer student, you are required to attend an on-campus orientation and advisement program prior to your first registration. Complete information is mailed to newly admitted students. Academic orientation takes place during the summer for the fall semester and in early January for the spring semester.

You will have an opportunity during orientation to meet individually with academic advisors, faculty members, classmates, and current CMU students. You will be extremely busy as you explore career options, outline your program of study, and register for your first class schedule. If you are undecided on a program of study, do not worry. You will not be alone. Our experienced staff will assist you as much as possible. There will be career information, tours of campus, and special activities to acquaint you with our university.

**Returning Undergraduate Students**

If you have previously completed coursework through Central Michigan University, discontinued your enrollment, and are now returning for additional classes, you should request registration information from the Registrar’s Office.

**Rematriculation**

A student whose eligibility to enroll (matriculation) has been canceled for academic reasons may apply for rematriculation to the Committee on Rematriculation. Students who have been suspended (applies only to first semester freshmen or transfers) may apply for immediate rematriculation. Normally, petitions for rematriculation for students who have been dismissed will not be considered until 12 months after the student has been dismissed.

A student who has been dismissed twice will be rematriculated only under extraordinary circumstances and then not until 24 months after the student’s second dismissal.

Students should plan to return for Fall or Summer sessions as readmission into the University for Spring semester creates course scheduling difficulties for the student.

Permission to return is not automatic, but is based upon the merits of each case. Students may be expected to show academic improvement at the community college level. Students will be expected to show solutions to the difficulties that prevented them from achieving academic competence.

A written application, payment of the rematriculation application fee, and a personal interview are required. Supporting documents may also be requested. Applications may be obtained from the Academic Advising and Assistance Office. Completed applications and the receipt for payment of the rematriculation application fee should be submitted at the time of the personal interview. The fee may be paid at the Student Service Court in the Bovee University Center. Interviews for students seeking to return for the Fall semester will be held in May and June; interviews for students seeking to return for Summer semester will be held in April. Last minute interviews are not conducted.

**Non-Degree Guest Admission**

**Admission Requirements.** If you are a student who is regularly matriculated at an accredited college or university and in good academic standing, you may be admitted as a guest. A guest student is urged to have the courses that he or she plans to take approved in advance by the home institution to which the student plans to transfer the CMU credits. A guest student must have at least a C average at the home institution in college-level courses. Your guest admission is valid for only one university semester or session at a time. Guest applicants who have completed fewer than 30 semester hours to date may be requested to provide additional evidence of academic readiness.

**When to Apply.** You should apply well in advance and at least one month prior to the start of classes.

**How to Apply.** Guest applications are available at all Michigan colleges or by request from the CMU Admissions Office, or at [https://apply.cmich.edu/](https://apply.cmich.edu/). If you wish to register as a guest in more than one semester or session, you must submit a new guest application for each session in which you wish to take courses.

**Non-Degree Special Admission**

**Admission Requirements.** If you hold a bachelor degree or a higher degree from an accredited college or university, you may be admitted to the university as a non-degree special student upon presentation of credentials showing that you hold such a degree or degrees. If you are 21 years of age or older and you are unable to furnish the usual admission credentials, you may be admitted as a non-degree special student with the permission of the Director of Admissions. Before a non-degree special student can qualify for a degree or certificate from this university, you must have met the requirements for regular admission.

**When to Apply.** If you are considering non-degree special admission, you should apply well in advance and at least two weeks prior to the start of classes.

**How to Apply.** The regular application form available in each Michigan high school or the CMU Admissions Office may be used for non-degree special admission. Students should check non-degree status on the application.

**Dual High School Enrollment**

Prior to your graduation from high school, you may be admitted as a non-degree high school concurrent student. This admission allows selected students to extend, enrich, and broaden their educational experiences, while completing high school requirements.

(continued)
Admission Requirements. Interested students should have at least junior standing. Occasionally special exceptions are made by the Director of Admissions. Your high school record to date must satisfy the requirements for new Central Michigan University freshman admission. A recommendation is required from a high school counselor.

When to Apply. We encourage concurrent students to complete their application well in advance and at least one month preceding the start of classes.

How to Apply. You will need to complete all the application steps for regular freshman admission described in this section.

Senior Citizen Program
CMU offers a program for Senior Citizens who are 60 years of age, prior to the start of the semester in which they are enrolling, to register for on-campus undergraduate classes on an audit basis. There will be no charge for tuition or other course fees. Enrollment is based on space availability in the course(s) and with the approval of the instructor. Contact the Registrar’s Office, Warriner 212, 989-774-3261 for further information.

Undergraduate Certificates
Any currently enrolled undergraduate degree-seeking student is eligible to enroll in any undergraduate certificate program, but a certificate is not automatically earned by completing the requirements of a degree program, general education, major or minor. Students should consult with a departmental/unit advisor.

Non-degree seeking students must meet the existing admission standards to the University for Non-degree Special Admission for on-campus enrollment or Special Admission for Global Campus enrollment. The student must consult with a departmental/unit advisor. The certificate will be noted on the transcript upon completion of the certificate program.

For more information, see the Index under “Undergraduate Certificates” for page numbers.

International Student Admission
For information on CMU international programs, contact the Office of International Affairs (OIA), Ronan Hall 330, 989-774-4308 (https://www.cmich.edu/office_provost/InternationalAffairs/Pages/default.aspx); or the English Language Institute, Ronan Hall 350, 989-774-2567 (https://www.cmich.edu/colleges/chsbs/Centers/ELI/Pages/default.aspx).

Central Michigan University welcomes applications from international students. Students interested in admission for undergraduate study should complete the International Student Application for Admission. Applications can be completed online at https://apply.cmich.edu/Home/International and all other required documents should be sent to the Office of International Affairs for processing at least 3 months prior to the intended semester of enrollment. Students interested in admission to the English Language Institute should complete the English Language Institute application. Additional information regarding admission requirements for undergraduate and English Language Institute study is listed below.

University Admission for Undergraduate Study
1. Complete and submit an International Student Application for Admission (https://apply.cmich.edu/Home/International) with the $35 application fee (credit card, check or money order written from a U.S. bank).
2. Submit official transcripts from all secondary and post-secondary institutions attended with English translations, if necessary.
3. Prospective international students who are not citizens or permanent residents of a TOEFL-exempt country must demonstrate proficiency in English. A list of TOEFL-exempt countries is available on the OIA website (see above). Prospective students may demonstrate proficiency by any one of the following methods:
   a. Attain a score of 550 PBT, 213 CBT, or 79 iBT and above on the Test of English as a Foreign Language (TOEFL) or a score of 6.5 and above on the International English Language Testing System (IELTS).
   b. Through the University’s International Bridge Program. A link to this is available on the OIA website listed above. Students admitted to the Bridge Program must take the ELI Placement Test upon arrival at the University. If a student’s ELI Placement Test Results show that he or she must take Intensive English Program courses, the student must satisfactorily complete all required Intensive English Program courses before beginning his or her undergraduate degree coursework. If a student’s ELI Placement Test Results show that he or she is under the Dual Program category (https://www.cmich.edu/colleges/chsbs/Centers/ELI/Programs/Pages/default.aspx), the student may take a combination of academic and English Program courses. If a student’s ELI Placement Test Results show that he or she does not need to take any ELI courses, the student will take a full load of undergraduate academic courses.
   c. Complete ELS Level 112. Prospective students who complete Level 112 of ELS’ English for Academic Purposes program will be considered to have demonstrated the required level of proficiency in English for admission to Undergraduate Study.
4. Prospective International students seeking F-1 or J-1 status must demonstrate adequate financial support as determined by the United States Department of Homeland Security regulations. A certified bank statement must accompany the application documenting the ability to cover one full academic year of residency at CMU Office of International Affairs. Upon admission to CMU and when proof of financial support has been received, a Form I-20 or Form DS 2019 will be sent to the student to assist them in acquiring a student visa.

English Language Institute Admission
Complete and submit an English Language Institute (ELI) Application for Admission with the $35 application fee (credit card, check or money order written from a U.S. bank).

International students seeking F-1 or J-1 must demonstrate that they have adequate financial support as determined by the United States Department of Homeland Security regulations. A certified bank statement must accompany the application documenting the ability to cover one full academic year of residency at CMU.

English Language Institute students will take an English placement test upon arrival at the university to determine which English courses must be taken. After demonstrating English proficiency, as determined by the ELI policies, and if university admission requirements are satisfied, these students may be granted admission to the program of their choice.

Graduate Admission
All graduate programs and admissions policies and procedures appear in the Graduate Bulletin and at www.grad.cmich.edu. Students interested in graduate programs at CMU are encouraged to contact the College of Graduate Studies at 100 Foust Hall, by email at grad@cmich.edu, or by telephone at 989-774-4723.

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CMU offers a program for Senior Citizens who are 60 years of age, prior to the start of the semester in which they are enrolling, to register for on-campus undergraduate classes on an audit basis. There will be no charge for tuition or other course fees. Enrollment is based on space availability in the course(s) and with the approval of the instructor. Contact the Registrar’s Office, Warriner 212, 989-774-3261 for further information.

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New Student Orientation

Central Michigan University’s orientation program provides you and your family with a comprehensive introduction to the university prior to your first registration for classes. Whether you are a new freshman or a transfer student from another college, you will get answers to your questions and more at an orientation session. All new freshmen, transfer students, and family members are required to attend orientation to finalize admission.

Orientation occurs in two phases:

**Academic Orientation**

Academic Orientation is designed to provide specific information about CMU academic programs, academic planning and first semester registration. All new freshmen, transfer students, and family members are offered several choices of session dates and times prior to the start of first semester classes.

**Campus and Community Life Orientation**

Your first university welcome meetings occur during Campus and Community Life Orientation. Immediately prior to start of the fall semester, new students are invited to an extensive offering of programs, special events, and informational meetings focused on you and your success in the Central Michigan University community.

What will new freshmen learn at orientation?

When you enter Central Michigan University, you will have to find your way around campus and live with a new set of roommates. You will have to find the library and enroll in classes. These topics, and many more, will be discussed in an orientation session. For example, you will:

- Meet classmates, student leaders, professors and academic advisors to learn about the university experience;
- Select and register for your first semester’s classes;
- Explore career, major and/or minor interests;
- Meet with representatives from university support offices, such as Scholarships and Financial Aid, Student Employment Services, and Residence Life.

What will transfer students learn at orientation?

We recognize that the needs of new Central Michigan University transfer students are very specific. At orientation, you will have an opportunity to have general as well as detailed university questions answered. Students attending transfer orientation will:

- Register for first semester classes with the assistance of academic advisors and faculty advisors;
- Explore major, minor, and degree requirements;
- Visit with representatives from university support offices such as Scholarships and Financial Aid, Student Employment, and Residence Life.

Family Member Orientation

Parents, guardians, and spouses of new students often appreciate the opportunity to accompany their students to campus for academic orientation. This unique opportunity to experience life at Central Michigan University is highly recommended. Family members who wish to attend orientation will be scheduled for the same orientation date as their student. To provide the most specific information, parent and student meetings are held separately.

Orientation for family members of new students will include:

- Discussion with staff from CMU student service offices such as Career Services, Scholarships and Financial Aid, Academic Advising, and Health Services;
- Tour of CMU campus.

Scheduling an Orientation Session

Scheduling an orientation session is easy. Upon admission to Central Michigan University, detailed orientation scheduling information is mailed to you. You will be required to submit the $175.00 new student orientation fee and request an orientation date that fits your schedule.
Planning Your Academic Career

Beginning Your Studies

Making Choices as a Student
You have many academic decisions to make. You will choose a major and possibly a minor, and enroll for courses which lead toward a desired degree. Students enrolled on the Mt. Pleasant campus will be required to complete an authorization for a major or sign a statement of intent to major by the time they earn 56 hours of credit. Some students have already made these choices when they begin their university studies, but most appreciate the opportunity that CMU offers to sample many areas of study through the University Program portion of the General Education Requirements. The University Program is required of all students and is explained later in this Bulletin. While taking University Program classes, you prepare yourself to make career and life choices from a broadened perspective, while fulfilling needed General Education requirements for graduation.

Your Advisors
As a freshman or a transfer student, you will receive individualized advisement on course selection during academic orientation. The registration process is computer assisted to help you obtain preferred courses. The Academic Advising and Assistance Office (Ronan Hall 250, 989-774-7506) offers general advisement in the areas of the University Program, Competencies, and Degree Requirements. When you are ready to consider a major, arrange an appointment with a faculty advisor in the department teaching courses of interest to you. You may want to visit with faculty in several departments, but once you have selected a major, you will be assigned a faculty advisor in that department. There are additional offices to help you:

Career Services (Ronan Hall 240, 989-774-3068) offers professional assistance in career decision making.

The Undergraduate Academic Services area of the Registrar’s Office (Warriner 123, 989-774-3504) provides a number of services. Personnel evaluate academic credits earned at other schools, provide academic counseling for degree and graduation requirements, and audit students’ records for graduation.

Your Schedule
Academic programs and course offerings of the university are in a constant process of change and revision in response to advances in knowledge, and to changing student needs and societal demands. In accordance with this process, academic programs and courses may be changed, deleted, or rescheduled. The time you will need to complete a degree depends on your decisions concerning such variables as the academic load you will carry, whether or not you will attend summer sessions, and how well you use academic advisement services. You may complete a bachelor’s degree in less than four years or it may take you longer. Conditions producing high demand for certain courses and programs where resources are limited may require some students to take more than the estimated minimum amount of time to complete their programs. There may also be special requirements for certain degrees as well as major and minor programs.

These requirements may include a particular grade point average, specific demonstrated competencies, or other prerequisite experience as specified in the Bulletin. You should be aware that students who have entered academic programs may be dropped or suspended from these programs for unsatisfactory academic performance or for other program-related problems.

You are urged to discuss your progress toward a degree periodically with your academic advisor as you continue your program of study at CMU.

Progress Toward Your Degree
The rate at which you move toward completion of your degree and how efficiently you progress depend largely on the decisions you make. Making use of the academic advisement services available on campus is strongly recommended. The advisors can help you clarify your plans, as well as help you plan the most efficient route toward your degree. You can also check your own progress on the Advising Workbench button on https://centrallink.cmich.edu/. It is still important to see your advisor for assistance and verification of your progress through the Advising Workbench.

Academic Load
The following is a typical academic load for a CMU undergraduate:

<table>
<thead>
<tr>
<th>Semester/Session</th>
<th>Typical Academic Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td>14 - 18</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>14 - 18</td>
</tr>
<tr>
<td>3 weeks of Summer Session</td>
<td>3</td>
</tr>
<tr>
<td>6 weeks of Summer Session</td>
<td>5 - 7</td>
</tr>
<tr>
<td>12 weeks of Summer Session</td>
<td>12 - 14</td>
</tr>
</tbody>
</table>

A degree requires a minimum of 124 hours of credit. Some degrees and majors have minimums above 124. In order to graduate within four years with a degree, a student must average at least 31 hours of credit each year.

Abilities and circumstances of students vary greatly. Each student should carefully weigh these factors when deciding the number of hours to carry during a semester or session as well as the length of time to be expended in fulfilling requirements for a degree. Some students will carry lighter loads and take longer to fulfill the requirements.

No undergraduate student will be permitted to be enrolled in more than 21 credits per semester. Exceptions may be granted with approval of the dean or his/her designee.
First Year (Freshman) (0-25 cr. hrs.)
- Meet with your General Academic Advisor during your first semester to clarify requirements on the University Program, competencies, or any other questions you have encountered since academic orientation. Review your Bulletin carefully.

At CMU, several advising services, classes, and self assessment instruments are available to assist you in your academic and career decision making. Some suggestions include:
- Talking to CMU advisors in academic departments, Academic Advising and Assistance, or Career Services regarding academic programs that interest you.
- Considering taking CED 101 (1 credit) Career and Self Exploration.
- Participating in various self assessment exercises designed to match your interests and abilities with academic and career opportunities.
- CMU offers the following personalized and computerized self assessment exercises: Focus Program and Strong Interest Inventory (see Career Services website: www.careers.cmich.edu).

Business:
- Contact Business Student Services (Grawn Hall 105, 989-774-3124) for information regarding the College of Business Administration or to schedule a meeting with a business advisor.

Communication and Fine Arts (Art, Broadcast & Cinematic Arts, Communication, Journalism, Music)
- Contact the advisor in Moore 221A, 989-774-7506.

Health Professions
- Contact the advisor in Kesseler Hall 130, 989-774-6601.

Humanities and Social & Behavioral Sciences (English, Foreign Languages, History, Military Science, Philosophy and Religion, Political Science, Psychology, Sociology, Anthropology & Social Work)
- Contact the advisor at Anspach 212A, 989-774-7506.

Pre-professional Studies (pre-law, pre-med, etc.):
- Talk with the appropriate pre-professional advisor (Advisors are listed in the Course Search & Registration (www.cmich.edu/Registrar).

Teaching:
- Visit the EHS Center for Student Services, EHS 421, to learn more about teacher education programs and schedule a meeting with a teacher education academic advisor. Website: www.ehs.cmich.edu/css; phone: 989-774-3309.

Science, Technology, Engineering, Mathematics:
- Contact College of Science and Technology Student Services for information or to schedule a meeting with an advisor. (IET 126B, 989-774-7506; www.cst.cmich.edu/studentsuccess)

Second Year (Sophomore) (26-55 cr. hrs.)
- Continue your search for a major and/or minor.
- If you have decided on your major and/or minor, consult with the appropriate departmental advisor(s) to authorize the major/minor and define requirements for graduation.
- Continue coursework on the University Program, competencies, and major/minor. Most competency requirements must be completed by 56 credit hours. Review your progress on completion of the University Program and competency requirements with your general academic advisor. Search for a study abroad or an internship opportunity by contacting CMU’s Office of International Affairs (Ronan Hall 330, 989-774-4308) or an internship coordinator in Career Services (Ronan Hall 250, 989-774-3068). Your academic department of choice may also have advice for you.

Teaching:
- Follow the procedures for admission to the Teacher Education Program.
- Schedule an appointment with your academic advisor.
- Visit the Center for Student Services website at www.ehs.cmich.edu/css for admission information.

Business:
- Complete the requirements for admission to the College of Business Administration outlined in the Undergraduate Bulletin.
- Meet with a CBA advisor in Grawn Hall 105, 989-774-3124; www.cmich.edu/css.

Science, Technology, Engineering, Mathematics:
- Meet with a CST advisor for information about majors and programs. (IET 126B; 989-774-7506; www.cst.cmich.edu/studentsuccess)

Third Year (Junior) (56-85 cr. hrs.)
- Authorize your major and/or minor in the appropriate department(s) if you have not done so.
- Once you have your major and/or minor authorized, schedule a pre-graduation audit appointment in Undergraduate Academic Services, Warriner 123, 989-774-3504. An Assistant Director will review your individual course of study and determine remaining graduation requirements. Register with Career Services (Ronan Hall 250, 989-774-3068).
- Apply for admission into an Accelerated Master's Degree Program if applicable.

Teaching:
- If you have completed Cycle I, and if you plan to student teach during the following fall semester, apply for student teaching in January (see Standards Leading to Teacher Certification in the Index for page number).
- Follow the procedures for admission to the Teacher Education Program.
- Schedule an appointment with your academic advisor.
- Visit the Center for Student Services website at www.ehs.cmich.edu/css for admission information.

Fourth Year (Senior) (86-124 cr. hrs.)
- Once you have earned 86 credit hours, apply for graduation at the Undergraduate Academic Services Office, Warriner 123, 989-774-3504 (see Requirements for Graduation in the Index for page number). Questions about graduation requirements should be referred to this office.
- Complete graduation requirements as indicated on your Graduation Audit. Develop skills for your job search at Career Services (Ronan Hall 250, 989-774-3068). Skill development workshops and information are available regarding job search techniques, interviewing skills, and portfolio development.
- If you are interested in attending graduate school, you should talk to faculty members in the field you would like to pursue. They will have information on how to go about selecting, applying to, and preparing for graduate school.
- If you are interested in attending graduate school, you should talk to faculty members in the field you would like to pursue. They will have information on how to go about selecting, applying to, and preparing for graduate school. You may also contact the College of Graduate Studies for information on all graduate programs available at CMU by visiting www.grad.cmich.edu, sending an email to grad@cmich.edu, calling 989-774-1708, or visiting Graduate Student Services in Foust 100.

Special Notes for Transfer Students:
- During your first semester, check with the Registrar’s Office to be sure that a final transcript from each of your previous colleges is on file.
- If you have questions following orientation, meet with a general academic advisor or college advisor to review your transfer credit evaluation, University Program and competency requirements.
- Review the above steps to verify your progress toward completion of all CMU degree requirements.
Central Michigan University’s comprehensive advising and counseling services offer an important resource for all undergraduate students. Academic advisors make every effort to familiarize students with university requirements, career, and academic information. Students with emotional or personal concerns have opportunities to work with professional counselors (see Counseling Center in the Index for more information). Using these support services is easy, convenient and critical to success.

All new freshmen and transfer students register for first semester classes at Academic Orientation. After that, students are urged to regularly discuss academic progress with any or all of the following academic support services.

**Academic Advising and Assistance**

The Academic Advising and Assistance office provides academic guidance, assistance and support to undergraduate students through advising, tutoring and academic support classes. The university academic probation, suspension and dismissal policies are monitored by this office. Staff members are also responsible for the planning and delivery of the undergraduate orientation program. The website is https://www.cmich.edu/ess/academic_advising_assistance.

**General Academic Advisors.** All entering undergraduate students are assigned a general academic advisor. Advisors assist entering and returning students with course selections, fulfilling General Education and other degree requirements. General Academic Advisors also offer advice on career and academic decision making, transfer credit, study skills and referrals to specific on-campus services.

**Student Success Centers.** One of the features of the Academic Advising and Assistance office is the convenient access students have to the office services. Four Student Success Centers are conveniently located in residence hall quads, enabling new students to meet with advisors where they live. Since General Academic Advisors also assist off-campus and undecided upper-class students, appointments are scheduled in Student Success Centers. A centralized advising and assistance office is located in Ronan Hall 250, to offer comprehensive services to students in the area of tutoring or on-campus referrals.

**Academic Assistance.** Assistance is available to provide help to students who, in the process of earning a degree, find that they need to know more about study skills and reading techniques. Staff members provide assistance for students who are experiencing academic difficulty with course content by providing tutorial help.

**Tutoring.** Many students find that they need some assistance in one or more subject areas. Tutoring is available for undergraduate students. Some subjects are considered to be traditionally difficult, and walk-in tutoring is provided in some of these subject areas. The Math Assistance Center is open to students in all undergraduate mathematics courses and the Writing Center is available to help students with all types of writing. Other subjects are tutored in small groups or one-on-one. Tutoring is free, and to obtain a tutor, students must visit Academic Advising and Assistance, Ronan Hall 250.

**Academic Skills Courses.** Courses in study skills are offered to help students gain a wide range of study techniques. Skills covered include time management issues, motivation, note-taking skills, test-taking techniques, stress management and problem solving methods. A course in reading improvement is offered to assist students in comprehension and critical reading skills.

**Academic Departmental Advising**

When students are ready to consider a major or minor program, it is recommended that an appointment be made with a faculty advisor in the department teaching courses of interest. Students may want to visit with faculty in several departments before making a decision. Once a major/minor is selected, a faculty advisor is assigned by the academic department.

**Undergraduate Academic Services**

Undergraduate Academic Services, a branch of the Registrar’s Office, is designed to assist and advise students regarding academic concerns. Personnel in this office are prepared to assist students with concerns regarding interpretation of policies and procedures in the university bulletin, degree and graduation requirements, and the transfer of credit to CMU.

**Pregraduation Audit.** Students may schedule an appointment for a pregraduation audit after their major and minor are authorized. An appointment will be made with an Assistant Director who will review their individual courses of study and determine remaining graduation requirements. This appointment is ideally scheduled during the student’s junior year (56 credits) when an advisor can best help with planning the completion of remaining requirements and clarify any additional policies or procedures.

**Transfer Credit Evaluation.** This area of Undergraduate Academic Services receives and reviews transcripts for evaluation of undergraduate transfer credit. Students may schedule an appointment with the Coordinator of Transfer Credit if they have questions regarding transfer credit.

Transferability of coursework from Michigan community colleges as well as partial listings from other colleges and universities can be viewed at www.cmich.edu/Office_of_theRegistrar/Transfer_Credit_Equivalency.htm. Students planning to complete coursework at colleges not listed should check with this office in advance.

**Graduation Audit.** During the semester or session in which students will complete 86 credit hours, an application for graduation should be submitted. You may obtain an application for graduation at the Student Service Court (Bovee University Center 119) or Undergraduate Academic Services (Warriner Hall 123, 989-774-3504). An official graduation audit indicating remaining requirements for your degree will be e-mailed to you. Appointments may be made to confer with the Graduation Coordinator regarding remaining questions, concerns or clarifications.

Applications are processed in the order they are received for each graduation. Submission should be based on the following timeline: September 15 for May graduation, January 15 for August graduation, and April 15 for December graduation. For further information, refer to “Requirements for Graduation” in this Bulletin.

In the process of earning a degree, many students find it helpful and necessary to seek assistance with specific questions.

Contact the Undergraduate Academic Services Office, Warriner Hall 123, 989-774-3504.
Office of Student Success
230 Ronan Hall
989-774-3401
oss@cmich.edu

The Office of Student Success provides students with support through personal coaching services to aid the management and completion of academic requirements. Together with a coach, students work to set and attain the highest standards of academic excellence by developing action plans to help optimize their learning experiences and opportunities. Coaching provides a structured, ongoing process to aid navigation of the university, support achievement of academic milestones like declaring a major, and graduation in four years.

Students and coaches often focus on topics that include navigating the process to gain admission to a competitive program of study, declaring or changing a major or minor, helpful study strategies, preparing for exams, managing priorities and time, financial planning, and effective reading and note-taking practices.

Coaching is available to all CMU students and each session is uniquely personal. Coaching takes place over multiple sessions held in person or virtually and build upon personalized plans and results over time.

Testing & Diagnostic Services

Center for Community Counseling and Development. The Center for Community Counseling and Development provides counseling and assessment services for community residents, area schools, and Central Michigan University students. Advanced graduate students in counseling ordinarily perform these services under the supervision of the counselor education faculty members. Among the services provided are: individual counseling for children, adolescents and adults; family and couples counseling; play therapy for children; general counseling for emotional problems and life adjustment concerns; career and employment counseling; referral help in finding appropriate services for identified problems; and consultation with community agencies and schools.

In addition to serving the needs of referrals during the school year, the Center for Community Counseling and Development provides counseling and consultative services during the summer months. The clinic is administered by the Department of Counseling and Special Education (989-774-3532; EHS 322).

Psychological Training & Consultation Center. The Psychological Training and Consultation Center (PTCC) is a CMU training clinic which offers low cost psychological services, including psychotherapy and psychological assessment, to CMU students and community residents. Services are provided by CMU Psychology graduate students who are training at PTCC, and they are supervised by Psychology Department faculty. In addition, specialty services are offered through PTCC, including the Violence Reduction Treatment Program, Parent-Child Interaction Therapy, Trauma and Anxiety Disorders Clinic, Neuropsychological Assessment Clinic, School Psychology Specialty Clinic, and the Learning Acceleration Program. For further information about any PTCC program, or to request services, call 989-774-3147.

Speech, Language, and Hearing Clinics. The Speech, Language and Hearing Clinics are operated by the Department of Communication Disorders at CMU and at various ancillary facilities in the Central Michigan area. These clinics are part of the Carls Center for Clinical Care and Education. The clinics emphasize complete programs in evaluation, diagnosis, and rehabilitation of children and adults with communication disorders. The academic and clinical service programs in Audiology and Speech-Language Pathology are nationally recognized by full accreditation from the Council of Academic Accreditation of the American Speech-Language-Hearing Association. In addition, the Audiology program is the first in the USA to be nationally recognized by full accreditation from the Accreditation Commission for Audiology Education of the American Academy of Audiology.

Each summer, the Department of Communication Disorders operates a five-week coeducational specialty program on campus for children and adolescents up to the age of 18 years, with speech, language, voice, fluency and hearing disorders. Participants receive approximately 60 hours of therapy at the Carls Center for Clinical Care and Education. Since its inception in 1946, this specialty clinic has served thousands of children with a wide range of communication disorders. Enrollment in this clinic is approximately 75 children each summer. The staff is comprised of university faculty; practicing speech, language, and hearing professionals; graduate students; and selected undergraduates.

The Department of Communication Disorders offers students in Audiology and Speech-Language Pathology diverse clinical opportunities. Practicum experience may include medical care facilities, educational settings, preschool language programs, hospital clinics, voice clinics, otolaryngologists’ offices, and adult work activity centers. Students completing the master’s degree program in Speech-Language Pathology or the professional doctoral degree (Au.D.) in Audiology fulfill the academic and clinical requirements for the Certificate of Clinical Competence issued by the American Speech-Language-Hearing Association.

The Carls Center for Clinical Care and Education, Health Professions Building, 989-774-3904.
The primary goals of Career Services are to assist individuals in recognizing career development as a lifelong process and to develop decision-making and job search skills that are useful throughout life. Career development is an important element of an individual's sense of identity and personal happiness. Successful career development is dependent on two factors: self-knowledge and knowledge of the world of work. The likelihood of career success is increased dramatically when individuals invest incremental effort over a significant period of time. We believe you should continue the process of career exploration and selection during your first semester and throughout your CMU experience. By utilizing Career Services, you will enhance your ability to make an informed career decision. All of us at CMU are committed to providing you with quality experiences and helping you prepare for your career.

Support Services
Advising. A professional staff member in Career Services is available to advise students in all fields of study. You may call to make an appointment with an advisor to discuss industry trends, salary trends, available resources, time frames for conducting a job search, preparations for your job search, and information about internships. You are encouraged to communicate with a career advisor throughout your CMU career beginning with your first semester. Frequent contacts with an advisor will enhance the quality of your career development and increase your knowledge of resources and job market trends. Visit www.careers.cmich.edu for information on planning for career success.

Resume Critiques. Career Services offers individual assistance in the development of this most critical tool.

Mock Interview Program. This program is designed to provide an opportunity to practice your interviewing skills prior to actual scheduled interviews with employers. This practice interview is a video taped session with an intern who is trained to provide feedback about verbal and nonverbal techniques.

Register. Searching for Internships, Employer Referrals, and On-Campus Interviewing. Individuals who are actively pursuing professional employment or internship opportunities register with Career Services by using eRecruiting. This system is available to undergraduates, graduating seniors, graduate students, and alumni. Registering allows you access to the on-campus interviewing program, internships, the employer referral program, and our job database.

Assessments (Career “Tests”). Try the free FOCUS assessment tool to help clarify your interests, values, skills, personality, education preferences and leisure time interests. Use this information as a basis for further discussions about your choice of major and future with a career counselor, friends, and family members. Additionally, this tool can be used to research job titles that fit your personal profile. Also available through Career Services, for a nominal charge, are the Myer's-Briggs Type Indicator (MBTI) and the Strong Interest Inventory (SII). You must make an appointment with a career counselor to receive and discuss your results.

Career Events. There are numerous Career events held throughout the academic year. These events are focused on the following career-related activities:
- Career/Job Fairs
- Employer Spotlights
- Career preparation/Transition from Student to Professional
- Deciding on a major
- How a major “fits” into the world of work.

For a current list of Career Events, go to www.careers.cmich.edu.

On-Campus Interviewing Program
This program is designed to give students access to a well-established base of employers who schedule and conduct interviews on campus for a variety of entry-level positions. A list of employers and their interview dates is available on our website (www.careers.cmich.edu), in our Grawn Satellite office and in Career Services.

For more information, contact Career Services, Ronan Hall 240, 989-774-3068, or visit us online at www.careers.cmich.edu.
Dates and Procedures

Information regarding dates and procedures for on-campus registration for a particular semester or session is published online by the Registrar’s Office at https://www.cmich.edu/ess/registrar.

Registration information and the Course Search & Registration will be available on the Registrar’s web page in February for Summer Sessions, in March for Fall Semester, and in October for Spring Semester.

The academic year at CMU is divided into the following sessions: two semesters of sixteen weeks each, and two summer sessions of six-weeks each with concurrent three-week and twelve-week sessions. For opening dates, see the university calendar at the front of this Bulletin.

Some Saturday and evening classes are offered on campus each semester for students who cannot attend at other times. If you wish to take a class for graduate credit, be sure that you are admitted to the College of Graduate Studies. Information regarding the types of graduate admission are given in this Bulletin. For additional information, contact the College of Graduate Studies, 100 Foust, 989-774-GRAD.

Fees and Deadlines

New Freshmen and Undergraduate Transfer Students. New freshmen and undergraduate transfer students are expected to follow directions in the admissions letter concerning the enrollment deposit. The deadline for payment of the New Student Orientation Fee and refund is stated in the letter.

Extended Credit Courses. Course fees will be collected at the organization meeting of the class.

Change of Registration (Drop/Add)

Courses may be dropped using CentralLink with a full cancellation of tuition and fees any time before the course meets a second time. Courses can be added only during registration. Refer to the appropriate Course Search & Registration for registration dates and procedures.

For Global Campus and CMU Online classes, registration, drop and withdrawal dates see http://global.cmich.edu/courses/drop-withdraw.aspx.

Withdrawing from a Class After Drop/Add Period

1. Students are allowed to withdraw from an individual course using CentralLink if they do so before the published deadline. The student will receive an e-mail that the withdrawal has been received by the Registrar’s Office.

2. At the time of the withdrawal, the student will be asked to indicate a reason for withdrawal and indicate their attendance in the course, either never attended or the last date attended.

3. Students will receive W’s as an indicator of withdrawal through the tenth week of the Fall or Spring semester or through the midpoint of all courses shorter than one semester. No individual course may be withdrawn after this time.

4. Faculty will also be sent an e-mail regarding the withdrawal and the attendance reported by the student. The instructor will notify the Registrar’s Office if he/she shows a different attendance period than reported by the student. Also in cases involving academic dishonesty, the instructor will notify the Registrar’s Office and the course will be reinstated. The final grade determination shall be left to the discretion of the instructor.

5. Under unusual circumstances, a student may appeal to the Registrar for exceptions to this policy. If a waiver is made, the Registrar shall notify the instructor of this action. The Registrar’s actions may be appealed to the Executive Director for Academic Advising and Assistance.

Semester Withdrawals

Information on completely withdrawing from the university for a semester appears in the Academic Policy and Procedures section of this Bulletin.

Internships, Practica, Independent Studies, Study Abroad, Theses

Students registering for internships, practica, independent studies, study abroad, or theses should be aware that these courses ordinarily require permission of the instructor and/or department chairperson prior to registration. Specific registration requirements for each course will appear in its Bulletin description; these requirements must be observed.
Past Due Policy for Fall Semesters Only

Any student registered for a Fall semester with a past due balance of $200.00 or greater will be removed from all registered courses on August 1st. All students will receive prior notification of the registration removal after the July billing statements have been issued (approximately the first week in July). If past due balances are not brought current after notification is sent and before August 1st, registration from courses for the Fall semester will be removed.

Tuition and Fees

Tuition and fees are established by the Board of Trustees and are subject to possible change. At the time of this printing of the Bulletin, tuition and fees had not been established for the 2015-16 academic year. Contact the Student Account Services and University Billing Office at 888-610-4991 for updated information, or see https://go.cmich.edu/tuitionandaid/undergraduate/Pages/costs.aspx for updates.

Tuition and fees for Registration are to be paid in full when billed. Any past due financial obligations must be paid prior to the time of registration. Registration will not be allowed until such obligations are met. CMU has a convenient and affordable tuition payment plan. The payment plan is an interest-free way to help you pay for college. You can enroll online for this option, which allows you to have more flexibility with tuition payments. For more information, ask a Student Service Court Advisor located in Bovee University Center 119 or see https://www.cmich.edu/fas/fsr/student_acct_university_billing/SASUBCMU-PaymentPlan/Pages/default.aspx.

Tuition Rates* for On-Campus Courses

<table>
<thead>
<tr>
<th>Level of Courses</th>
<th>14-15 Rates Per Credit Hour*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Michigan Residents</td>
</tr>
<tr>
<td>Undergraduate students:</td>
<td>385.00</td>
</tr>
<tr>
<td>Global Campus/Online (UG)</td>
<td>387.00</td>
</tr>
<tr>
<td>Master’s/Specialist:</td>
<td>507.00</td>
</tr>
<tr>
<td>Doctoral:</td>
<td>583.00</td>
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</tbody>
</table>

*2015-16 tuition rates for incoming freshmen and transfer students will be set prior to the start of the academic year.

Application Fees

Undergraduate:
• $35.00 to be submitted with the application form.
Graduate:
• $35.00 for U.S. citizens and resident aliens to be submitted with the application form.
• $45.00 for international students to be submitted with the application form.

Rematriculation:
• $35 to be submitted with the application form.

New Student Orientation Fee

A $175.00 New Student Orientation Fee is assessed to all newly-admitted undergraduate students for new student advisement and orientation.
Financial Information

Late Registration Fee
An additional fee of $100.00 will be charged to all students registering on or after the first day of classes for the semester or session.

Non-Payment Tuition Charge
Payment for tuition must be received by the stated due date or the student will be assessed a $100.00 Non-Payment Tuition Charge in addition to a $30 monthly late fee.

Returned Check Fee
A $25.00 handling fee is charged for checks returned by the bank (i.e., insufficient funds, account closed) which were presented to the university. Students may be involuntarily withdrawn from all classes if returned checks intended to cover tuition and/or past-due balances are not repaid as directed in the Notice of Returned Check letter. This letter will be mailed from the university upon receipt of a returned check.

Auditing Course Fee
Students who attend classes but do not desire credit pay the same fees and are governed by the same regulations as students desiring credit.

Special Course Fees
Many courses are approved for special course fees that must be paid in addition to tuition to cover costs of materials and services supplied to students. All courses with special fees will have the amount identified next to the course in the special fees column of each Course Search & Registration.

Global Campus Classes. For information regarding fees for Global Campus Programs and Educational and Professional Development, please contact the Global Campus office at 989-774-3865.

Field Trips. Expenses involving field trips in a class may be prorated among members of the class.

Excess Materials. Students using materials in excess of those furnished by the departments of Chemistry, Human Environmental Studies, Engineering Technology, and Journalism will be charged for the cost of those materials.

Flight Training. Students enrolled in flight training courses will be charged for aircraft and instructor time at rates established by the flight school.

Study Abroad Administrative Fee. CMU students enrolling in a study or internship program abroad pay a $150 administrative fee to the Office of International Affairs. Students not currently enrolled at CMU pay a $300 administrative fee.

Competency Test Fee - General Education Program
A schedule showing the fee for each test which may be used to meet the competency requirements for the General Education Program is maintained in the Computer-Based Testing Center at https://www.cmich.edu/office_provost/AcademicAffairs/CBTC/Pages/default.aspx.

Credit by Examination Fee
The credit by examination fee is calculated according to the tuition rates in effect, based on resident/non-resident and undergraduate/graduate status of the student.

Graduation Fee
- Undergraduate - No application fee.
- Graduate - Application for graduation fee is $35.00 (per degree).

Transcript Fees
Five official transcripts per week are free, however there is a $10.00 charge for priority (same day) service. Transcripts are available upon receiving a written, hand-signed request from the student. Transcripts of students with financial obligations to the university are not released until the obligation is paid.

Diploma Replacement Charge
$25.00 - Bachelor’s, Master’s, and Specialist’s degrees
$35.00 - Doctoral degrees and Graduate Certificates

Library Fees
Overdue reserve material:
- Two-hour reserve materials: $1.00 first hour, 25 cents each successive hour.
- Other reserve materials: $1.00 first day, 50 cents each successive day.

All Other Overdue Books:
- $5.00 charge for each overdue item. Replacement cost of the purchase price of the item or $60.00 if the purchase price is not available plus $15.00 processing fee for lost items. Library fines can be paid on your CMU student account.

Housing Fees
Residence Halls. Various contracts are available depending on individual meal plans. Information regarding the plans, payment due dates, etc., can be found at www.reslife.cmich.edu. The cost of the room and unlimited meal plan for the academic year 2014-2015 ranged from $8,780 to $10,096.

University Apartments. Various contracts are available depending on the individual unit and number of bedrooms. The approximate monthly rate for students in 2014-2015 ranged from $494 to $685.

Housing Application and Penalty Fees
- Meal Plan Changes (Assessed to cover costs): $15.00
- Housing Contract Breakage - Contract breakage fees will be assessed according to the Cancellation of Housing Agreement section of this Bulletin. (See Index section)
- Lost Key Fee and Lock Change Fee
- University Apartments: $33.00-50.00; $20 for US Mailbox key; $20.00 for Graduate Housing fob
- Residence Halls: $50.00 - $100.00

Student Photo Identification Card
Students receive their photo identification card from the Campus ID Office in the Bovee University Center Room 205. The first card is issued to the student at no charge. There will be a fee assessed for a replacement ID card due to loss or damage. Banking Services using the ID card are also available. For additional information, contact the Campus ID Office at 989-774-3484 or by visit the website at https://www.cmich.edu/fees/ras/central_card/pages/centralcard.aspx.

Transfer of Campus ID Card. For your protection, the only person authorized to use your card is you. There is a $25 misuse fee if someone else is caught using your identification card.

Health Services Fees
University Health Services charges fees for the services provided. Payment is not required on the date of the visit. Charges may be placed on the student’s CMU account and will be included on the next monthly billing statement. Courtesy insurance billing is provided if the student presents proof of current coverage (insurance card or photocopy of it) and authorizes us to do so. University Health Services participates with a number of health insurance and prescription drug plans. Some fees are subject to change without notice. For current charges for specific services contact the Health Services Business Office, Foust 202, 989-774-3059.

Vehicle Registration Fee
- Commuter: 175.00 / year
- Resident: 150.00 / year

For Spring Semester, the charge is one half the annual fee. For Summer Semester, the charge is one fifth the annual fee.

Bicycle Registration
Bicycles must be registered permanently at the University Police Department. There is no charge for this service. (Fees subject to change. See centrallink.cmich.edu/services/emergency/cmupolice/vehicle_registration/Pages/Parking_Permits)
Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act of 1974 was established to protect the privacy of student records. CMU is, therefore, not allowed to release details of a student’s financial account without prior written consent from the student. Authorization to release information forms, which will allow release of non-academic information to specific individuals, are available online at https://www.cmich.edu/centrallink/account/Privacy/Setting-Changing-Authorization-to-Release-Information-Passcod.aspx, on Centrallink, or in the Student Service Court, Bovee University Center 119.

Resident Status Policy

I. Introduction. Central Michigan University has a commitment to the resident taxpayers of the State of Michigan to provide educational opportunity at lower tuition rates than those charged to non-residents. Therefore, there are two general tuition rates, one for Michigan residents and a higher one for non-residents. For the purposes of determining resident status by CMU, “domicile” is defined as the place where an individual intends his/her true, fixed and permanent home and principal establishment to be, and to which the individual intends to return whenever he or she is absent. This policy is designed to explain how a student may demonstrate the required intent and establishment of a domicile in Michigan. An individual whose activities and circumstances, as documented to the University, demonstrate that he or she has established a domicile in Michigan and intends to be domiciled in Michigan will be eligible for classification as a resident. An individual whose presence in the state is based on activities and circumstances that are indeterminate or temporary, such as (but not limited to) educational pursuits, will be presumed not to be domiciled in Michigan. The burden of proof is on the applicant to demonstrate with clear and convincing evidence that he or she is eligible for resident classification under this policy. To overcome a presumption of non-resident status, a student must provide a completed Application for Resident Status and document with clear and convincing evidence that a Michigan domicile has been established. Furthermore, the University reserves the right to audit enrolled or prospective students at any time with regard to eligibility for resident classification and to reclassify students who are registered under an improper resident status.

II. Determining Resident Status. A student’s status as a resident or non-resident is established based upon the domicile of the student. The circumstances and activities to be considered in determining a student’s domicile are set forth below:

A. Resident Status:

1. A student who is a dependent of parents who have established Michigan as their domicile will be classified as a resident for tuition purposes.

2. A student 18 years or older who has attained independent status may be classified as a resident for tuition purposes if the student:

   a. documents one year of continual physical presence in the state as one of the criteria for determining eligibility for resident status, as described in I.C., below, and,

   b. demonstrates by clear and convincing evidence that the student has established Michigan as his or her domicile and intends to make Michigan the student’s permanent home, each independent of the student’s attendance at CMU.

B. Non-Resident Status:

1. Any student under the age of 18 whose parents have not established Michigan as their domicile is presumed to be a non-resident student.

2. Any student over the age of 18 who is financially dependent on parents who have not established Michigan as their domicile is presumed to be a non-resident student.

C. Physical Presence in Michigan:

1. Generally, an individual must document one year of continual physical presence in the state as one of the criteria for determining eligibility for resident status. The year to be documented will be one year immediately preceding the first day of classes of the term in question. The year of continuous presence is never the only criterion used for determining resident eligibility and, in itself, will not qualify a student for resident status.

2. If the one year resident requirement is fulfilled while a student is enrolled in this University or another institution of higher education, it is presumed that this student has not established domicile in the State of Michigan. However, if substantial information exists (see below for other factors) which clearly demonstrates the establishment of a Michigan domicile, the individual may be immediately eligible for resident status prior to the passage of one year.

D. Circumstances and Activities Which Lend Support to Claim of Michigan Resident Status:

The following circumstances and activities, though not conclusive or exhaustive, may lend support to a claim that a student has established Michigan as the student’s domicile and intends to make Michigan the student’s permanent domicile.

1. A person appointed to a regular full-time position at the University (and that person’s spouse or designated Other Eligible Individual (OEI) defined by CMU’s OEI program through Human Resources, and dependent children) may be classified as a Michigan resident for tuition purposes.

2. A non-resident transferred to Michigan for full-time employment purposes and that individual’s spouse or children may be classified as a Michigan resident for tuition purposes.

3. Any individual using educational assistance under either Chapter 30 (Montgomery GI Bill® – Active Duty Program), Chapter 33 (Post-9/11 GI Bill®), of title 38, United States Code, and/or the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b) (9)) who lives in the State of Michigan while attending Central Michigan University (regardless of his/her formal state of residence). Covered individuals (includes Veterans, current military personnel, and family members), eligible for VA education entitlement must provide a copy of the VA Certificate of Eligibility (COE) letter verifying approval of VA educational entitlement. Veterans and current military personnel include those individuals from all branches of the military including Army, Navy, Air Force, Marines, Coast
Guard, Army and Air National Guard, and Reservists. Periods of qualifying service will be verified via a copy of the veteran's DD-214 form (member 4).

4. A student who is married to a person who is classified as a Michigan resident will be classified as a Michigan resident for tuition purposes.

5. A student who has a parent or grandparent who graduated from CMU will be classified as a Michigan resident for tuition purposes.

6. Additional Circumstances and Activities:
   a. Continuous presence in Michigan during periods when not enrolled as a student.
   b. Reliance upon only Michigan sources for financial support.
   c. Domicile in Michigan of family, guardian, or other relatives or persons legally responsible for the student.
   d. Former domicile in the State of Michigan and maintenance of significant connections therein while absent.
   e. Ownership of a home in Michigan if purchased without support from non-Michigan sources.
   f. Admission to and full-time practice of a licensed profession in Michigan.
   g. Long-term military commitments in Michigan.
   h. Permanent full-time employment in Michigan, provided that the applicant's employment is the primary purpose for the applicant's presence in Michigan.
   i. Spouse's full-time, permanent employment in the state, provided that the spouse's employment is the primary purpose for the student's presence in Michigan.

In classifying an individual as a resident the University will consider other circumstances and activities which indicate an intent by the individual to make Michigan the individual's domicile or which indicate that the individual has made Michigan his or her domicile.

E. Circumstances and Activities which Generally Lend No Support to a Claim of Michigan Resident Status:
The following circumstances and activities are temporary and indeterminate and, in and of themselves, do not demonstrate a permanent domicile in Michigan:
1. Voting or registration for voting in Michigan.
2. Possession of a Michigan driver's license.
3. Employment that is temporary or short-term.
4. Employment in a position normally held by a student.
5. Ownership of a Michigan home if purchased with support from non-Michigan sources.
6. The lease of living quarters.
7. Payment of Michigan income or property taxes.
8. Financial hardship of the student caused by having to pay a higher tuition rate, or by any other reason.
9. The applicant's statement of intent to be domiciled in Michigan.
10. Presence in Michigan while in attendance at CMU or another institution of higher education.

F. Non-Citizens Lawfully Admitted to the United States:
(Lawful admission status is determined by the Director of the Office of International Affairs, or designee.)
1. A non-citizen of the United States (and that individual's spouse or same-sex partner as defined by CMU Human Resources, Faculty Personnel Services, or other authorized office, and dependent children) may be eligible for classification as a Michigan resident for tuition purposes, if such person has an appropriate, current visa, and meets the requirements for Michigan resident status specified in this policy.

2. A non-citizen transferred to Michigan for employment purposes (and that individual's spouse or same-sex partner as defined by CMU Human Resources, Faculty Personnel Services, or other authorized office, and dependent children) may be classified as a Michigan resident for tuition purposes, if such person has an appropriate, current visa, and meets the requirements for Michigan resident status specified in this policy.

3. A non-citizen appointed to a regular full-time position at CMU (and that individual's spouse or same-sex partner as defined by CMU Human Resources, Faculty Personnel Services, or other authorized office, and dependent children) may be classified as a Michigan resident for tuition purposes, as long as such person meets the requirements for Michigan resident status specified in this policy.

4. A non-citizen student who has a parent or grandparent who graduated from CMU will be classified as a Michigan resident for tuition purposes, if such person has an appropriate, current visa.

III. Procedure to Determine Resident Status. The procedure for determining resident status for an individual is as follows:

A. Undergraduate Students at Time of Admission:
1. The Director of Admissions, or designee, shall determine the initial resident status of new undergraduate students.

2. If an individual disagrees with the initial decision of the Admissions Office, that individual must file a properly completed Application for Resident Status with the Registrar's Office. The Application for Resident Status must be received before the seventh day after the first day of classes during the semester or term in which the individual is first enrolled at CMU. The Registrar's Office shall consider the Application for Resident Status and provide the individual with a written decision. If the individual continues to disagree with that decision, the individual may file an appeal following the procedures set forth in IV, below.

B. Graduate Students at Time of Admission:
1. The Dean of the College of Graduate Studies, or designee, shall determine the initial resident status of new graduate students prior to the first registration.

2. If an individual disagrees with the decision of the College of Graduate Studies, that individual must file a properly completed Application for Resident Status with the Registrar's Office. The Application for Resident Status must be received before the seventh day after the first day of classes during the semester or term in which the individual is first enrolled at CMU. The Registrar’s Office shall consider the Application for Resident Status and provide the individual with a written decision. If the individual disagrees with that decision, the individual may file an appeal following the procedures set forth in IV, below.

C. All Students Requesting a Change in Resident Status:
The procedure for determining whether a non-resident student has acquired Michigan resident status is as follows: An individual must file a properly completed Application for Resident Status with the Registrar, or designee. The Application for Resident Status must be received before the seventh day after the first day of classes during the semester or term in which the student is seeking the resident status. The Registrar, or designee, shall consider the Application for Resident Status and provide the individual with a written decision. If the individual disagrees with that decision, the individual may file an appeal following the procedures set forth in IV, below.

(continued)
Financial Information

IV. Appeal Process. If an Application for Resident Status is denied, the individual may request that his or her Application for Resident Status be reviewed by the Resident Status Appeal Committee. The following procedures shall apply:

A. The Resident Status Appeal Committee shall be composed of the Director of Admissions, the Registrar, the Director of International Affairs, the Associate Vice President for Student Affairs, and the Dean of the College of Graduate Studies, or their respective designees. At least three of these individuals must participate in an appeal. The decision of the majority of those participating in the appeal shall be conclusive.

B. The appeal must be made in writing and must be received by the Registrar within fourteen (14) calendar days of the date of the denial letter. If the deadline falls on a weekend or a University holiday, it will be extended to the next business day.

C. All contact with the Resident Status Appeal Committee must be in writing, unless otherwise requested by the Committee. An individual who wishes the Committee to consider information in addition to that provided with the Application for Resident Status must submit that additional information to the Resident Status Appeal Committee, in writing, with the appeal request.

D. In its sole discretion, the Resident Status Appeal Committee shall have the right to request that the individual provide the Resident Status Appeal Committee such additional information and/or documentation as it deems appropriate, including meeting with the Resident Status Appeal Committee.

E. The burden of proof is on the individual to demonstrate with clear and convincing evidence that he or she is eligible for a change in resident status because he or she intends to be domiciled in Michigan and has, in fact, established domicile in Michigan.

F. After the individual has submitted all requested information, the Resident Status Appeal Committee will review the individual’s appeal. The individual will receive a written decision from the Resident Status Appeal Committee when the review is complete.

G. Once the Resident Status Appeal Committee issues its decision, there are no further appeals for the semester or term covered by the Application for Resident Status.

Tuition Status for Graduate Fellows and Assistants

For the purposes of determining tuition rates, doctoral level fellows and assistants are given in-state tuition for the duration of their program of study. Master’s and specialist’s level fellows and assistants are classified as Michigan residents only during the academic year of the award (including subsequent summer).

Residency Status for Migrants

Migrant status is one factor considered when determining if a student is domiciled in Michigan for tuition purposes. Michigan migrants are defined as individuals who have made their livelihood in seasonal work in the State of Michigan and have traveled interstate for this purpose. Migrant students will meet the residency requirement if they, or their parents, or legal guardians, were employed in Michigan for at least two months during each of the preceding five years. Verification of employment as migrant workers should be secured from the Michigan Farm Labor and Rural Manpower Services Office. Other appropriate evidence may also be used by migrant workers to prove their residency.

Financial Debt and Involuntary Withdrawal

Any student who withdraws from the University or who has a financial debt is responsible for paying any outstanding financial obligations and will have a hold placed on official transcripts and future registrations if the balance remains unpaid. Graduating students with unpaid financial obligations may also have a hold placed on their diplomas.

Please be advised that CMU reserves the right to suspend campus ID privileges and charging privileges to the student account at any time due to a past due balance, including, but not limited to, meal plan, flex and campus cash, computer lab, library, bookstore, SAC, telecom and health service charges. Any delinquencies from the University Apartments may result in the initiation of eviction proceedings. In addition, students with delinquent accounts may have a prepayment hold placed on their account, requiring payment in full at the time of registration for all future semesters. In mitigating circumstances, students with unpaid financial obligations may be involuntarily withdrawn from classes by CMU Administration.

Refunds

Refunds are issued weekly when a credit balance exists on a university account. All potential refunds are applied to university obligations before a refund is issued to an individual. Refunds of less than $1.00 will not be issued unless the student requests it from the Student Account Services and University Billing Office, but will be carried forward to offset future university charges.

Refunds are issued either by direct deposit to a personal U.S. bank account of the student’s choice or to a CMU Money Card distributed by Money Network. Students must make a selection for their preferred method on CentralLink under Finances, Refund Payment Option.

Refunds for Student-Initiated Complete Withdrawals from All Classes

Students withdrawing from the university must complete a withdrawal online through CentralLink to initiate the refund process. Further information regarding the complete withdrawal policy appears in the section on Academic Policies and Procedures. Students who have credit balances in excess of $1.00 on their student accounts after all university obligations have been met will receive a refund unless the student received financial aid.

Refunds upon Withdrawal for Students Receiving Financial Aid

Financial aid received by students awarded financial assistance through the Central Michigan University Office of Scholarships and Financial Aid is applied to student accounts to pay for university charges. Credits for the unused portion of tuition, special course fees, housing and other university charges resulting from a student’s withdrawal from the university are used to repay the financial aid sources in full prior to refunding the student. Withdrawing students who have received refunds for financial aid to cover non-institutional, educational costs may be required to repay financial aid sources.

Refunds for students who receive Title IV financial aid are allocated to the financial aid source in the following order:

- to outstanding balances on Federal Direct Loans (Unsubsidized and Subsidized)
- to outstanding balances on Federal Perkins Loans
- to outstanding balance on Federal Plus Loans
- to Federal Pell Grant awards
- to Federal SEOG awards
- to TEACH Grant awards
- to other Title IV student assistance
- to other federal, state, private or institutional student assistance to the student.
Drop and Add Refunds

The Student Account Services and University Billing Office will automatically process refunds/charges as a result of a change in class registration. Any credit resulting from a change in class registration will be applied to any outstanding university obligations before a refund is issued. No refunds are made after the registration period closes unless the student is completely withdrawing from the university or the class is dropped on CentralLink prior to its second scheduled meeting time.

New Student Orientation Fee Refunds

The $175.00 New Student Orientation Fee is refundable by submitting a written request to the Admissions Office for students who cancel their admission prior to the established deadline dates as indicated in admission correspondence for the specific semester or session, and who have not attended an orientation session.

Tuition Refunds

A percentage of the tuition listed below plus the corresponding percentage of all fees will be refunded to a student who withdraws from the university.

<table>
<thead>
<tr>
<th>Percentage of Tuition and Fee Refund for Fall/Spring</th>
<th>Calendar Days Beginning with First Day of Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Weeks</td>
<td>1-10 11-26 27-54</td>
</tr>
<tr>
<td>10 Weeks</td>
<td>1-5 6-17 18-33</td>
</tr>
<tr>
<td>8 Weeks</td>
<td>1-4 5-12 13-26</td>
</tr>
<tr>
<td>5 Weeks</td>
<td>1-3 4-8 9-17</td>
</tr>
<tr>
<td>Refund</td>
<td>100% 50% 25%</td>
</tr>
</tbody>
</table>

Global Campus Refunds (including CMU online courses)

Drop or Withdraw from a CMU Global Campus Course:

- A Drop occurs prior to the course start or prior to the 2nd meeting time for face-to-face classes or the 2nd week for CMU Online classes.
- A Withdrawal occurs after second meeting time for face to face classes or after the second week for online classes and before the midpoint.

Important Information Regarding Course Drops and Withdrawals for All Global Campus Classes:

- Drops and withdrawals are done by the student, within the permitted time frame for doing so, through the Course Search and Registration System within CentralLink.
- Withdrawals after the midpoint are not permitted.
- Students who cease or fail to attend (virtual or otherwise), without formally dropping or withdrawing from the course will receive a grade of "E".
- Telephone requests to drop or withdraw will not be accepted.
- In the event that a student is not able to drop or withdraw from a course online through Centralink, the student must immediately notify the program administrator at the center where the course is being offered in writing for assistance.
- Drops and withdrawals can and do affect your financial aid eligibility. For more information go to [http://global.cmic.edu/courses/drop-withdraw](http://global.cmic.edu/courses/drop-withdraw).

For more information and a schedule of refund percentages, consult the most current Global Campus Bulletin ([https://bulletins.cmich.edu/default.aspx](https://bulletins.cmich.edu/default.aspx)). For a Course Drops/Withdrawals Chart, see [http://global.cmic.edu/courses/withdraw.aspx](http://global.cmic.edu/courses/withdraw.aspx).

Vehicle Registration Refunds

Students not returning for the Spring Semester will be entitled to a fifty percent motor vehicle registration refund. Applications must be made prior to the end of the first week of classes of the second semester. Students withdrawing within two weeks of the first day of classes are entitled to a full refund of the motor vehicle registration fee for that semester. Applications for refunds should be made to the University Police and accompanied by identifiable portions of the parking decals.

Cancellation of Housing Agreement

The residence hall agreement is for the entire academic year, or remainder of the year, provided the student is enrolled at the university. The residency and financial conditions of the agreement shall not be terminated to move to a private home, fraternity or sorority house, or other housing or to commute during the period covered by the agreement. Students who break the residence hall agreement without approval from Residence Life officials will owe full room and board charges for the entire academic year.

Students who are approved for release from the residence hall agreement for any reason are subject to the following schedule of cancellation charges:

New Applicants Only:

- Cancellation of this agreement after May 1 but by August 1 will result in a $300 cancellation fee.
- Cancellation of this agreement after August 1, but prior to the first day the halls open in the fall will result in a $500 cancellation fee.

Returning Students Only (Prior to the halls opening):

- Students signing an agreement have a 30-day cancellation period without penalty. Students who sign an agreement can cancel without penalty, but ONLY IF they provide a thirty-day written notice of said cancellation, from the day they apply, and the expiration of the thirty-day notice period occurs prior to May 1.
- Students cancelling after the 30-day cancellation period and by August 1 (December 1 for spring semester) will be charged a $300 cancellation fee.
- Students cancelling after August 1 (December 1 for spring semester) but before the first day the halls open will be charged a $500 cancellation fee.

All Students (during the Academic Year):

- Cancellation of this agreement from the first day halls open in the fall but prior to November 1 shall result in up to a $900 cancellation fee.
- Cancellation of this agreement after November 1, but prior to the end of the fall semester shall result in up to a $600 cancellation fee.
- Cancellation of this agreement from the end of the fall semester but before April 1 shall result in a $300 cancellation fee.
- Cancellation of this agreement after April 1 shall result in a $100 cancellation fee.

All Cancellation Requests must be in writing.

Other charges and damages may apply under the provision of the agreement such as damage to room. If a student is not approved for release from their residence hall agreement and they choose to move anyway, they are still financially responsible for the entire contract.

Apartments. Residents are charged for actual days up to the termination of their Housing Agreement. Family housing residents may terminate by giving the University Apartments Office 45 days written advance notice. Single student resident contracts are for the entire academic year.
Scholarships and Financial Aid

Office of Scholarships and Financial Aid
Central Michigan University
Student Services Court
Mount Pleasant, MI 48859
989-774-3674
1-888-392-0007
FAX: 989-774-3634
E-MAIL: cmuosfa@cmich.edu

The Office of Scholarships and Financial Aid (OSFA) at Central Michigan University, in conjunction with the federal and state governments and private and civic organizations, offers a variety of scholarship, grant, loan, and employment opportunities to assist you in financing your education.

Approximately eighty percent of all CMU students receive some form of assistance from these sources. The purpose of financial aid is to ensure that the university continues to make it possible for students of all degrees of financial capacity, special talent, or high scholastic merit to attend CMU. Should you have any questions during the application process, please do not hesitate to contact us.

CMU will limit institutional funds (i.e., need-based grants, merit scholarships, employee tuition waivers, Indian Tuition Grant Waiver, etc.) to the annual cost of attendance.

The following general information is provided for prospective and continuing undergraduate students.

Financial Aid Eligibility:
General Requirements
To be eligible for CMU and federal undergraduate assistance you must:

1. Be a U.S. citizen or eligible non-citizen for federal, state, and most CMU programs.
2. Demonstrate financial need (for need-based programs) as determined by the CMU OSFA and by federal regulations.
3. Be enrolled full time (12 credits per semester except for federal and institutional grants and/or Federal Direct Loans) in a degree program. Students enrolled less than full-time but at least half-time (6 credits per semester) may have grant aid pro-rated.

NOTE: In order to graduate within four years in a degree program which requires a minimum of 124 hours of credit, a student must average at least 31 hours of credit each year. Several degrees may require a minimum greater than 124 hours.

4. Federal aid recipients may not owe a refund from any federal grant or loan or be in default on any federal loan.
5. Students must be enrolled on campus to receive financial aid, except under special circumstances. Students whose program of study requires a course(s) not available at CMU may apply for a Consortium Agreement to receive financial aid while enrolled at another institution.
6. Students can only receive a Federal Pell Grant at one institution.
7. Students may receive a Federal Stafford Direct Loan while enrolled at least half-time simultaneously at two institutions up to the annual maximum grade-level limit.
8. Guest students attending CMU are not eligible to receive financial assistance through CMU. Students should check with their home institution to determine eligibility for financial assistance.

Satisfactory Academic Progress toward your Degree
CMU students are required to make progress toward their degree to be eligible for federal and most state and university aid sources. Progress is measured in three ways:

1. **Length of time to complete your degree.** Students must complete all degree requirements within 150% of the minimum number of credit hours required to complete their program of study.
2. **Required GPA level.** Students must maintain a 2.00 cumulative GPA as an undergraduate student and a 3.00 cumulative GPA as a graduate student.
3. **Required percentage of attempted credits completed.** All students must complete 67% of all CMU credits attempted each semester of enrollment (including the summer semester).

Satisfactory Academic Progress
Federal regulations (HEA Sec. 484(c)) require that Central Michigan University monitor the satisfactory academic progress of all students regardless if they have received financial aid in previous semesters. These financial aid requirements are separate from students’ academic requirements. To maintain eligibility for federal student aid, as well as most state and institutional student aid programs, there are three distinct criteria that must be monitored and met.

1. **Quantitative standard:** Students must complete 67% of all CMU credits attempted each semester of enrollment which includes the summer semester. Attempted hours are based on the number of credits for which the student is registered at the conclusion of the Registrar’s posted “Deadline for Dropping a Class with a Full Cancellation of Tuition.”
2. **Qualitative standard:** Students must maintain a 2.00 cumulative GPA as an undergraduate student and a 3.00 cumulative GPA as a graduate student.
3. **Maximum time frame standard:** The number of attempted credits in which a student is expected to finish a program cannot exceed 150 percent of the published length of the program. Total credit hour limits apply whether or not the student has actually received financial aid for the entire time at CMU. **Transfer credits from previous schools count toward credit hour limits.**

Undergraduate students cannot receive financial aid after completing 186 credit hours. The 186-credit-hour limit for completion of a baccalaureate degree is intended to be long enough to allow for changes in a major, loss of credit due to transfer, withdrawn coursework, minors, double majors, etc.; therefore, no extensions of the maximum time frame will be granted for the above mentioned reasons.

Students in graduate programs may not receive financial aid if they have exceeded the published time limits as outlined in the CMU Graduate Bulletin for master, doctoral, or professional programs.

Graduate students working on second baccalaureate degree or post-baccalaureate students working on teacher certification.

Students pursuing a second undergraduate degree or post-baccalaureate students working on teacher certification are limited to 93 credit hours of work between the receipt of the first degree and the completion of the second. Students may not receive financial aid beyond 6 semesters (or the part-time equivalent of 6 semesters) of enrollment in the second undergraduate degree program or teacher certification program.
Satisfactory Academic Progress review is performed at the end of each semester

As a courtesy, the OSFA will attempt to provide students with specific notification regarding their Satisfactory Academic Progress status. If for any reason the OSFA fails to provide an intended notification, this does not relieve the student from the obligation of continuing to maintain satisfactory academic progress or from any other requirements of the financial aid program.

Consequences of unsatisfactory progress

Students who fail to maintain the required cumulative GPA and/or complete 67% of what they attempt in a semester of enrollment at CMU will be placed on a warning status for their next semester of enrollment at CMU. Students are eligible to receive most forms of aid while on warning, but failure to bring the cumulative GPA up to the required level and/or complete 67% of what is attempted in the next semester of enrollment at CMU will result in financial aid suspension beginning with the next semester of enrollment. A student will remain on financial aid suspension until the cumulative GPA is raised to its required level and/or the student completes 67% of attempted credits within a semester. Only credit hours completed are counted as credits earned. Grades of I (Incomplete), W (withdrawal), X (audit), and Z (deferred) are not counted as earned credit.

Students who reach their time limit without completing their degree will be denied further federal and most state and institutional financial aid as a student at that level. As students near their credit limits they will be placed in a warning status. For example, if as an undergraduate you reach 150 attempted credits you will be placed in a warning status. Once you reach the 186-earned-credit limit, you will be denied further aid until the degree is conferred. You then would regain eligibility for a second undergraduate or a graduate degree. If you are attempting a master’s degree and reach the eligibility limit, you would be denied further aid until the master’s degree is conferred, at which time you would regain eligibility for a second master’s, doctoral, or professional degree.

Appeal process

Students who have faced extraordinary circumstances may appeal a financial aid suspension, but students are cautioned that appeals are not routinely approved. Students wishing to appeal their financial aid suspension status must complete a CMU Satisfactory Academic Progress Appeal Form for Financial Aid and include all required documentation. Appeal forms are available on the OSFA website and at the Student Service Court in the Bovee University Center.

All appeals should be submitted to the Office of Scholarships and Financial Aid. In most cases a decision will be made within 15 business days of receiving an appeal and the appropriate documentation. Students are notified of appeal decisions in writing or through their CMU e-mail account.

Continuing at CMU after aid is denied

Students denied financial aid generally may continue attending Central Michigan University using private aid sources such as alternative student loans (https://www.cmich.edu/ess/OSFA/Pages/ALT-LOAN.aspx), or by funding their education themselves. Please note that on the linked alternative loan list, some loans listed are NOT available to students while on financial aid suspension.

Applying For Financial Aid

To apply for financial assistance at Central Michigan University, prospective students must complete the Free Application for Federal Student Aid (FAFSA). The need analysis form must be received by the Federal Processor by March 1 in order to meet the State of Michigan’s priority consideration date. Applications are available online at www.fafsa.gov, or from high school counselors, financial aid offices at other institutions of higher learning, and the CMU OSFA. Online applications are strongly encouraged.

All CMU awards are made for a period of one academic year only. Reapplication must be completed for each year.

Financial aid awards for the prospective student are not offered before the student has attained regular admission status through the Admissions Office.

Because need-based financial aid is limited, it is awarded to the earliest applicants who demonstrate the greatest financial need until funds are exhausted.

Verification

Students may be selected for verification through an institutional edit process and/or through a random selection for the U.S. Department of Education’s Quality Assurance Program. The OSFA is required to collect documents to verify the information on the FAFSA. These documents include, but are not limited to, federal tax transcripts and documentation of assets and family size.

A timely response to a documentation request is important. Your financial aid application cannot be processed without the requested documentation.

Fraud

Falsification of income information submitted for the purpose of receiving financial assistance will result in cancellation of all future assistance and repayment of all prior assistance received falsely. If federal and/or state funds are involved, notification of the false information will be provided to the proper agencies (U.S. Department of Education and/or Michigan Department of Treasury) for their further disposition.

Determination of Financial Need

Need is determined by subtracting a student’s total family contribution, as determined by the federal needs analysis, from the estimated cost of attendance.

Independent Status

The expected family contribution for education expenses for students who meet the criteria for financial independence is evaluated exclusive of parental support. To be independent for 2015-2016, students must answer yes to at least one of the following questions:

1. Were you born before January 1, 1992?
2. At the beginning of the 2015-16 school year, will you be working on a master’s or doctorate program (such as an M.A., M.B.A., M.D., J.D., Ph.D., Ed.D., or graduate certificate, etc.)?
3. As of today, are you married?
4. Do you have children who receive more than half of their support from you between July 1, 2015 and June 30, 2016?
5. Do you have dependents (other than your children or spouse) who live with and receive more than half of their support from you, now and through June 30, 2016?
6. At any time since you turned age 13, were both your parents deceased, were you in foster care, or were you a dependent or ward of the court?
7. Are you a veteran of the U.S. armed forces?
8. Are you currently serving on active duty in the U.S. Armed Forces for purposes other than training?

(continued)
9. Are you or were you an emancipated minor as determined by a court in your state of legal residence?
10. Are you or were you in legal guardianship as determined by a court in your state of legal residence?
11. At any time on or before July 1, 2014, did your high school or school district homeless liaison determine that you were an unaccompanied youth who was homeless?
12. At any time on or after July 1, 2014, did the director of an emergency shelter or transitional housing program funded by the U.S. Department of Housing and Urban Development determine that you were an unaccompanied youth who was homeless?
13. At any time on or after July 1, 2014, did the director of a runaway or homeless youth basic center or transitional living program determine that you were an unaccompanied youth who was homeless or were self-supporting and at risk of being homeless?

Students may be required to document their status with the OSFA. Students with unusual or extenuating circumstances relating to independent status should contact the OSFA.

Parental Contribution
For dependent students, the OSFA uses the federal needs analysis to determine the contribution from each family, taking into account the family’s income and assets, taxes paid, the household size, and the number of college students in the home.

Student Contribution
The federal needs analysis is utilized to determine the student’s contribution and the student’s spousal contribution, if applicable. Students and their spouses are expected to assist in meeting educational costs. The expected contribution is calculated from previous year earnings and untaxed income, and a percentage of personal savings and assets.

The Student’s Financial Aid Package
A financial aid award is packaged for each student applicant based on the student’s demonstrated financial need, date of application, availability of funding and eligibility. If applicable, a combination of gift (scholarships and grant) and self-help (job and loan) is offered to the student.

Talent scholarships or grants-in-aid, i.e., Athletic, Music, Communication and Dramatic Arts, or Broadcast and Cinematic Arts are awarded by the respective departments for which the awards are named. Merit Scholarships are awarded at the time of admission, based on admission criteria, not financial need. If an award recipient is also receiving university need-based financial assistance or aid from the Michigan Competitive Scholarship Program, or from an external agency, it may be necessary to include the talent scholarship or grant-in-aid in the financial aid package. This could result in a reduction in the talent scholarship or grant-in-aid.

The student is responsible for following the procedures included in the award notice to secure the aid offered.

Changes in the Award

The OSFA anticipates that students will receive the aid package offered in their award statement. It may, however, be necessary for the university to increase or decrease the award if changes occur in the student’s enrollment status, family financial status, or the student’s own financial resources or expenses.

Changes in enrollment status include changing undergraduate majors, taking fewer than 12 credit hours per semester, registering for study away from the university, or withdrawal before the end of the semester. Reductions in credit hours below 12 credits in a semester may result in a cancellation of CMU assistance for that semester. Students should consult a financial aid advisor before making a change in enrollment status.

Changes in family financial strength include significant discrepancies between the resources described in the FAFSA and those reported in the federal income tax return or unanticipated family financial reverses lasting longer than three months. Students should consult a financial aid advisor if there is an unusual circumstance that impacts the family’s financial strength.

Changes in student resources include receipt of educational benefits such as employee/dependent tuition benefits, and receipt of awards in amounts that differ from the estimates on the award statement, or that were not included in the statement. Students must report receipt of additional resources not considered in the original aid package. Students who receive scholarships from private donors may receive a reduction in some awards to ensure that the total aid resources do not exceed a student’s financial need.

Award Revision

CMU reserves the right to revise a student’s award package if government regulations, university policy, or sources of funding change prior to or during the academic year. This also applies if overpayments or overcommitments occur, or if acceptance of the award occurs after the deadline.

The award may be reduced or withdrawn after a student has received a direct payment of the financial aid. The reduction in aid will be charged to the student’s account and the student will be required to pay that amount to CMU.

Award Disbursement

All financial aid is typically divided in half and credited directly to the student account. When possible, awards are applied to the first bill in each semester; however, late awards or award revisions will be applied throughout each semester. Financial aid funds will be applied against the student’s tuition, university housing cost for the semester, and any other charges on the student’s account at the time of disbursement. NOTE: First-time borrowers of the federal direct student loan must complete an entrance interview and a Master Promissory Note prior to disbursement of loan funds.

If there are more credits than charges, a refund will be issued for the balance. It is the student’s responsibility to verify the accuracy of billing charges, financial aid credits, and refund.

Refunds are usually available to on-time filers by the first week of classes. Late filers should plan to have sufficient funds for meeting expenses until a refund is available.

Non-CMU Scholarship Disbursement Policy

1. Estimated scholarships, i.e., outside agency, will not reduce the amount of tuition payable by posted deadlines.
2. Donors may specify the semester(s) in which the scholarship is paid.
3. If a student wants the scholarship distributed in a way that differs from what the donor requests, the student will be asked to get an authorization letter from the donor.
4. If the donor letter does not specify a distribution schedule, CMU will disburse scholarships of less than $500 all in the fall semester. Scholarships $500 or more will be disbursed equally to the fall and spring semester.
5. If the scholarship has been split and the donor has not given instructions, the student may request the entire award be moved to the fall semester. However, the student is then cautioned that he or she may be short of funds for the spring semester.
Tax Status of Financial Aid

The Tax Reform Act of 1986 amended the Internal Revenue Code section pertaining to the taxability of scholarship and fellowship grants. Effective January 1, 1987, only the amount of a scholarship or fellowship grant which is used for qualified tuition and related expenses (i.e., tuition, fees, books, supplies, and equipment) is excluded from gross income. Any amount of a scholarship or fellowship grant which is used for non-course related expenses (such as room and board) is taxable and must be included in the student’s gross income. Students should keep accurate records of all tuition paid and related expenses, and financial aid received.

CMU Scholarship Policy

Recipients of CMU merit and talent-based scholarships of a dollar value equal to or greater than $2,500 are required to reside on campus during their freshman and sophomore years unless they qualify as commuting students or for another exception to the Campus Residency Policy.

Students may receive two renewable merit scholarships. Students who are selected for more than two renewable scholarships may choose the awards of highest value. However, a student can also receive the Leader Advancement scholarship if one of the three awards is among the following: Multicultural Award of Distinction, Multicultural Advancement, Cofer, Detroit Compact and Wade McCree.

CMU will limit institutional funds (i.e., need-based grants, merit scholarships, employee tuition waivers, Michigan Indian Tuition Waiver, etc.) to the annual cost of attendance.

Statement of Student Financial Aid

Rights and Responsibilities

1. Students have the right to be informed of and to apply for all financial aid programs for which they are eligible and the responsibility to apply by program deadlines and to acquaint themselves with the application procedure.

2. Students have the right to know how financial need and award packages are determined and to request a review of the financial aid package should circumstances change to negatively affect the family’s ability to meet costs of attendance, and the responsibility to notify the university should new resources become available to the student which were not originally considered.

3. Students who borrow have a right to full disclosure of the terms and provisions of loan programs, including typical repayment schedules and the responsibility to participate in an online exit interview before leaving the university. They must repay loans on a timely basis and keep the university informed of their current address.

4. Students have the right to be informed of financial aid policies and have the responsibility to be aware of and comply with all published financial aid policies and to comply with these policies.

5. Students have the responsibility to submit accurate information on all university documents relating to the financial aid application process.

Sources of Aid

The student’s financial aid package might include a scholarship or grant from CMU or from a federal or state program. To be eligible for the following CMU scholarships and grants, students must be admitted to programs offered on the Mt. Pleasant campus. NOTE: Residency Requirement: To renew awards, all recipients of CMU merit- and talent-based scholarships of a dollar value equal to or greater than $2,500 will be required to reside on campus during their freshman and sophomore years.

Please APPLY EARLY. Scholarship funds are limited and the awarding process is competitive. Meeting the eligibility requirements does not guarantee a student will receive a scholarship. The best way to improve your candidacy is to submit all admission application materials as soon as possible.

Merit Scholarships

The Centralis Scholarship Program

The CMU Board of Trustees created two levels of merit-based scholarships that are awarded to incoming freshmen who have demonstrated outstanding academic performance and curricular involvement. All new students entering CMU as freshmen with a minimum cumulative grade point average of 3.7 and an ACT composite of 27 or higher are invited to compete for a Centralis award. The Centralis competition involves an examination administered on the CMU campus. For information on the Centralis Scholarship Competition, contact the Admissions office.

Centralis Program

The Centralis Scholarship Program provides merit-based awards annually to 150 outstanding high school seniors. All Centralis award recipients are automatically admitted to the Honors Program and are required to complete the Honors Program protocol in its entirety, in addition to the stipulations and expectations outlined in the “Centralis Conditions of Award” and “Centralis Scholarship Policies” documents.

The Martin H. Cholakian Centralis Scholarship

Martin H. Cholakian was a member of the Board of Trustees from 1989 until his death while attending a university event in Canada, January 29, 1994; and this scholarship was named in his memory. Mr. Cholakian was a dedicated and active supporter of CMU and took special interest in the university’s pioneering efforts to bring higher education to non-traditional students in distant locations.

John P. and Doris L. Crippo Endowed Centralis Scholarship

Through her estate, Doris L. Moulton Crippo established an endowed Centralis Scholarship. Doris and John Crippo were great believers in higher education; they were very interested in and had excellent rapport with students, faculty, staff and alumni.

Rollie Denison/Development Board Centralis Scholarship

Established in 1999 from funds donated by current and former members of the Central Michigan University Development Board of Directors.

Fabiano Family Centralis Scholarship

The Fabiano family of Mt. Pleasant, MI established the first Centralis Scholarship in 1989 to continue the family’s long-standing commitment to education and community well-being. Eleven members of the Fabiano family attended or graduated from CMU between 1920 and 1989. The Fabiano family has maintained strong interest in academic excellence and involvement in programs that result in university growth and prosperity.
The Bernard J. Firestone Centralis Scholarship
Established in 1989 by the Board of Trustees in memory of Bernard J. Firestone, member of the Board of Trustees from April 28, 1989, until his tragic death September 6, 1989. Mr. Firestone’s life was devoted to the welfare of others through education and the labor movement as means of improving the human condition.

R.L. Kesseler Family Endowed Centralis/Honors Program Scholarship I
Established in 1990 by the Board of Trustees in honor of Arnold J. and Margaret L. Sowmick, respected leaders of the Saginaw Chippewa Tribe, who wanted to repay CMU for his successes due to the education and opportunities provided by CMU.

Milton Peterson Endowed Centralis Scholarship
Mr. Peterson of Corning, New York established the first endowed Centralis Scholarship to recognize the university’s dedication to academic excellence. Mr. Peterson is a patent attorney for Corning Glass who wants to repay CMU for his successes due to the education and opportunities provided by CMU.

Arnold J. and Margaret L. Sowmick Centralis Scholarship
Established in 1990 by the Board of Trustees in honor of Arnold J. and Margaret L. Sowmick, respected leaders of the Saginaw Chippewa Tribe, who died as a result of a car accident July 29, 1990. Arnold was chief of the Saginaw Chippewa Tribe from 1982 to 1990 during which time his foresight and leadership were instrumental in establishing progressive programs especially in the areas of education and health. Margaret and Arnold, in their words and deeds, were friends of CMU and were instrumental in forming positive relationships which benefited their tribe and the university.

Augusta McIntosh Tobin Centralis Scholarship
Converted in 1996 from a loan fund established in 1985 through the estate of Augusta McIntosh Tobin (Class of 1925), who contributed 40 years of her teaching career to the Dearborn, MI school system.

Ronald A. Zuverink Memorial Centralis Scholarship
Established in 2001 by the estate of Ronald A. Zuverink, former private business owner in Chicago, Illinois. Proceeds from the endowment will be used to support Centralis scholarships.

Academic Prestige Award
This scholarship honors high school students who have a 3.25 cumulative GPA and an ACT composite score of 27 or higher. The value of this award is $6000 per academic year and is awarded to new freshmen who meet eligibility requirements. Funds are limited and are awarded first come, first served basis. The scholarship is renewable for 3 consecutive years if a 3.25 cumulative GPA and successful completion of 30 new credit hours is maintained.

Academic Excellence Award
This scholarship honors high school students who have a 3.00 cumulative GPA and an ACT composite score of 23 or higher. The value of this award $4500 per academic year and is awarded to new freshmen who meet eligibility requirements. Funds are limited and are awarded first come, first served basis. The scholarship is renewable for 3 consecutive years if a 3.25 cumulative GPA and successful completion of 30 new credit hours is maintained.

Academic Success Award
This scholarship honors high school students who have a 3.00 cumulative GPA and an ACT composite score of 21 or 22. The value of this award $3000 per academic year and is awarded to new freshmen who meet eligibility requirements. Funds are limited and are awarded first come, first served basis. The scholarship is renewable for 3 consecutive years if a 3.25 cumulative GPA and successful completion of 30 new credit hours is maintained.

Community College Transfer Recognition Award
All new transfer students entering CMU directly from a Michigan community college with a minimum, cumulative grade point average of 3.30 or higher and with a minimum of 30 transferable credits are eligible for this $1,000 award. This scholarship can be renewed for one additional year provided the student maintains full-time continuous enrollment at CMU with a 3.25 (or higher) cumulative GPA. The Academic Honors Scholarship replaces this award.

Leader Advancement Scholarship
In 1997 the Leadership Institute was established as a new initiative of CMU to provide a foundation of skills necessary for under-graduate students to pursue positions of leadership in business, government, education, and community agencies. As part of the Institute, the Leader Advancement Scholarship (LAS) provides $2,000 per academic year to up to 40 incoming freshmen who have distinguished themselves through a record of leadership and involvement during their high school years. Competitors must have a minimum cumulative high school GPA of 3.0. Recipients are selected by a committee through analysis of the LAS Application, a portfolio-like record of activities that is completed by the student, and an on-campus interview. Scholarship recipients must maintain full-time status and a cumulative GPA of 2.75 while at CMU and show significant progress on the LAS protocol. Renewal requires students to reside in on-campus residence halls in both their freshman and sophomore years.

Lloyd M. Cofer Scholarship
Established in 1980 in memory of Dr. Lloyd M. Cofer, charter member of the CMU Board of Trustees, for ten scholarships equal to $4,125 per year to deserving undergraduate students who are graduates of a Detroit public high school. Scholarships are renewable for three additional years for recipients who maintain a satisfactory academic progress record, full-time continuous enrollment, and a 2.50 (or higher) cumulative GPA. Renewal requires students to reside in on-campus residence halls in both their freshman and sophomore years.

Students who receive this award must agree to live in the residential college their freshman year and complete the Cofer Scholars Protocol, which outlines the requirements for the scholarship program.

Students are not eligible to receive the Cofer Scholarship and either the Wade McCree or Detroit Compact Award. Students may select the award of highest value.
Multicultural Advancement Scholarship
These awards recognize and support students who, through past activities or educational aspirations, indicate an interest in the advancement of minorities in American society. These awards are equal to $4,125 per year and are renewable for students who maintain full-time enrollment and a 2.50 cumulative grade point average. Up to ten Awards of Distinction are also awarded each year. The value of this scholarship is $10,500 per academic year to be used toward the cost of tuition, fees, room and board, and books and supplies. The scholarship is renewable for three additional, consecutive years if a 3.25 (or higher) cumulative GPA and full-time continuous enrollment are maintained. Renewal requires students to reside on campus residence halls in both their freshman and sophomore years.

Students who receive this award must agree to live in the residential college their freshman year and complete the Multicultural Advancement Scholars Protocol, which outlines the requirements for the scholarship program.

Students are not eligible to receive the Multicultural Advancement Award and either the Wade McCree or Detroit Compact Award. Students may select the award of highest value.

Talent Scholarships
Athletic Scholarships. Scholarships are awarded to outstanding athletes in men's and women's sports. Further information may be obtained by contacting the CMU Director of Athletics.

Communication and Dramatic Arts Talent Scholarships. Talent scholarships are awarded to full-time students participating in co-curricular activities of the Department of Communication and Dramatic Arts. Contact the department directly for further information.

Broadcast and Cinematic Arts Talent Scholarships. Talent scholarships are awarded to full-time students participating in co-curricular activities of the Department of Broadcast and Cinematic Arts. Contact the department directly for further information.

Music Talent Scholarships. Talent scholarships are awarded to full-time students participating in co-curricular activities of the School of Music. Contact the School directly for further information.

Endowed and Contributed Scholarships
A number of scholarship awards are available annually to CMU students, established through endowments or by annual contributions from individuals, businesses, or civic organizations. Some are based on financial need. Others are based on other non-need-related criteria. See Honorary and Memorial Funds in the Index for the page number.

Further information may be obtained from the Office of Scholarships and Financial Aid and specific departments.

CMU Grants
These grants are awarded on the basis of demonstrated need, with a minimum grant of $50 and a maximum grant not to exceed the gift portion of the student's financial aid package. An employee/dependent tuition benefit is counted in the gift portion of the student's financial aid package. Receipt of the tuition benefit will result in the cancellation of a CMU grant.

CMU President's Award
The President's Award is granted to non-Michigan resident high school seniors with a cumulative GPA of at least 2.75 (on a 4.0 scale) and enroll directly as freshmen at CMU as full-time, on-campus students. The President's Award is granted to non-Michigan resident transfer students who have earned 30 or more credit hours with a cumulative grade point average of 2.75 (on a 4.0 scale) and who enroll directly at CMU as full-time, on-campus students.

The value of the award is equal to the difference between in-state and out-of-state tuition for the academic year. The award is renewable for new freshmen for three additional consecutive years if a 2.50 cumulative GPA, non-Michigan residency and full-time continuous enrollment are maintained and for new transfer students for up to six semesters, if a 2.5 cumulative GPA, non-Michigan residency and full-time continuous enrollment are maintained. Renewal requires students to reside on-campus residence halls in both their freshman and sophomore years. Transfer students receiving the President's Award do not have a housing requirement. Participation in the Legacy Program replaces these awards.

The President's Award for Undergraduate International Students
This award honors non-United States resident high school seniors who will graduate with at least a 3.3 (on a United States 4.0 scale) grade point average, have a 22 or higher ACT composite score (or SAT I of 1,000), a TOEFL score of 550 (213 for computer-based testing), for applicants whose native language is not English, and enroll directly as freshmen at CMU as on-campus students. Students enrolled in CMU's International Bridge Program who have passed all required English Language Institute courses are eligible for this award and are not required to meet the TOEFL score requirement listed above, but are required to meet all other requirements listed above. Recipients will be granted an award equal to the difference between in-state and out-of-state tuition for four years. Potential four-year value of this award is greater than $43,200. To remain eligible for this award, students must be non-United States residents, complete at least 12 credits each semester (for a total of eight semesters of continual enrollment at CMU), and maintain a cumulative CMU grade point average of at least 3.25. In order to renew CMU merit scholarships, students must reside in CMU on-campus residence halls in both their freshman and sophomore years. Part-time attendance, failure to maintain the required cumulative GPA, withdrawal from CMU in any regular semester other than summer school, or failure to reside in the residence halls for the freshman and sophomore years will cancel scholarships for the rest of the academic program.

The non-United States resident President's Award is one of a number of CMU merit awards; others include the Board of Trustees Outstanding Student Scholarship, Board of Trustees Academic Honors Scholarship, Cofer and Multicultural Advancement Awards. Students are eligible to receive only one of these merit awards. The President's Award has the highest dollar value. Students who receive in-state tuition rates due to the Legacy Program are not eligible for this award.

Presidential Awards for International Students
In an effort to enhance the recruitment of international students to campus, CMU has allocated funds for merit-based awards to be given to new non-immigrant undergraduate degree-seeking students. The awards are designed for international undergraduate students (new students and transfer students). Scholarship funds will be applied directly toward payment of tuition. Funding shall not exceed cost of tuition for any given semester. Students who enroll in CMU's International Bridge Program will be eligible for the scholarships upon satisfactory completion of the English Language Institute program. Students who are currently enrolled at CMU in a degree-seeking program may not apply for the award. Contact the Office of International Affairs, Ronan Hall 330, 989-774-4308, for more information.

Global Scholar. Up to seven (7) renewable scholarships in the amount of $3,000 per year is available. Award recipients will receive $1,500 per semester for up to eight (8) semesters. Applicants must have a cumulative grade point average equivalent to 3.00/4.00 at the time of application. All other eligibility requirements must be met.

Continental Scholar. Up to twelve (12) renewable scholarships in the amount of $2,000 per year are available. Award recipients will receive $1,000 per semester for up to eight (8) semesters. Applicants must have a cumulative grade point average equivalent to 2.90/4.00 at the time of application. All other eligibility requirements must be met.
Federal Supplemental
Educational Opportunity Grants (SEOG)

These are federal grants awarded by CMU to undergraduate students who are U.S. citizens or permanent residents demonstrating financial need. The amount of the grant is determined based on the federal needs analysis and available funding. Students must be making satisfactory academic progress to continue receiving the grant, and meet all other conditions outlined in the Financial Aid Eligibility section of this Bulletin.

Federal Pell Grants

Application Procedures. Students may apply for Federal Pell Grants by filing a FAFSA.

Methods of Selection of Recipients and Allocation of Awards. The Pell Grant Program is an entitlement program. The applicant must be enrolled as a first degree undergraduate student in an approved postsecondary institution and must show financial need as determined by Federal Methodology, a formula applied to all applicants. Pell Grant lifetime eligibility is limited to the full-time equivalence of 12 semesters.

Award Schedule. The amount of the award will be determined by the expected family contribution (EFC) and enrollment status at time of the Pell Grant disbursement.

TEACH Grant Program

Through the College Cost Reduction and Access Act of 2007, Congress created the Teacher Education Assistance for College and Higher Education (TEACH) Grant Program that provides grants of up to $4,000 per year to students who intend to teach in a public or private elementary or secondary school that serves students from low-income families.

Conditions. In exchange for receiving a TEACH Grant, you must agree to serve as a full-time teacher in a high-need field in a public or private elementary or secondary school that serves students from low-income families.

Requirements. TEACH Grant recipients are required to have completed at least four academic years within eight calendar years after you received the TEACH Grant.

High-Need Field

High-need fields are the specific subject areas identified below:

- Bilingual Education and English Language Acquisition
- Foreign Language
- Mathematics
- Reading Specialist
- Science
- Special Education

Other identified teacher shortage areas as of the time you begin teaching in that field. These are teacher subject shortage areas (not geographic areas) that are listed in the Department of Education’s Annual Teacher Shortage Area Nationwide Listing at https://www.ed.gov/about/offices/list/ope/pol/tsa.doc.

Schools Serving Low-Income Students

High-need fields are the specific subject areas identified below:

- Elementary Education
- Secondary Education
- Special Education

Many foundations, corporations, business and civic organizations, and private individuals contribute scholarships for students attending CMU. The best source of information on these opportunities is a local high school counselor.
Employment Programs

Job opportunities, on and off campus, are available to CMU students, regardless of financial need, who are enrolled at least half-time each semester. Employment in moderation can be beneficial to a student’s educational experience, and earnings can often reduce or eliminate the necessity to borrow. Over 5,000 students work on campus earning over $8 million yearly.

Federal Work Study Program

The university participates in the Federal Work Study Program (FWS). Students must be U.S. citizens or eligible noncitizens and meet all other requirements included in the Financial Aid Eligibility section. Students must be enrolled at least half time. Job placement extends to most areas of university activity. Pay rates are commensurate with federal minimum wage guidelines. Students are paid once every two weeks for hours worked.

Once students have earned the amount for which they are eligible, it is for the employing department to determine if students will remain employed and paid from another funding source. Students are not required to accept a job offer in order to receive other types of aid. If students want to replace all or part of the value of the job offered with a loan, they must write to or make an appointment with a financial aid advisor to discuss this option. Substitution of a loan for a job assignment can occur if loan funds are available. Summer employment for Federal Work Study students may be available on campus. Students must file the FAFSA for the succeeding year in order to be determined eligible, and complete a summer financial aid application.

University Employment/General Student Assistance Employment

Other student jobs are available on campus in addition to those described under the Work Study Programs. General Student Assistance positions are funded by the state through the university. Half-time enrollment status is also required for employment under this program.

Off-campus Employment

Businesses and individuals in the Mt. Pleasant and surrounding areas utilize the Student Employment Office to advertise available part-time positions through up-to-date job postings. Information on summer employment is also posted and includes local, state, national, and international opportunities.

Loan Programs

Several loan programs are available. A student is not required to accept a loan in order to receive other types of aid. Students should consider replacing part of the value of a loan with a job. Contact Student Employment to determine whether employment is available.

Students accepting student loans are committing themselves to a serious legal and moral obligation: loans must be repaid. Repayment may take ten years or longer after leaving Central Michigan University. Students are urged to consider their ability to repay a loan, their future credit rating, and their potential indebtedness before accepting a loan. The staff of the OSFA are available to discuss the implications of loans on the student’s future financial situation.

Federal Perkins Loan

Federal Perkins Loans are offered to full-time students who are U.S. citizens or permanent residents. Undergraduate students may borrow up to $5,500 annually, $11,000 aggregate for grades 1 & 2; total aggregate maximum is $27,500. The Perkins Loan is intended for students who have exceptional financial need. Because of limited funding, preference is given to undergraduate student applicants.

Loan Stipulations

No interest is charged on this loan while the student maintains at least half-time status, but five percent interest is charged beginning nine months after the student leaves school. The student has up to ten years to repay the loan after leaving school, depending on the amount that was borrowed. Deferment of repayment is allowed for additional graduate work and for military, Peace Corps, and VISTA service; officers in the Commissioned Corps of the Public Health Service; law enforcement services; full-time volunteers in some non-profit organizations, serving required internship for professional practice or service; and certain types of disability cases. Up to 100 percent of the loan may be canceled for a student who becomes a special education teacher or a teacher in an economically and culturally deprived area. The promissory note contains more detailed information.

Once offered, Federal Perkins Loan money will not be credited to the student’s account until student has completed Perkins Loan Entrance Interview Counseling and a Perkins Loan promissory note is completed, signed and returned to the OSFA. Normally the loan will be divided and credited equally to the fall and spring portions of the university billing statement.

Typical Loan Repayment Schedules

The following tables represent typical repayment schedules for student borrowers of Federal Perkins Loans. Borrowers should read the promissory note carefully to ensure that they fully understand the terms of the loan before the loan is accepted. Typically, Federal Perkins Loan payments are made every quarter.

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Loan Exit Interviews

Federal regulations and university policy require students who have taken a Federal Perkins Loan to attend a loan interview before graduating or withdrawing from the university. Important information concerning repayment schedules and deferment and cancellation provisions will be discussed. Students must attend and should contact the Loan Accounting Office, 105 Warriner Hall to arrange for the interview immediately before leaving the university. A hold on transcripts and future registration will be placed on those who do not complete the exit interview.

Federal Stafford Direct Loan Program

Subsidized Loans. Subsidized loans are made to a student by the federal government and applied directly to the student’s account. These loans are based on need, and eligibility is determined by the OSFA. All applicants must file a FAFSA. Loan applications are not required. CMU will initiate processing unless the student declines the suggested Federal Direct Loan on the award statement.

Undergraduate students making satisfactory academic progress who carry at least six (6) semester hours may borrow up to $3500 for the first year of undergraduate study, $4,500 for the sophomore year, and $5,500 for the junior and senior years of undergraduate study, depending on financial need. The subsidized loan aggregate maximum for undergraduate study is $23,000. Application is usually made for one semester or an academic year (9 months), with summer school requiring a separate CMU Summer Application.

For enrollment periods beginning on or after July 1, 2014, the annual fixed interest rate for a subsidized loan is 4.66%. There is a 1.073 percent origination fee deducted from the loan amount. Six months after ceasing to be enrolled at least half-time, the borrower must begin repayment. Several repayment options are available; contact the federal servicer. Payment of principal may be deferred under certain conditions. Refer to your promissory notes for details.
Unsubsidized Student Loans. Provisions are the same as the Federal Direct Subsidized Loans, except that the loan is not based on need. The program is open to students who do not qualify for the Federal Direct Subsidized Loan or who do not qualify for the full amount. The student is responsible for the interest that accrues while he/she is in school. Dependent students who demonstrate financial need for a subsidized loan based on grade level may borrow up to $2,000 in an unsubsidized loan, not to exceed the cost of attendance. Independent students may borrow the Federal Direct Subsidized Loan limits as well as an additional Federal Direct Unsubsidized Loan up to $6,000 per year for freshmen and sophomores and up to $7,000 per year for other independent undergraduates, not to exceed the cost of attendance. The interest rate that borrowers pay while in school is fixed at 4.66%. There is an origination fee of 1.073 percent.

The aggregate maximum for undergraduate study is $31,000, which may be a combination of subsidized and unsubsidized loans. The aggregate maximum for an independent undergraduate student is $57,500.

Direct PLUS (Parent) Loans
The Federal Direct PLUS Loan program makes loans at an annual fixed interest rate of 7.21% to pay for the costs of study at postsecondary schools. Under the program parents are eligible to borrow on behalf of dependent undergraduate students. Loan funds may be used only to pay for students' educational costs. The maximum eligibility for a Federal PLUS equals the cost of attendance minus estimated financial aid for the loan period. All applicants must file a FAFSA for the student for whom they wish to borrow. Processing will be initiated when the parent borrower provides requested information for the promissory note. Upon receipt of the signed promissory note, funds will be deposited to the student's account. The federal servicer is required to check the credit worthiness of all Federal Direct PLUS Loans applicants.

Parents may choose to defer payments on a PLUS loan until six months after the date the student ceases to be enrolled at least half time and pay accruing interest monthly or quarterly, or allow interest to be capitalized quarterly. Interest begins to accumulate at the time the first disbursement is made. Parents may choose to repay both principal and interest while the student is in school or take advantage of deferring payments.

Loan Counseling
Entrance Interviews. Students who have applied for a Federal Direct Student Loan as a first-time borrower are required by federal regulations to complete an entrance interview before their loan funds may be applied to their accounts. Important information on loans, debt management, repayment options and consequences of default will be presented. Information regarding this mandatory session is enclosed with the student's award package.

Exit Interviews. Students who receive a Federal Direct Loan are required by federal regulations to complete a loan interview before graduating or withdrawing from the university. Important information regarding deferment and payment schedules will be discussed. Students are contacted electronically to complete on-line exit counseling. Exit counseling materials will be mailed to students who fail to complete on-line exit counseling within 30 days of notification. During exit counseling CMU is required to obtain the following information from the borrower:
- expected permanent address
- name and address of the borrower's expected employer
- address of the borrower's next of kin
- any corrections to CMU's records concerning name, address, social security number, references, and driver's license number.

For Federal Direct loans, CMU is required to provide the above information to the federal servicer within 60 days of the exit counseling completion.

Veterans’ Resource Center
The Veterans’ Resource Center (VRC) serves students who are veterans, spouses, dependents or military students (on- or off-campus). VRC staff will help each student navigate through CMU, build academic and social networks, and receive assistance with their educational benefits, including those applicable to spouses and dependents. Hours of operation are Monday through Friday, 8:00 a.m.-5:00 p.m. by appointment. The Veterans’ Resource Center is located in Warriner Hall 114B and may be reached at 989-774-7991.

Specific information regarding Veterans’ Certification can be found at: http://global.cmich.edu/veterans

Other Sources of Financial Aid
Michigan Rehabilitation Services
Michigan Rehabilitation Services (MRS) is an arm of the Michigan Department of Career Development, designed to provide rehabilitative services to vocationally handicapped or impaired individuals.

Any person with an impairment such as an amputation, a cardiac condition, speech problems, deafness, blindness, orthopedic involvement, or epilepsy, can make application for service through Michigan Rehabilitation Services.

All services provided are individually planned to meet the established need and could include, for example: tuition, fees, books, prosthetic devices, maintenance, or other services that would be required for the completion of a rehabilitation program.

A student who feels that vocational rehabilitation services are needed may make inquiry and application for assistance by contacting the office of Michigan Rehabilitation Services in the student’s home area.

Army ROTC Scholarships
ROTC offers a variety of scholarships to the students of CMU. Scholarships differ primarily in the length of time in which the recipient receives the financial assistance. The Army ROTC scholarship program includes a financial benefit package for a period of four, three, and two years. Scholarships are awarded on a competitive basis to the most outstanding applicants, each of whom must: be of good moral character, be a U.S. citizen, be medically qualified, be not more than 31 years of age at graduation, pass the Army Physical Fitness Test (APFT), have no civil convictions (other than minor traffic violations), have a GPA of at least 2.5 (4.0 scale), and possess scholar, athlete, and leader attributes.

Each scholarship pays for college tuition, laboratory fees, on campus educational fees, and a standard amount for the purchase of textbooks, classroom supplies, and equipment. Army ROTC Scholarship winners also receive a tax–free subsistence allowance of $300–$500 per month for each school year that the scholarship is in effect.

Average Annual ROTC Scholarship
- Tuition: Student’s assigned tuition rate x 32 credits
- Books, Supplies: $900.00
- Subsistence: $3,000.00-$5,000.00

Additional ROTC scholarship information may be obtained by contacting personnel of the Military Science Department at 989-774-7440/3049.

Reserve Officers’ Training Corps (ROTC) Scholarship
Established in 1993 by CMU to provide six room and board awards on an annual basis to high school seniors winning three–year Advance Designee or four–year ROTC Scholarships.

Bureau of Indian Affairs
Information regarding grants for qualified students of at least one-quarter American Indian descent is available through the U.S. Department of the Interior, Bureau of Indian Affairs at 202-208-3710.

Indian Tuition Waiver
A Michigan state resident of a U.S. Federally Recognized Tribe who is not less than 25% Indian blood quantum is eligible for free tuition at CMU. Applications are available from the Michigan Department of Civil Rights, telephone 517-241-7748, www.michigan.gov/mdcr/0,1607,7-138--240889--,00.html. The student must be enrolled in a degree-granting program.
Endowed Scholarships and Awards

Named funds are designed to acknowledge a person or persons with a special relationship to CMU while strengthening the university’s student financial aid program, academic programs or administrative services. The accounts are sometimes named in honor of, or in memory of, loved ones. Named endowed awards and scholarships are listed on the following pages of the Bulletin.

Central Michigan University Scholarship Programs

Privately funded endowments provide supplemental funding to students based on need, academic focus, career aspirations or other specific criteria. Many of the endowed scholarships available for students are awarded by academic departments. A listing of the academic departments awarding scholarships is available on the Office of Scholarships and Financial Aid web page.

Remaining scholarships that are awarded by the Office of Scholarships and Financial Aid are generally awarded in the spring and summer for the next academic year. Most endowed scholarships require the student to be an undergraduate and enrolled full time (12 hours) in a degree-granting program on campus. Preference may be given to juniors and seniors of high academic standing with cumulative GPA of 3.0 or higher and demonstrating financial need. No application is required as recipients will be selected by the OSFA Scholarships Committee based on scholarship-specific criteria.

If you receive a Bulletin scholarship and other need-based financial aid, it may be necessary for the Office of Scholarships and Financial Aid to adjust your financial aid package.

AAUW - M. Ruth Evans Award
Established in 1991 by Jackie M. Evans, members of the M. Ruth Evans family and members of the Mt. Pleasant, Michigan branch of the American Association of University Women (AAUW) in memory of M. Ruth Evans, wife, mother and friend, for a sophomore, junior, senior or graduate student who has been a resident of Isabella County for two or more years and has a GPA of 2.86 or higher.

Lawrence E. Abbott Endowed Scholarship
Established in 2004 by Lawrence E. Abbott (Class of 1955). The income from the endowment will support a renewable award for a full-time undergraduate student enrolled in the College of Communication and Fine Arts and majoring in speech. Eligible candidates must demonstrate financial need and maintain an overall GPA of 3.0.

Harold and Iris Abel Honorary Scholarship
Established in 1986 by friends of Harold and Iris Abel, who served as president and first lady of CMU between 1975 and 1985.

Roger Allen Scholarship
Established by Roger and Margaret Allen, friends of education and CMU.

Rachel Brink Allwardt Endowed Scholarship
Established in 2000 by the estate of Rachel Brink Allwardt (Class of 1940). Proceeds from the endowment will be used to establish a scholarship for a junior or senior majoring in child development, accepted into the teacher education program, with a 3.5 minimum GPA.

Marian Croft Althoff Scholarship
Established in 1986 by James F. Althoff in memory of his wife Marian Croft Althoff (Class of 1951) for a student majoring in English.

Alumni Gold Scholarship
The Alumni Gold Scholarship was established in 1999 to benefit children and grandchildren of CMU alumni. Applicants must be freshmen or transfer students who meet criteria for admission to CMU. Recipients will be recommended by the CMU Alumni Association Board of Directors with final approval by the Director of Alumni Relations.

American Mitsuba Corporation Endowed Scholarship
Established in 2009 by American Mitsuba Corporation and its affiliate CME, LLC. Income from the endowment will support a renewable award for a student majoring in the electrical or mechanical engineering program in the College of Science and Technology with a minimum GPA of 3.0. Preference will be given to qualified CME and related company associates and their immediate family members.

Arthur Andersen Endowed Fund in Accounting
Updated in 2006, income from the endowment will support a fund for areas in the School of Accounting: student scholarships and faculty research. Recipients of the scholarship must be incoming freshmen who intend to enroll in the College of Business Administration with an accounting major, have a minimum 3.5 GPA and minimum ACT composite of 25. Faculty recipients will be awarded a summer stipend for conducting valuable research or research projects. More information is available in the College of Business Administration.

Jack and Patricia Anson Endowed Scholarship
Established in 2005 by Todd (Class of 1977) and Teresa Anson (1974) in honor of Jack (1950) and Patricia (1947) Anson. Income from the endowment will be used to support a scholarship for a Mount Pleasant, Michigan high school senior who has meaningfully participated in an organized activity in high school that is sponsored by the Mt. Pleasant Public Schools and who has a minimum GPA of 3.0.

Charles L. and Mary Fisher Ansprach Scholarship
Established in 1994 through a conversion of a loan fund in memory of Central's distinguished fifth president and in memory of Mrs. Ansprach who served the university for 20 years with distinction and grace as the wife of President Ansprach (1939 to 1959) for sophomore, junior or senior students with a 3.0 or higher GPA. Contact the Carlin Alumni House for more information.

Charles E. Anthony Scholarship
Established in 1999 by friends and family in memory of Charles E. Anthony, former WCEN owner and prominent Mt. Pleasant businessman, for a journalism major or minor who is an active member of the CM Life staff with a minimum GPA of 2.75.

Suzanne and Raymond Baber, Jr. Endowed Scholarship for Beaver Island Students
Established in 2007 by Suzanne Baber (Class of 1948, 1952) in memory of her husband Raymond Baber, Jr. Income from the endowment will support a scholarship for a biology major or minor with a minimum GPA of 3.0 to be used for tuition, room and board, books, and travel related expenses for a student taking a class at the CMU Biological Station on Beaver Island.

The Suzanne and Raymond Baber, Jr. Endowed Scholarship in Teacher Education
Established in 2002 by Suzanne Baber (Class of 1948, 1952) retired counselor, and Raymond "Bud" Baber, Jr., retired automobile advertising executive. Proceeds from the endowment will be used to support scholarships for juniors or seniors enrolled in the College of Education and Human Services, Department of Teacher Education, with a 3.0 minimum GPA. Preference will be given to students who demonstrate financial need.

Ron and Susan Bacon Outdoor Recreation Award
Established in 2006 by Ron and Susan Bacon in honor of their parents, Ronald and Sophia Bacon. Income from the endowment will support a scholarship for a junior or senior enrolled in the Department of Recreation, Parks, and Leisure Services with a major in outdoor recreation.

Ruby Leora Balduf Endowed Scholarship
Established in 2002 by the estate of Ruby Leora Balduf (Class of 1928). Proceeds from the endowment will be used to fund a renewable scholarship for a student enrolled in the College of Education and Human Services with a GPA of 3.0 or higher and demonstrated financial need.

William S. Ballenger, III and Dr. William P. Browne Capitol Internship Program Endowment
Established in 2007 by friends and family of William S. Ballenger, III and Dr. William P. Browne, former CMU employees, to honor their service and dedication in the area of political science at CMU. The endowment recognizes Bill Ballenger's service as the Rotarian and Marjorie Griffin Endowed Chair in American Government from 2003-2007. The endowment also honors Dr. Bill Browne as a respected friend, colleague, and mentor to the political science department and the College of Humanities and Social and Behavioral Sciences. Income from the endowment will support a renewable internship for an undergraduate or graduate student enrolled in the political science academic program who has an interest in the study of political science and who has a minimum GPA of at least 3.0.

Sue Schrier Bancroft Endowed Music Fund
Established in 2004 by Sue (Class of 1972) and Chris Bancroft. Income from this endowment will support the School of Music by way of faculty development, scholarships, supplies and equipment, program support and guest artists and/or guest speakers. When used for scholarships, the recipients will be students who demonstrate outstanding promise in their field as determined by a School of Music scholarship committee.

Fay and Genevieve Barbitte Outstanding Student Award
Established in 1988 by Fay and Genevieve Barbitte for juniors within the Department of Teacher Education and Professional Development.

Stephen Lawrence Barstow Art Scholarship
Established in 1993 through the estate of Stephen Lawrence Barstow for two financially needy art students with particular emphasis in promoting Native Americans into the arts.

Stephen Lawrence Barstow Native American Prize
Established in 1993 through the estate of Stephen Lawrence Barstow for the outstanding art student.

John and Jennie Bastow Scholarship and Olson L. Anderson and Catherine Bastow Anderson Scholarship
Established in 1986 through the estate of Olson and Catherine Anderson for undergraduate students with an above average grade point and need of financial assistance. First preference is given to students from Bay County, MI.
Scholarships and Financial Aid

James O. Beard, Jr. Scholarship
Established in 1994 by family and friends in memory of James O. Beard, Jr. (Class of 1991), who was an accounting instructor and served as faculty advisor for the Student Accounting Society. The recipient must be a senior and a member of the Student Accounting Society.

E.C. Beck English Scholarship
Established by Dr. Earl C. Beck, former chairman of the Department of English, for an English major. First preference is given to juniors and seniors on the basis of scholarship, need and probable teaching success.

Joseph and Selma Bell Scholarship
Established in 1959 by Joseph and Selma Bell of Riverdale, IL, longtime friends of CMU, for worthy and patriotic students.

Jack and Nancy Benedict Endowed Award
Established in 2010 by Jack (Class of 1967, 1969) and Nancy Benedict. Income from the endowment will support an alternating award for a student enrolled in the College of Business Administration and College of Communication and Fine Arts. Recipient must have a signed major in business or journalism and have a minimum GPA of 2.5.

Frances E. Rogers Benson Scholarship
Established in 1988 by the family of Frances E. Rogers Benson. CMU Life Certificate in 1928, for students with a GPA of 2.8 or higher as selected from East Jordan High School or Charlevoix County high schools.

Bettsworth Endowed Scholarship in Directing
Established in 2004 by Chester J. Brown and Linda Bettsworth and friends, Income from this endowment will be used to fund a renewable scholarship for a junior or returning senior who has demonstrated outstanding promise in theatre directing, as determined by the chair of the Department of Speech, Communication and Dramatic Arts, the Theatre, Interpretation and Dance area in consultation with the Office of Scholarships and Financial Aid.

Biological Station Scholarship
Tuition awards are available to students taking courses at the CMU Biological Station at Beaver Island, MI. Contact the director of the biological station for further information.

Department of Biology Scholarship
Established in 1989 for one freshman and one transfer student pursuing a biology major. Freshmen scholarships are renewable for up to three additional years if eligibility is maintained. Apply within the Department of Biology.

Suzanne Rae and Walter James Bisard Endowed Scholarship
Established in 2006 by Walt Bisard '66, '67 for his wife Suzanne '75, '87 in honor of her 26 years of outstanding elementary science teaching career and also for their 40th wedding anniversary. Income from the endowment will support a renewable award for a sophomore, junior or senior with a minimum GPA of 3.0. Recipient will be pursuing a career in Elementary Science Teaching, Middle School Science Teaching or High School Physics Teaching. The award may be used for CMU tuition, travel to science meetings, conferences or membership in science organization(s).

Paul M. Bishop and Family Endowed Award
Established in 2003 by Paul M. Bishop and family, Paul M. Bishop was a 1940 CMU graduate and first established this loan fund in 1972. Members of the Bishop family have been long-time residents of Mount Pleasant and strong supporters of Central Michigan University. Three generations of Mr. Bishop's family have attended and graduated from CMU - daughters Susan B. Johnston, Lucinda B. McCoy and granddaughter Jennie A. McCoy. This renewable award will benefit a junior or senior enrolled in the College of Humanities and Social and Behavioral Sciences who is pursuing a degree in social work and who has a minimum GPA of 3.25. First preference will go to a student who can demonstrate financial need.

Barbara Bissot Endowed Scholarship
Established in 2007, the endowment was created by Dr. Barbara Bissot, a former professor in the Department of Teacher Education and Professional Development at CMU, through her estate. Income from the endowment will support a renewable scholarship for a student with a minimum GPA of 3.3 enrolled in the College of Education and Human Services, Department of Teacher Education and Professional Development.

Mary Ellen and George M. Blackburn Choral Scholar Endowment
Established in 2008 by Mary Ellen and George M. Blackburn in memory of her husband, George M. Blackburn. Income from the endowment will support a student with a music major. Recipient will become the St. John’s Episcopal Church Choral Scholar and will participate in the St. John’s Episcopal Choir and become acquainted with sacred choral literature from the 16th to 21st centuries. Visit the College of Communication and Fine Arts, School of Music for further details.

Bohannon Family Endowed Scholarship Fund
Established in 2004 by Lon M. (Class of 1975) and Vicki J. Bohannon. Income from this endowment will be used to fund a renewable scholarship for a full-time undergraduate student enrolled in the College of Business Administration with preference for accounting or international business major. Recipient must maintain a 3.0 overall GPA and demonstrate financial need.

The Daniel L. Bookey Endowed Award
Established in 2008 by friends and colleagues in honor of Daniel L. Bookey, emeritus CMU athletics equipment manager. Income from the endowment will support an award for a student equipment manager in their sophomore year or higher who best epitomizes the character traits of Dan Bookey: selflessness, dedication, integrity, and love of the game. Student must maintain 2.5 or higher GPA.

Duane Mark Bouliew History Award
Established in 1990 by family and friends in memory of Duane Mark Bouliew. CMU senior killed in an automobile accident December 16, 1989, for a junior or senior who has earned at least 12 credit hours in history with a minimum 3.25 GPA; has a 3.0 or higher overall GPA; and preferably is a member of CMU’s History Club and Phi Alpha Theta, or active in other campus or community organizations.

Jennifer H. Bourque Memorial Award
Established in 2014 by Jeremy Bourque and friends and family in memory of his sister Jennifer Bourque, a 2004 Journalism alumni. Income from the endowment will support a renewable award for a photojournalism major with a minimum 2.5 GPA demonstrating financial need from the state of Michigan. Preference will be given to a single parent.

Norvall C. and Evelyn Gagnon Bovee Scholarship
Established in 1995 from a loan fund established in 1971 to commemorate Norvall C. Bovee’s 30 years of dedication, service, loyalty and positive effect on CMU as assistant and director of the Keeler Union, business manager, controller and vice president of business and finance between 1940 and December 11, 1970. Annual spendable investment income will be awarded to biology majors studying at the CMU Biological Station at Beaver Island, MI. Application may be made through the Department of the Biology.

Bill Boyden Leadership Award
Established in honor and memory of W.B. (“Bill”) Boyden by family members and friends. Bill Boyden well reflected during his lifetime a unique blend of leadership, community concern and involvement, athletic ability and diverse other talents. The purpose of the award is to foster and recognize similar interests and abilities in deserving students.

Roger and Nancy Bradshaw Endowed Award
Established in 2014 by Roger ’75 and Nancy Bradshaw. Income from this endowment will support a renewable scholarship for a full-time junior or above student who is an instrumental music major from the western part of Michigan; with a minimum 2.7 GPA.

Brannan Family Scholarship
Established in 2010 by family and friends in memory of Samuel J. Brannan (Class of 1959, 1962), mathematics professor at Central Michigan University for 38 years. Income from the endowment will support a renewable award for a full-time junior or senior enrolled in the teacher education program in the College of Education and Human Services with a minimum 3.0 GPA.

William Brehm, Sr. Scholarship
Established in 1988 by William Brehm for a junior or senior pursuing a business administration degree with a major in hospitality services administration.

Brungardt-Utley-March Endowed Award
Established in 2004 to honor Patricia Breuer, Lewis Brown and Trena Marsh. Income from the endowment will be used to support a renewable scholarship for a student(s) who graduated from a high school in Michigan and who can demonstrate financial need and commitment to the advancement of African-Americans in the professions.

Laurel Wood Brist Endowed Award
Established in 2007 by Pat Loers in memory of her mother, Laurel Wood Brist. Income from this endowment will support a scholarship for a full-time junior or senior enrolled in Early Childhood Development Program in the elementary education program with a GPA of at least 3.0. Preference will be given to students from Mecosta or Isabella County.

Reverend Lloyd C. and Ica L. Bronson Memorial Award
Established in 2002 by Larry Bronson, CMU emeritus faculty member, to honor his parents, the Reverend Lloyd C. and Ica L. Bronson. Proceeds from the endowment will be used to establish a renewable scholarship for a senior student enrolled in the College of Humanities and Social and Behavioral Sciences, majoring in English with a GPA of 3.5 or above. Recipient will provide documented work with minority groups. Women, persons of color, and persons with disabilities are encouraged to apply.

Chester J. Brown Scholarship
Established in 1984 by family, friends, and trust of Chester James Brown (Class of 1934), lifelong resident of Isabella County, for a student within the Colleges of Communication & Fine Arts or Science & Technology.

Edward C. Brown Award
Established in 1991 by CMU faculty, staff, students and friends in memory of Edward C. Brown, director of CMU Health Services from 1978 to 1990, in recognition of the outstanding leadership he provided to health services, the Division of Student Affairs and the university in general for sophmore, junior or senior students who have a cumulative GPA of 3.0 or higher in health education.
Kathryn L. Brown Award
Established in 1998 by friends and family in memory of Kathryn (Kate) L. Brown, a junior in the Hospitality Services Administration program who died while doing her internship. Recipient will be a full-time student majoring in hospitality services administration with at least one full semester remaining before graduation and a minimum GPA of 2.5.

Betty A. Brubaker Family of Heroes Scholarship
Established in 2014 by Steven A. Rellinger '85, '96, family and friends in honor of his mother, Betty A. Brubaker and also John Sheets, Don Rellinger and Herman Wright, members of the United States Military. Income from the endowment will support an award for currently enrolled CMU students that are personnel of the U.S. Armed Forces, National Guard, reserves, or honorably discharged veterans, and/or their respective family members. The recipient(s) must be eligible for Veterans Affairs Administration (VA) education benefits fulfillment under chapters 30, 33, 35, 1606 or 1607 and provide a copy of his or her VA Certificate of Eligibility. Recipients also must have a cumulative minimum GPA of 2.5 for undergraduate students and 3.0 for graduate students.

Mary Lou Bruce Scholarship
Established in 1983 by Lieutenant Colonel Gene D. Bruce and friends in memory of Mary Lou, a dedicated military wife and a valued member of the military science and health education families and Mt. Pleasant community, for a junior, senior or graduate student majoring in health education and health science who has earned a 3.0 or higher GPA.

Dr. James R. Burley Endowed Scholarship
Established in 2011 by family, friends and colleagues of the late Dr. James R. Burley, Marketing and Hospitality Services Administration professor. Income from the endowment will support a renewable award for a full-time junior or senior majoring in the College of Business Administration, Department of Marketing and Hospitality Services Administration with a minimum GPA of 3.0.

Roy and Alice Burlington Beaver Island Endowed Award
Established in 2007 by Drs. Roy and Alice Burlington, for a full-time freshman student majoring in the field of biology on Beaver Island during Summer Session II.

Donald Oren Bush Scholarship
Established by the family in memory of husband and father, Donald O. Bush, professor of Teacher Education and Professional Development, for a junior or senior early childhood and elementary education major with a 2.75 or higher GPA and financial need.

Marie Donner and Fred R. Bush Scholarship
Established by Fred R. Bush, family and friends in recognition of Professor Bush, former director of the University Theatre, graduate of CMU and member of the faculty for 33 years. Mrs. Bush was a faculty member in the Department of Music for students of fine arts.

Nikoline A. Bye Endowed Award
Established in 2012 from the estate of Nikoline A. Bye ’32. Income from the endowment will support an award for a student enrolled in the College of Science and Technology who is a second semester junior or senior and has been admitted to the teacher education program. First preference will be a mathematics major on the elementary curriculum. The recipient will have a minimum academic excellence as demonstrated by a GPA of 3.5 or higher in the mathematics major and have at least one year left before graduation.

Hughalkins Endowed Scholarship
Established in 2002 by the estate of Hugh H. Clarkins (Class of 1933). Proceeds from the endowment will be awarded to a student who plans to pursue a career in the geographic information sciences. The recipient must be enrolled in the College of Science and Technology, with a signed geography major, a concentration in geographic information sciences, and have a minimum GPA of 3.25 in geography courses and a 3.25 GPA overall.

Cambridge-Howe-Calkins Scholarship
The Cambridge-Howe-Calkins scholarship honors all the members of the Cambridge, Howe, and Calkins families who have attended Houghton Lake schools. Many of them have gone on to CMU. The scholarship is endowed by the Cambridge Family for an incoming freshman from Houghton Lake High School. The award will be made based on GPA and involvement in school and community activities. The student must live on campus while attending CMU.

Jerry and Felicia Campbell Endowed Scholarship Fund
Established in 2003 by Jerry (Class of 1962) and Felicia Campbell. Jerry is a current member and past chair of the Central Michigan University Board of Trustees and a member of the Dean’s Advisory Board, College of Business Administration. Mr. Campbell is chairman of the board of Republic Bancorp. This endowment will provide funds for incoming freshman who will be participating in the Houghton Lake competition and who intend to pursue a degree in business. Recipients will have a minimum GPA of 3.5 and a composite ACT score of at least 28. Recipients will be expected to join a business student organization, participate in a mentoring program, and reside in the College of Business Administration’s residential college in their freshman year. This scholarship is renewable if recipients maintain a minimum 3.25 GPA and make satisfactory academic progress toward their major and degree program.
Chemical Financial Corporation Endowed Scholarship
Established in 2009 by Chemical Bank. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration with a minimum GPA of 3.0. Preference will be given to students from Clare or Midland County, if no students from these counties meet the criteria, then any student from Michigan meeting the criteria may apply.

Eugene C. Chenoweth Debate Award
Established in 1980 through the estate of Eugene C. Chenoweth for undergraduates who exhibit excellence in intercollegiate debate competition. The award is administered by the director of debate and chairperson of the Department of Communication and Dramatic Arts.

Gabriel Chien Memorial Scholarship
Established in 2003 by Dr. Gabriel Chien in memory of his wife Dr. Grace Chien, who was a history professor at CMU. Proceeds from this endowment will be used to support a student scholarship. The recipient will be a United States citizen enrolled in the College of Humanities and Social and Behavioral Sciences who has demonstrated a global and historical perspective.

The Chisman Company Endowed Scholarship
Established in 2005 by The Chisman Company. Income from the endowment will support a renewable scholarship for a student pursuing a major in construction management from the College of Science and Technology. Preference will be given to incoming freshmen who have had three years of high school math. The student must have a minimum GPA of 3.0 and be able to demonstrate financial need.

Citizens Insurance Company of America Scholarship
Established in 1989 by Citizens Insurance Company of America, Howell, MI, for a College of Business Administration student who meets eligibility requirements specified by Citizens Insurance Company of America.

Robert and Susan Clarke Scholarship
Established in 2005 by Robert (Class of 1971) and Susan Clarke (1971). Income from the endowment will support a scholarship for a graduate from Harbor Springs High School. Preference will be given to incoming freshman and those pursuing a degree in business or education.

John and Mary Ann (Kaatz) Click Endowed Award
Established in 2011 by Patricia Janes ’86, ’92 and Theresa Cusworth ’79, ’88 in honor of their parents, John and Mary Ann (Kaatz) Click. Income from the endowment will support an award for a full-time student enrolled in the College of Education and Human Services, in a service oriented studies program with a minimum GPA of 2.5. The recipient must work or volunteer a minimum of ten hours per week and explain the reason(s) for choosing a service career.

CMU Police Scholarship Fund
Established by the CMU Police Department to provide financial assistance to students.

CMU Women’s Connection Scholarship
Established in 2007 by CMU Women’s Connection donors. This association provides a platform for alumnae and friends to be actively engaged in the advancement of the university and to promote enhanced learning opportunities for CMU students. Income from this renewable award will support a part-time or full-time single parent enrolled at CMU or to a student from a single parent household demonstrating financial need with a minimum GPA of 2.75.

Vicky Cobb Endowed Scholarship
Established in 2015 by Vicky Cobb, ’84, ’91. Income from the endowment will support an income freshman with a minimum GPA of 3.25 from the Central Michigan region (Mason, Lake, Osceola, Clare, Gladwin, Arenac, Oceana, Newaygo, Mecosta, Isabella, Bay, Montcalm, Gratiot, Shiawassee or Saginaw counties) demonstrating financial need. The recipient will be a full-time student studying one of the disciplines offered by the College of Science and Technology, preference will be given to students majoring in Chemistry or Biochemistry and those committed to alleviating the underrepresentation of women in STEM disciplines. Recipient must show potential for leadership at the collegiate level. Recipient agrees to live in the Science & Technology Residential College and take the First Year Experience class.

Cochran/Burke Scholarship for Excellence in Middle Level Education
Established in 2005 by Dr. Jennifer Cochran and Dr. Peggy Burke, CMU faculty. Income from the endowment will support a renewable award for a junior or senior with a minimum GPA of 3.0 who can demonstrate financial need and has a major in middle level education.

Alice J. Wesley Colby and William F. Colby Scholarship
Established in 1998 by Judith Mynsberge in memory of her aunt, Alice Wesley Colby (Class of 1935) and William Colby. This scholarship is awarded annually to students, preferably from Bay or Alpena Counties, who have achieved a 3.0 GPA in high school and are in need of financial assistance to pursue a career in teaching.

Roger L. Coles RPL Leadership Award
Established in 2010 by Roger L. Coles (Class of 1973, 1977) interim dean of the College of Graduate Studies, formerly the chairperson of Recreation Parks and Leisure Services Administration. Income from the endowment will support a renewable award for a full-time student enrolled in the College of Education and Human Services, Department of Recreation, Parks and Leisure Services Administration with a minimum GPA of 2.75 and is a Student Recreation Association (SRA) board member that has been on the board for at least one year. Candidate must demonstrate level of involvement through study and/or state/ national organization or community service.

Gary L. and Cathleen M. Collins Endowed Scholarship
Established in 2010 by Gary L. and Cathleen M. Collins (1998) to support students seeking an experience in international business. The award will be for a junior or senior that is a Michigan high school graduate majoring in business, who will be seeking opportunities for experiences through internships or other business educational opportunities. The award may be used to assist with travel related expenses or a scholarship to assist a student studying business through a sponsored College of Business Administration program. Recipient must have a record of academic excellence as demonstrated by a GPA of 3.25 or higher.

Jeanne F. Collins Scholarship
Established in 1988 by Robert John Collins in memory of his wife, Jeanne F. Collins, dedicated administrative assistant to four CMU presidents spanning 23 years.

R. Cedric Colness Vocal Scholarship
This scholarship was established in 1975 by L. Judith Colness in memory of her husband, R. Cedric Colness. Professor Colness was a member of the Music Department faculty for ten years as a teacher of voice, opera theatre, musical theatre, and voice pedagogy. Earnings from this scholarship will provide an annual scholarship for one vocal music major of sophomore, junior, or senior status who exhibits excellence in skill and proficiency in this field. The recipient will be selected at a vocal competition on campus during the spring semester prior to the upcoming academic year. Specifications for the competition are as follows: 1. Donor (or designee) must be notified of the date, time, and place for the vocal competition. 2. The vocal scholarship application must compete and sing three selections from memory: a. A Lied (German) Art Song b. A Chanson (French) Art Song c. an Operatic aria 3. The competition must include at least one judge from outside the campus/ Mt. Pleasant area, 4. The donor (or designee) will be notified of the winning recipient.

Computer Science Endowment
Established 2005. The spendable income from this endowment may be used for scholarships for undergraduate or graduate students, student awards, professional events in the department, and other necessary purchases for the benefit of the Computer Science Department. If used for a scholarship for undergraduates, the students must be a sophomore or junior, an authorized CPS or IT/IC major (Computer Science or Information Technology), and have a minimum 3.5 GPA. Graduate Students must be an authorized major in CPS MS. The award is renewable.

Con-way Freight Inc. Endowed Logistitcs Honors Award
Established in 2008 by John Labrie (Class of 1989) and Con-way Freight Inc. The renewable award will support an honors student enrolled in the College of Business Administration’s logistics management program with a minimum GPA of 3.25.

Fred and Joyce Cook Endowed Scholarship
Established in 2005 by Fred (Class of 1969) and Joyce (1992) Cook. Income from the endowment will support a renewable scholarship for an incoming freshman. Preference will be given to a student working toward the advancement of minorities and who can demonstrate financial need.

Dr. Robert and Karen Cook Endowed Scholarship
Established in 2009 by CMU alumni in honor of Dr. Robert Cook, professor of Marketing and Hospitality Services Administration and Mrs. Karen Cook. Income from the endowment will support an award for a student enrolled in the College of Business Administration majoring in Logistics Management, with a minimum GPA of 3.25.

Wells Cook Endowed Award
Established in 2007 by friends and family of Dr. Wells F. Cook (Class of 1950), former professor at CMU. Income from the endowment will support a renewable award for students enrolled in business information systems with a minimum GPA of 3.0.

Cynthia Diane Cordell Scholarship
Established by the family of Cynthia Diane Cordell, a CMU student who was preparing to become a teacher at the time of her death in December 1968, for worthy senior, junior or graduate level students in good standing pursuing a teaching curriculum.

Florence Olive Courville Scholarship
Established through the estate of Florence Courville, a friend of education, for worthy students from Benzie County.
Crawford & Winiarski/Rodney L. Crawford Scholarship in Forensic Accounting
Established in 2000 by Rodney L. Crawford (Class of 1977). Income from this scholarship will support a junior or senior enrolled in the College of Business Administration with a minimum GPA of 3.0 and a demonstrated financial need.

Hubert Dixon Crider Scholarship
Established in 1980 by Muskegon Development Company in honor of Hubert Dixon Crider, Muskegon, MI, for a junior or senior in good academic standing with a major or minor in geology. Mr. Crider came to Michigan in 1925 and was responsible for selecting the well site for the drilling of the first major oil discovery in the state of Michigan. Mr. Crider continued to serve the industry for 55 years in his field of geology. Recipient selection is made by a Department of Geology & Meteorology committee.

Dorothy L. Galloway Crooks Elementary Education Scholarship
Established in 2005 by Dorothy L. Galloway Crooks (Class of 1954). Income from the endowment will support a renewable scholarship for a junior or senior enrolled in the College of Education and Human Services, admitted to the elementary teacher education program. The recipient must have a minimum GPA of 3.0 and demonstrate financial need.

David H. Current Endowed Scholarship
Established in 2011 by Diane E. Current and faculty members in memory of David H. Current. Income from the endowment will support a renewable award for a full-time junior or senior student enrolled in the College of Science and Technology, Department of Physics with a minimum 3.0 GPA. Student must demonstrate a passion for Physics, growth in problem solving skills and interest in experimental Physics.

Bob Currie Scholarship
The Bob Currie Memorial Loan Fund, established in January, 1974, was converted to an endowed fund in 1988 to provide an academic achievement scholarship to a CMU student majoring in physical education with preference given to former swimmers from Dearborn, MI.

Herbert L. and Lillian M. Curry Scholarship
Established in 1995 by Karen Heydenburg and Dennis Curry in memory of their parents with preference for junior or senior IPC majors with a 3.0 or higher GPA, with an emphasis in oratory/debate or speech education and participation in debate, oratory or other forensic activities. Applications may be made through the Director of Forensics.

Waldo J. and Kathyrn Curtiss Endowment
Established in 2005 by Waldo and Kathryn Curtiss. Income from the endowment will support either a scholarship or purchase equipment for learning or physically disabled students.

Nicholas Cuthbert Biology Scholarship
Established in 1993 in memory of CMU Professor Emeritus Nicholas Cuthbert. This merit-based scholarship will be awarded to a signed biology major.

Dalton-Meisel Grant Scholarship
Established in the mutual will of Frank W. Dalton and Lillian M. Dalton. The Daltons were both CMU graduates who were active in alumni affairs and in Michigan schools.

Levi, Mildred and Rusch Dees Scholarship
Established in 1966 for one senior student majoring in voice who has earned a 3.0 or higher GPA. Application may be made through the School of Music each spring.

G. Roland and Olga Jones Denison College of Business Administration Scholarship
Established in 1983 by CMU graduates Olga Jones Denison (1940) and “Rollie” Denison (1941) in appreciation of the influence of CMU on their lives as alumni and as residents of the city of Mt. Pleasant. Awards are for one or more junior or senior students of the College of Business Administration. Selection of recipients is made by a committee of the College of Business Administration and based on scholarship, citizenship and need.

Charlotte Denman/Eianore Thompson Endowed Scholarship
Established in 2005 by Eianore Thompson in honor of Charlotte Denman. Income from the endowment will be used to support a renewable scholarship for a student who is a junior with an expressed interest in teacher education, with either a major in physical education and an academic minor, or an academic major with a physical education or coaching minor. Recipients must have a GPA equal to the NCAA standard, currently 3.3. Preference will be given to student athletes or those working with an athletic team.

Amie Jo and Kellie Sue Dennis Scholarship
This one-year scholarship is awarded as selected by a committee from Beal City High School to a graduating senior enrolling at CMU. The endowment was provided by family and friends of Amie Jo and Kellie Sue Dennis in 1986 shortly after their untimely deaths at ages 17 and 15. Amie Jo and Kellie Sue were active and energetic Beal City High School students.

Gregory and JoAnn DeWitt Endowed Award Fund
Established in 2008 by Gregory (Class of 1983) and JoAnn DeWitt (1983). Income from the endowment will support an award for a full-time sophomore or higher undergraduate student majoring in business from Kent, Ottawa or Muskegon counties with a minimum GPA of 3.0. Preference will be given to a student demonstrating fiscal need.

Diehl Award in Business Information Systems
Established in 2007 by a trust from Ben and Edna Diehl ’40. Income from the endowment will support a renewable award for a student enrolled in Business Information Systems who has a cumulative minimum GPA of 3.0.

Norman Dietz Endowed Music Award
Established in 2009 by friends and family in honor of Norman C. Dietz (Class of 1941), music professor emeritus. Professor Dietz was an inspiration to many as a musician, teacher, leader, and mentor who instilled in students a standard of excellence that not only impacted their musical skills but also fostered the satisfaction of achieving success beyond personal expectations. Income from the endowment will support a renewable award for a junior or senior music major. The recipient must be a member of one or more of the School of Music presentation instrumental ensembles, possess strong leadership skills and have a minimum GPA of 3.0.

The Norman C. Dietz Scholarship
The recipient of the Norman C. Dietz Scholarship is to be a music major member of the CMU Macatawa Chippers who exhibits outstanding leadership and musicianship and whose integrity is beyond reproach.

Wendell and Marcia Dilling Chemistry Endowed Scholarship
Established in 2008 by Wendell and Marcia Dilling. Income from the endowment will support a renewable award for a student enrolled in the College of Science and Technology and the Department of Chemistry with a GPA of at least 3.0.

Russell and Linda Dippel Family Award
Established in 2008 by Kristen Holt (Class of 1994). Income from the endowment will support a renewable award for a study abroad student enrolled in the College of Business Administration, majoring in accounting with a minimum GPA of 3.0 and demonstrating financial need. Preference will be given to students from Eisenhower High School in Shelby Township, MI.

Claudia B. Douglass Science Education Award
Established in 2004 by Dr. Claudia Douglass, professor of biology at Central Michigan University. Income will be used to support a renewable award for a sophomore, junior or senior pursuing a major in elementary or secondary Integrated Science (preferred) or secondary Biology. Recipient must have an overall GPA of 3.5 or higher and a GPA of 3.25 in all science classes (excluding mathematics).

Dow Coming CMU Endowed Scholarship
Established in 2006, the scholarship was funded by a group of Dow Corning employees, all dedicated CMU alumni, in memory of Larry Reed ’69. Income from the endowment will support a scholarship for an undergraduate student enrolled in the College of Business Administration; preference may be given to juniors. The recipient will be performing at a high level in their academic coursework. Selection will be based upon GPA, performance in specific business courses, letters of recommendation, demonstrated leadership in college related activities and the potential for success following completion of the degree. A list of finalists for the scholarship is to be sent to a selection committee, who will then make the final determination of the recipients. Preference may be given to applicants who are available to intern as students with Dow Corning and willing to consider full-time employment with Dow Corning upon graduation.

Lee and Lori Dow Endowed Scholarship
Established in 2009 by Lee (Class of 1976) and Lori Dow. Income from this endowment will support a renewable award for a junior enrolled in the College of Business Administration demonstrating financial need with a minimum GPA of 3.5.

Edana DuGuay Scholarship for French Study Abroad
Established in 1986 by the Department of Foreign Languages, Literatures and Cultures in honor of Dr. Edana DuGuay, former professor of French, for a student majoring in French for the purpose of studying abroad. The award is given on a competitive basis to a junior or senior of high academic standing.

Dennis L. Durkee Endowed Award in Journalism
Established in 2010 by Dennis L. Durkee (Class of 1978). Income from this endowment will support an award for a full-time sophomore or higher majoring in journalism with a minimum GPA of 3.0.

J. Dean and Betty L. Eckersley Business Administration Scholarship
Established in 1996 as a renewable scholarship for a freshman, sophomore, junior or senior student intending to pursue or major in business administration within the College of Business Administration who has earned a minimum GPA of 3.0. Preference is given to incoming freshmen or sophomores, a 3.25 for a junior and 3.0 for a senior with financial need as determined by CMU. Preference will be given to students from Isabella County, other counties of Michigan and transfer students from Mid-Michigan Community College who were recipients of the J. Dean and Betty L. Eckersley Scholarship. Application may be made through the College of Business Administration.
Michael J. and Susan P. Farrell Endowed Scholarship in Science Education
Established in 2014 by Michael J. ‘77 and Susan P. Farrell ‘77. Income from the endowment will support a renewable award for a student enrolled in the College of Science and Technology, Department of Chemistry, pursuing a career in science education with a minimum GPA of 2.75.

Drusilla Farwell Foundation Endowed Award
Established in 2007 by the Drusilla Farwell Foundation. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration with a minimum GPA of 3.0.

Richard D. Featheringham Endowed Organ Scholarship
Established in 2005 by Dr. Richard (Class of 1981, 1984) and Audrey Featheringham. Income from the endowment will support a renewable scholarship for an undergraduate or graduate student with a minimum GPA of 3.0. Preference is for organ major or minors, then for keyboard major or minors. The student must successfully audition with the School of Music.

Robert G. Fell Endowed Scholarship
Established in 1986 in memory of Robert G. Fell, former CMU biology professor, for a biology student.

Lon Ferguson Memorial and Friends of Art and Design Travel Endowment
Established in 2011 by friends and family in memory of Lon Ferguson, former art and design instructor at CMU. Income from this endowment will be used to support a travel award. The recipient will be a student enrolled in the College of Communication and Fine Arts and the Department of Art and Design. The student must be a full-time art major with a minimum GPA of 3.0. The award is intended to support a student engaged in a study away experience that will enrich his/her artist repertoire through applied research/creative endeavor which could include a study abroad experience, research trip, or applicable artistic internship/apprenticeship experience.

Fausto and Gladys Fernandez Endowed Scholarship
Established in 2010 by Eduardo B. Fernandez (Class of 1984) in honor of his parents, Fausto and Gladys Fernandez. Income from the endowment will support a renewable award for an incoming sophomore or higher with a signed agreement to study abroad. The recipient(s) will be a sophomore or higher and a graduate student with a minimum GPA of 3.0.

Bud Fisher and Fisher Companies Study Abroad Scholarship
Established in 1995 in memory of his father, David R. Fisher, a former university employee. Income from the endowment will support a renewable award for a full-time student(s) demonstrating financial need. Preference will be given to students majoring in science or math. Income from this endowment will support a renewable award for a student majoring in science or a cross-disciplinary program involving chemistry.
Fisher/O’Boyle Endowed Scholarship
Established in 2007 by Jodi Brooks-Fisher ’89, PhD and Irene O’Boyle ’88, ’91, PhD, both professors in The Herbert H. and Grace A. Dow College of Health Professions, School of Health Sciences. Income from the endowment will support a renewable award for a junior or senior with a declared major in Public Health Education and Health Promotion or School Health Education and has a minimum GPA of 3.0.

Frances G. Fitch Art Scholarship
The Department of Art Scholarship established in 1988 was renamed in 1993 to commemorate former art faculty member Frances G. Fitch. Junior or senior recipients with a 3.5 or better GPA in art classes are chosen by members of the Department of Art & Design.

Kelly Lynn Fizpatrick and Bruce William Wood Scholarship
Established in 1992 by family and friends of two alumni for rotating scholarships for CMU students in broadcast and cinematic arts and journalism.

Mae B. Fleming Award
Established in 1999 by Nancy J. Blay in memory of her mother Nancy Mae Bowers Fleming, former teacher and CMU housemother, for an education major who is active in extra curricular or community activities.

Kendall W. Folker Award
Established in 1987 in memory of Kendall W. Folker, former chairperson and professor in the Department of Religion, for a graduating senior who has been admitted to a graduate program in South or East Asian studies or undergraduates pursuing work in South or East Asian studies through a study-abroad program.

Phillip V. and Sylvia M. Frederickson Foundation Endowed Scholarship
Established in 2014 by the Phillip V. and Sylvia M. Frederickson Foundation. Income from this endowment will support a renewable award for a full-time incoming freshman demonstrating financial need who is also a resident of the State of Michigan. Recipient must have a cumulative minimum GPA of 2.7 or higher.

Wasaburo Fujimiya Study Abroad Scholarship
Established in 2014 by Wasaburo Fujimiya ’66 for undergraduate and graduate students who wish to study abroad. The Donor wishes to support CMU students pursuing their education overseas and international students studying at CMU. Income from the endowment will support a renewable scholarship for student(s) in good academic standing with a 3.0 cumulative minimum GPA who chose to study in one of Central Michigan University’s Japanese or East Asian exchange partner program universities, and/or students from one of these exchange partner universities studying at CMU. Recipient must be approved to study abroad through CMU and be enrolled full-time at the time of the award and during the term of study abroad.

E. Evelyn Fuller Memorial Endowed Award
Established in 2001 by the E. Evelyn Fuller (Class of 1940) estate. Proceeds from the endowment will be used to establish an award based on financial need, the recipient must be a Michigan resident studying education with a junior class status. The award is renewable one semester only.

Fuller Endowed Scholarship
Established in 2014 by Gary Fuller, professor of Philosophy and Religion at CMU, to support a student with a major or minor in Philosophy. Income from the endowment will support a renewable award for a junior or higher (counts as at least a junior in August) with a cumulative minimum GPA of 3.0, both overall and in Philosophy (if this applies) for the previous year. Recipient will also have demonstrated strong philosophical ability and motivation. The applicant is required to submit an essay not to exceed 500 words reflecting his/her interest in the study of philosophy along with a one page application available from the Department of Philosophy and Religion’s website.

Carl V. and Margaret Hahn Furney Scholarship
Established in 2007 to provide educational scholarships to single parents who are in need of financial assistance. Students who are seeking a degree in teacher education or who are currently majoring in teacher education shall be given first preference. The recipient is to attain the minimum GPA to qualify or maintain their teacher education major status. The money may be used for tuition, books, or to assist with child-care while the recipient single parent attends classes. The maximum award should not exceed $15,000 per year and is renewable.

Future Alumnus Association Scholarship
This nonrenewable scholarship was established in 1981 through efforts of the CMU Student Foundation for a full-time junior or senior student active in student organizations, a member of the Student Alumni Association, a United States citizen and who has a minimum GPA of 3.0. Applications, accompanied by a letter of recommendation from a faculty member, should be sent to the CMU Carlin Alumni House.

Edmund and Marjorie Galant Endowed Award
Established in 2006 by Dr. Richard Galant in honor of Edmund (Class of 1940) and Marjorie Galant (1941). Income from the endowment will be used to support a renewable award for a junior or senior admitted to the secondary education program in the Department of Teacher Education and Professional Development with a minimum GPA of 3.5. First preference should be given to students who are residents of Kent or Washtenaw counties, but may be awarded to any qualified resident in the State of Michigan.

Myron and Hazel Georgia Scholarship
Established in 1989 by Myron and Hazel Georgia. Income from this endowment will support a scholarship for a student enrolled in the College of Science and Technology and majoring in Construction Management, Mechanical Engineering Technology, Industrial Technology Management, Computer-Aided Product Design, Information Technology Management, Manufacturing, or Mechanical engineering with a GPA of at least 3.0. Preference will be given to non-traditional students.

William R. Gemma Memorial Award
Established in 1999 in memory of CMU associate professor William R. Gemma, Ph.D., for Health Services Administration and International Administration majors.

John Genette and Andrea Dickey Genette Award
Established in 2009 by John Genette (Class of 1976) and Andrea Dickey Genette (1978). Income from the endowment will support a renewable award for a junior or senior enrolled in the College of Communication and Fine Arts, Department of Communication and Dramatic Arts. The recipient will be pursuing theatre as a profession (does not have to be a theatre major) wishing to produce their own projects with a minimum GPA of 2.5. Please contact the Department of Communication and Dramatic Arts for further information.

Michael “Gio” Giordano Helping Professions Award
Established in 2013 by Michael “Gio” Giordano ’71, ’74, ’10 to recognize the impact of his educational experience at Central Michigan University and to provide for those who pursue the goal of helping others. Income from the endowment will support a renewable award for undergraduate students having earned junior status, or graduate students who have completed 12 hours of graduate credit, who have elected the field of social work, professional counseling or clinical psychology. Recipient must have a minimum GPA of 3.5 in their major course of study. The award will be given on the basis of an essay not to exceed 500 words on the topic of the role of a helping professional in creating client self-reliance.

Glenn Family Foundation Scholarship
Established in 2002 by Michael (Class of 1973) and Glenda Glenn. Income from the endowment will support a renewable scholarship for a sophomore, junior or senior enrolled in the College of Business Administration majoring in business. The student must have a minimum 2.5 GPA and exhibit financial need.

Michael and Glenda Glenn Sales Institute Scholarship
Established in 2008 by Michael (Class of 1973) and Glenda Glenn. Income from the endowment will support a renewable award for a student with a major or minor in the College of Business Administration, Department of Marketing and Hospitality Services Sales Institute. Recipient must be a sophomore or higher, have a minimum GPA of 3.0 and be a Michigan resident.

Goodwin Family Endowment for Study Abroad and International Experiences
Established in 2008 by Keith (Class of 1974, 2006) and Janice Goodwin to support international learning for students in the College of Business Administration. Income from the endowment will support students who wish to study and/or intern abroad, providing funding for travel, room and board, program fees and other expenses associated with the international experience. Awards based on GPA, required essay, and faculty letter of recommendation.

Theodore Goosen Award
Established by family and friends in memory of Theodore Goosen, former owner of the Mt. Pleasant Malt Shop, for a junior or senior majoring in marketing or hospitality services administration.

Deborah Baroli Govitz Scholarship
Established in 1995 as a memorial to L. Scott Govitz and the CMU Department of Marketing and Hospitality Services Administration for students majoring in hospitality services administration with a minimum cumulative GPA of 2.5 who have at least one full semester remaining before graduation. The scholarship is based on full-time enrollment and is not renewable.

Grand Rapids Alumni Award
Established in 2003 by Grand Rapids Area Alumni to support an endowed award for one or more full-time freshman students that reside in Kent and its contiguous counties. Transfer students are not eligible for this award.

Grand Traverse Alumni Chapter Award
Established in 1992 through funds raised by alumni and friends in Grand Traverse County for a full-time freshman and sophomores (transfer students are not eligible) with demonstrated financial need. Students will be selected from five counties: Antrim, Benzie, Grand Traverse, Kalkaska and Leelanau counties.

Great Lakes Bay Region Alumni Chapter Endowed Scholarship
Established in 2004 by members of the Great Lakes Bay Region Alumni Chapter of Central Michigan University. Income from this endowment will be used to support a scholarship for an incoming freshman who can demonstrate financial need from Midland, Bay or Saginaw counties.
Barbara P. Greene Endowed Scholarship in Political Science
Established in 2004 by Sarah and Edward Cohen (daughter and son-in-law) and friends of Barbara Greene. Barbara was a professor and chair of the political science department prior to her death in 2001. Income from this endowment will support a scholarship for students enrolled in the political science department who have interest in state and local government. Recipient must possess a minimum GPA of 3.0 on a 4.0 scale. Preference will be given to a graduate student, followed by a senior or junior.

Robin L. Racette Griffin Endowed Scholarship Fund
Established in 2007 by Robin L. Racette Griffin (Class of 1976). Income from the endowment will support a renewable scholarship for a full-time undergraduate enrolled in the College of Communication and Fine Arts. Eligible candidates must be a sophomore or higher and maintain a minimum overall GPA of 3.0 and demonstrate financial need.

Edgar L. and Miriam Grim Scholarship
Established in 1965 by family, friends and associates in honor of loyal alumnum, recognized humanitarian, and Michigan Deputy Superintendent of Public Instruction, Edgar L. Grim, for junior or senior students pursuing a teaching curriculum.

Les Gruber Scholarship
Established in 1985 by Jacoba Gruber, family and friends in memory of Les Gruber, former professor in the Department of Communication Disorders, for students majoring in communication disorders.

Hales and Nolan Family Scholarship
Established in 1990 by Glenn R. Hales and H. Marlene Hales, (Class of 1978) and renamed in 1992 to commemorate Marlene’s parents, Lois and Delbert Nolan, Sr., for juniors or seniors with a 3.0 or higher GPA.

Aaron C. Hall Scholarship
Established in 1984 by family and friends in memory of Aaron C. Hall (Class of 1958), former director of financial aid and admissions counselor between 1965 and 1967, for Holt High School graduates as selected by Holt High School personnel.

Arnold Hammel KME Endowed Award
Established in 2008 by friends and colleagues in honor of Arnold Hammel (Class of 1962), mathematics professor emeritus. Income from the endowment will support an award for a full-time student majoring in mathematics and also an active member of Kappa Mu Epsilon, the mathematics honor organization.

Irvin W. and Velma C. Hartman Scholarship
Established in 2005 by Irvin W. and Velma C. Hartman, friends of Central Michigan University and long-time members of the Mount Pleasant community. Income from the endowment will support a renewable scholarship for an undergraduate student who is applying to the teacher education program and has a minimum GPA of 3.0. Preference will be given to students from Isabella County, Michigan and then to any qualified student.

Robert D. Hays Award for Excellence in Jazz
Established in 1996 for a sophomore, junior, senior, or graduate student considered to be the most improved jazz musician. The recipient will be selected by the School of Music and will present with this prize at the final jazz concert of the school year.

Health Professions Dean’s Endowed Scholarship
Established in 2014 by alumni and friends of the Herbert H. and Grace A. Dow College of Health Professions. Income from this endowment will support a scholarship for a student enrolled in a graduate degree program of the Department of Physical Education and Sport. Income from this endowment will support a renewable scholarship for a student enrolled in a graduate degree program of the Department of Physical Education and Sport in The Herbert H. and Grace A. Dow College of Health Professions with a minimum GPA of 3.0 and demonstrate financial need.

Hensley Family Endowed Scholarship
Established in 2013, the endowment was created by Virginia M. Hensley ‘45. Income from the endowment will support a scholarship for a student enrolled in the teacher education program, with financial need and a minimum GPA of 3.0. Preference will be given to a student(s) enrolled in Isabella County. If there are no recipients meeting the above criteria if may be awarded to any qualified student.

Michael Herceg and Joan A. Kelley Scholarship
Established in 2006 by Michael Herceg and Joan A. Kelley (Class of 1968). Income from the endowment will support a renewable scholarship for an incoming freshman who plans to major in teacher education, has a minimum 3.0 GPA, and is a resident of the State of Michigan. Financial need may be considered.

Dr. W.E. Hersee and Idonea Lewis Hersee Endowed Scholarship
Established in 2001 by Dr. W. E. Hersee (Class of 1931) and Idonea Lewis Hersee (Class of 1931). Income from the endowment will support a renewable scholarship for a junior with a major in biology on the premedicine program and a minimum 3.5 GPA.

Ruth Heyman Honors Scholarship
Established in 2007 by the Ruth Heyman Foundation. Income from this endowment will support a renewable scholarship for a student(s) in the Honors Program demonstrating high financial need. Recipient will have a minimum GPA of 3.5 and a minimum ACT score of 25 and must retain Honors Program membership and an average GPA of 3.0 in order to maintain the scholarship. Scholarship will be set at $2,500 annually for up to four years. The scholarship may be received in addition to a Board of Trustee merit award, but may not be received in addition to a Centrals Scholar, Centrals Gold or Leadership Advancement Award. Students are required to live in Larzelere Hall (Honors Residential Community) their first year and must remain on campus for their second year, but may live in another residence hall if desired. Preference will be given to student(s) that are not getting need based aid because they do not qualify for the Pell threshold.

Dr. Tom and Louise Hickey Award
Established in 2013 by Jamie L. H. Brown ‘03 and Christopher A. Brown ’04 in honor of their parents who were educators in the state of Michigan. Income from the endowment will support a renewable scholarship for a student enrolled in the Teacher Education program in the College of Education and Human Services with a cumulative minimum GPA of 3.0. Preference will be given to a student who is a first generation college student.

Joyce E. Hoffer Music Endowed Scholarship
Established in 2006 by Joyce E. Hoffer (Class of 1954). Income from the endowment will support a scholarship for a freshman who has a high potential for success in music education and an average GPA of 3.2. First preference will be given to elementary music majors with second preference given to vocal music majors. This scholarship is renewable.

Joan L. Hogan Award
Established in 2013 by Joan L. Hogan 67, 68, retired CMU Counseling and Special Education Faculty. Income from the endowment will support a renewable scholarship for a student(s) enrolled in Counseling and Special Education admitted to the Special Education program. Recipient will have a minimum cumulative GPA of 3.0 and demonstrate financial need.

Rose J. Hogue Scholarship
Established in 1985 in honor of Rose J. Hogue, a professor in the Department of Home Economics from 1919 to 1953, for a junior or senior majoring in dietetics with a 3.0 or higher GPA.

Holen Family Endowed Music Fund
Established in 2010 by Mark Holen (Class of 1970) and the Holen Family. Income from this endowment will support a renewable scholarship for a student who is a music major. First preference will be given to a resident from Genesee County, MI whose primary instrument is percussion. Second preference will be given to a resident from Genesee County, MI who is interested in pursuing a concentration in jazz (consideration will be first given to a student whose concentration is jazz piano). Third preference will be given to a resident from Genesee County, MI who is a music major with any instrument. Fourth preference will be given to a Michigan resident who is a music major with any instrument. Sophomores or higher level undergraduate students must be full-time students and possess a minimum 3.0 GPA. An incoming freshman may apply for the scholarship but must have attained a 3.0 in high school and display a high level of music proficiency and excellence. See the College of Communications and Fine Arts for more detail.

Horns Alumni Endowed Award
Established in 2005 by alumni of the Honors Program. Income from the endowment will support a renewable award for students in good standing with the Honors Program, have a minimum 3.25 GPA and who have completed 56 credit hours.

Laurene A. Horisnzy Outstanding Student in Early Childhood and Elementary Education Award
Established in 1991 through the estate of Laurene A. Horisnzy for students pursuing careers in early childhood and elementary education.

James E. Hornak Endowed Award
Established in 2014 by colleagues, former students, and family of Dr. James E. Hornak (Class of 1963, 1966), retired chairperson of the Department of Physical Education and Sport. Income from this endowment will support a renewable award for a student enrolled in a graduate degree program of the Department of Physical Education and Sport in The Herbert H. and Grace A. Dow College of Health Professions who has a minimum GPA of 3.3. If no recipients fit the criteria, it may be awarded to any signed major within the Department of Physical Education and Sport within The Herbert H. and Grace A. Dow College of Health Professions.

Hostutler Scholarship
Established in 1980 by Kenneth L. and Margaret J. Hostutler, residents of Mt. Pleasant and loyal friends of CMU.

Jeanette R. House Memorial Scholarship
Established in 1998 by family and friends to honor her enthusiasm for learning and to encourage students who are pursuing majors in literature or related subjects. Scholarships will be awarded to CMU students entering their senior year who have declared a major or specialization in literature.
Gongzhu Hu and Shu Lu Endowed Award in Computer Science
Established in 2009 by Dr. Gongzhu Hu and Mrs. Shu Lu. Dr. Hu is a professor in the department of computer science and Mrs. Lu also is employed at CMU in the Office of Scholarships and Financial Aid. The recipient of the award will be an authorized computer science major; at least a sophomore standing and have a 3.5 GPA.

Robert E. Hutchinson Memorial Scholarship
Established in 2010 in memory of Robert E. Hutchinson (Class of 1964). Robert was named outstanding sophomore cadet in ROTC and was president, treasurer and pledge trainer for Tau Kappa Epsilon fraternity. Income from the endowment will be used for a renewable award for a junior or higher in the College of Business Administration. Recipient selection will be based on leadership involvement within the College of Business Administration, the University community and within other activities that allow for leadership opportunities.

Independent Bank Endowed Scholarship
Established in 2006 by Independent Bank of Bay City, Michigan. Income from the endowment will support a renewable scholarship for a low to moderate income student as defined by HUD median family income limits; http://www.huduser.org/portal/datasets/il/ii2013/select_Geography.odn. Recipient will be enrolled in the College of Business Administration with a minimum GPA of 3.0. Preference will be given to residents of one of the following counties: Arenac, Barry, Bay, Eaton, Genesee, Huron, Ingham, Ionia, Isabella, Jackson, Kent, Leake, Macomb, Mecosta, Midland, Montcalm, Muskegon, Newaygo, Oakland, Ottawa, Saginaw, Sanilac, Tuscola or Wayne.

Independent Order of Odd Fellows Award
Established in 1990 by Mt. Pleasant, MI, Lodge #217 for Michigan residents enrolled at CMU who have earned a 2.0 or higher GPA. Initial gifts to create the endowment were made in memory of former lodge members Roy F. Robison and Harley Philo.

Information Systems (IS) Student Award
Established in 1993 by the Department of Business Information Systems for an IS major with a 3.0 GPA overall and in IS courses. Preference will be given to members of The Association for Information Technology Professionals (AITP).

Interdisciplinary Degree Programs Endowment
Established in 2004 by Richard (Class of 1972) and Mary Lou Hazleton (1986). Mary Lou is a retired speech/language pathologist and current member of CMU’s Development Board. Richard is president and CEO of The Charles J. Stroacker Foundation in Midland and is retired as Chairman and CEO of Dow Corning Corporation. Income from this endowment will be used to support interdisciplinary degree programs in the College of Communication and Fine Arts including music theatre and integrative public relations for needs such as renewable scholarships, supplies and equipment, program support and guest artist/guest speakers. When used for scholarships, the recipients will be those who demonstrate outstanding promise in their field as determined by the program council.

Irgang Elementary Education Scholarship
Established in 2003 by Dr. Frank J. (Class of 1950) and Virginia Irgang. Dr. Irgang is a published author and professor emeritus from San Diego State University. Proceeds from the endowed scholarship will support two students enrolled in the Department of Elementary Education who are interested in pursuing a teaching career. Recipient must possess a minimum 2.7 GPA, be a Michigan resident, and enrolled full time at CMU. The scholarship is not renewable and preference will be given to students graduating from secondary schools in Lapeer County, Michigan.

Frank and Virginia Irgang Scholarship
Established by Frank Irgang (Class of 1950) and Virginia Irgang for Michigan resident, junior and senior students majoring in industrial engineering and technology. The scholarship is based on full-time enrollment and not renewable.

John N. Irwin Scholarship
Established by friends and family of John Irwin, member of the Department of Music from 1967 to 1976, for advanced piano students deemed worthy and needy of an advanced scholarship.

Willie Frances and Robert Louis James, Sr. Endowed Award in Business
Established in 2012 by Robert James, Jr. in honor of his parents, Willie Frances and Robert Louis James, Sr. Income from this endowment will be used to fund a renewable scholarship for a full-time student enrolled in the College of Business Administration with a major or minor in business. Recipient must have completed at least one semester of academic coursework and maintain a 2.5 overall GPA. The award is also to be used to help support educational diversity and preference will be given to students from historically underrepresented populations, especially those that are first generation college students and are willing to promote diversity on campus.

L.A. Johns/Isabella Bank Endowed Scholarship in Finance
Established in 2003 by Isabella Bank in honor of Larry Johns, retired president/CEO/director of Isabella Bank and former CMU Development Board member. Income from this endowment will support scholarships for domestic and international students to study finance or personal financial planning. Preference will be given to international students. Visit the College of Business Administration for further details.

David and Linda Johnson Endowed Award
Established in 2011 by David C. and Linda M. Johnson (Class of 1975, 1999). Income from the endowment will support a renewable award for a student enrolled in the teacher education program in the College of Education and Human Services. Preference will go to a student from a rural area.

Dr. Frank D. and M. Vibijan Johnson Endowed Scholarship
Established in 2000 by Dr. Frank D. Johnson, (Class of 1950), former director of Continuing Medical Education at Central Michigan Community Hospital and his wife M. Vibijan (1951), former elementary teacher, for a sophomore, junior or senior, 3.5 GPA, majoring in chemistry, biology or physics. Alternate year awarded to a science major in teacher education.

J. Edward Johnson Scholarship
Former Mt. Pleasant city commissioner and mayor, J. Edward Johnson, moved from Mt. Pleasant to Denver, CO in 1982. In recognition of his interests and energies dedicated to Mt. Pleasant and well being of CMU, friends established this $1,000 scholarship for a College of Business Administration student bearing a high scholastic average in need of financial assistance to continue higher education.

Judy Johnson Endowed Scholarship
Established in 2005 by Bill (Class of 1965, 1970) and Judy Johnson. Bill is President of The Berean Group, LLC, in Newaygo, a member of the university’s National Campaign Committee and former chair of the Board of Trustees. Judy is a graduate of Newaygo High School and worked at CMU’s Park Library. Income from the endowment will support a renewable scholarship for an incoming freshman from Newaygo High School. The recipient must demonstrate financial need and have a minimum GPA of 3.0.

Irene F. Jorae Scholarship
Established by Rodney J. Rogers as a loan fund in November, 1966, to commemorate dedicated teacher, friend and counselor who gave 36 years of service to CMU. The fund was converted to an endowed scholarship in 1994 for a student majoring in biology (premedical included) as awarded by the Department of Biology.

Tyrone Jordan Endowment
Established in 2003 by Tyrone Jordan, executive assistant to the president - Metro Area, this endowment will benefit an entering freshman from the city of Detroit or those who show interest in the advancement of minorities in American society and who has a minimum GPA of 2.5.

Frank and Rita Jozefaciuk and Aunt Irene Rutkowski Endowed Award
Established in 2006 by the family of Frank and Rita Jozefaciuk and Aunt Irene Rutkowski. Income from this endowment will support a renewable award for a junior or senior with a math major. Recipient must be a U.S. citizen, Michigan resident, and possess a minimum 3.4 GPA. Engineering, computer science, and statistics students will also be given consideration.

Dr. Frederick C. and Lois M. Kabbe Scholarship
Established in 2012 by Robert ’78 and Connie Kabbe ’97 and Jon and Alice Kabbe in memory of their parents, Dr. Frederick C. and Lois M. Kabbe ’61. Dr. Kabbe was a CMU chemistry professor. Income from the endowment will support a renewable award for a student enrolled in chemistry or mathematics with a minimum 3.0 GPA of 3.0. Preference will be given to a part-time or full-time single parent household graduating from an Isabella or contiguous county high school.

Eric H. Kadler Award for Study Abroad
Established in 2005 by Dr. Eric H. Kadler, former CMU employee. Income from the endowment will support a student entering his/her third semester in the professional phase of the athletic education program in the Department of Physical Education and Sport. The recipient must be full time with a signed major in athletic training/sports medicine with a 3.0 GPA. Also considered will be leadership skills, accomplishments, cocurricular activities, and financial need.

Don W. Kelsey Scholarship
Established by family and friends in 1982 for students meeting Board of Trustees’ criteria. Don W. Kelsey was instrumental in the development of new materials handling equipment which aided the efforts of our country during World War II. Following the war, Don served the automobile and related industries by providing materials handling and materials storage equipment, which he often designed, through the Don W. Kelsey Company. Mr. Kelsey was a supporter of higher education through annual contributions, and was particularly interested in CMU Special Olympics efforts.

Phillip and Suzanne Ketch Scholarship
Established in 2006 by Phillip (Class of 1977) and Suzanne (1964) Ketch. Income from the endowment will support a scholarship for a junior or senior majoring in management, marketing, human resources, accounting, or who has an interest in the study of business and human resources.

David and Linda Johnson Endowed Award
Established in 2011 by David C. and Linda M. Johnson (Class of 1975, 1999). Income from the endowment will support a renewable award for a student enrolled in the teacher education program in the College of Education and Human Services. Preference will go to a student from a rural area.

Dr. Frank D. and M. Vibijan Johnson Endowed Scholarship
Established in 2000 by Dr. Frank D. Johnson, (Class of 1950), former director of Continuing Medical Education at Central Michigan Community Hospital and his wife M. Vibijan (1951), former elementary teacher, for a sophomore, junior or senior, 3.5 GPA, majoring in chemistry, biology or physics. Alternate year awarded to a science major in teacher education.
Scholarships and Financial Aid

Marianne J. Kerr Scholarship
Established by family and friends in 1982 shortly after her untimely death at age 40 for students meeting Board of Trustees' criteria. Marianne J. Kerr was a dedicated fifth grade teacher at Pullen School in Mt. Pleasant and spouse of former university attorney, J. David Kerr.

Thelma Key Scholarship
Established in 1985 through the estate gift of Thelma Key (Class of 1924, 1942). Thelma retired from the Grand Rapids public school system in 1966.

Philip Kintzele Accounting Scholarship
 Established in 1991 by the Michigan Central School of Accounting. Recipient will be pursuing an MBA and will have completed at least 100 credit hours with the highest overall grade point average of those applying for the scholarship.

Philip Kintzele Accounting Transfer Students’ Scholarship
Established in 1992 for students who transfer to CMU’s School of Accounting who have earned at least 30 credit hours (six credit hours in accounting).

Leo J. Kipfmueller Endowment Fund for the Summer Remedial Clinics
Established in 2002 by the Department of Communication Disorders to recognize Dr. Kipfmueller’s contributions to the success of summer remedial clinics. After graduating from CMU with a B.A. in 1955 and an M.S. in 1960, Dr. Kipfmueller served 33 years in a number of capacities for the SRC, including student, staff member, faculty supervisor, and director of the program. He worked as a CMU faculty member for 24 years and retired in 1992. Proceeds from the endowment will be used to provide revenue annually to fund scholarships for children without sufficient financial resources to pay summer remedial clinic fees.

Michael J. Kirkpatrick Leadership Award
Established in 1997 by family and friends in memory of Michael J. Kirkpatrick. It is to be awarded to at least two CMU students who have demonstrated exemplary leadership skills in college and/or high school, demonstrated a high level of civic involvement and volunteerism while in college and/or high school, and maintains a high level of involvement with extra-curricular activities at CMU.

Pam Klein Memorial Endowed Journalism Scholarship
Established in 2006 by Bruce Hetrick and family and friends, in memory of Pam Klein (Class of 1977). Income from the endowment will support a renewable scholarship for a student majoring in journalism. Recipients of the scholarship must be junior/senior with an overall GPA of 3.0 and a 3.3 in journalism courses. Preference will be given to CM Life journalists or editors. For more detailed information see Department of Journalism.

Thomas S. Knapp Alumni Field Camp Scholarship
Established in 1986 by the Department of Geology for students with the appropriate background for admission to a summer course in geology.

Robert E. and Cordelia B. Kohrman Scholarship
Established in 2005 by Robert E. and Cordelia B. Kohrman. Income from the endowment will be used to support a scholarship for a junior enrolled in the College of Science and Technology, who has a signed major in chemistry, a minimum GPA of 3.2, and demonstrates outstanding performance in organic chemistry. The scholarship will be renewable for up to two years.

Arthur Loren Kontio Outstanding Young Biologist Award
Established by Arthur Loren Kontio in 1993 to recognize, encourage and praise the outstanding achievement of young biologists at CMU.

Koopman Memorial Scholarship Fund
Established in 2004 by Dr. Margaret O. Koopman Joy (Class of 1926), who taught social science at Central Michigan University. The income from this endowment will fund a renewable scholarship for students who have been accepted in the Teacher Education Program, have a minimum 3.0 GPA and are majoring in one of the social sciences: sociology, political science, economics, history or geography.

Nancy and Ted Kortes Spanish Award
Established in 1993 for students studying in Spain or Latin America. Recipients must have a signed major or minor in Spanish and maintain at least a 3.0 GPA in Spanish classes.

Fredrick and Rosemary Kreft Endowed Scholarship Award
Established in 2003 by Ira (Class of 1977) and Anne Kreft. Ira is a current member of the CMU National Campaign Committee, Dean’s Business Advisory Council, and alumni and development boards. Income from the endowment will support a renewable scholarship for an incoming freshman who intends to study accounting, has a minimum GPA of 3.5, and a composite ACT score of 24 or higher. Preference will be given to students from specific counties in Michigan; visit the College of Business Administration for further details.

Olive Hutchinson Kries Biology Scholarship
Established in 1976 through the estate of Dr. Olive Hutchinson Kries, an esteemed member of the Department of Biology from 1936 to 1960. Spendable investment income will be awarded to CMU biology majors who have completed at least 30 total CMU credit hours prior to application and who have maintained a 3.45 or higher GPA based on a 4.0 scale as selected by the Department of Biology.

Ole H. Kristofferson Award
Established as a loan fund by family and friends in 1974 and converted to an endowment in 1990 to commemorate Dr. Kristofferson, former senior member of the first faculty of the Department of Geology, for an award or appropriate equipment to geology students based on merit or achievement.

Edward J. Kuhn Endowed Scholarship
Established in 2014 from the estate of Edward J. Kuhn ’49. Income from the endowment will support a renewable scholarship for a full-time student enrolled in the Teacher Education program in the College of Education and Human Services. Recipient will have maintained a cumulative minimum GPA of 3.0 and demonstrate financial need.

Mabel and DeWayne Kyser Scholarship
Established in 2004 by Nicholas Kyser and family and friends of Mabel (Class of 1937) and DeWayne Kyser (1935). Income from this endowment will support a renewable scholarship for students enrolled in the College of Education and Human Services and who are admitted to the teacher education program, have a minimum GPA of 3.0, and able to demonstrate financial need.

LaBelle Management Scholarship
Established in 1995 to reward junior hospitality services students for their excellence in either service or academics, and to strengthen the students’ education. The selection shall be coordinated through the department chair of Marketing and Hospitality Services Administration.

Gilles Labrie Scholarship
Established in 2006 by John G. Labrie '89 in honor of his father Gilles Labrie, professor of foreign languages, literatures and cultures at CMU. Income from the endowment will support a renewable scholarship for a full-time sophomore, junior, or senior with a signed major in French and a minimum GPA of 3.0.

Langenburg-Dunn Endowed Scholarship
Established in 2007 by Edward R. (Class of 1966, 1970) and Kathryn R. Langenburg (1964). Income from the endowment will support a renewable award for a junior or senior pursuing a bachelor of science in education, secondary education emphasis, majoring in math with a minimum GPA of 3.0. First preference will be given to a student from Bay City, then Bay County, then Michigan.

George N. and Ernestine R. Lauer Scholarship
Established in 1989 by George and Ernestine Lauer in appreciation of CMU and their family for a renewable scholarship for a Michigan resident junior with a 3.0 or higher GPA majoring in mathematics, computer science, speech pathology or English.

Roger and Kay Lee Endowed Scholarship in Computer Science
Established in 2010 by Dr. Roger and Kay Lee. Dr. Lee is a professor in the department of computer science. The recipient of the award will be a sophomore, authorized computer science major, and have a 3.5 GPA.

Lee Statistics Endowed Award
Established in 2013 by Dr. Carl Moun-Shen and Ye-Fu K. Lee. Both Carl and Ye-Fu are CMU employees. Carl is a statistics professor in the Department of Mathematics and Ye-Fu is an SAP applications programmer. Income from the endowment will support an award for a sophomore or higher student enrolled in mathematics. Recipient will be majoring in statistics, with a minimum 3.5 GPA, and receiving an A in both Calculus 1 and Elementary Statistics.

Jean M. Leslie Endowed Scholarship
Established in 2012 from the estate of Jean M. Leslie ’69, ’72. Income from the endowment will support a renewable award for a full-time junior level or higher student enrolled in the College of Education and Human Services, majoring in Elementary Education with a minimum GPA of 3.0.

Bessie Cooper Lewis Scholarship
Established in 1990 by family members in memory of Bessie Cooper Lewis for a senior who has been accepted into the teacher education program in early childhood and elementary education.

Dorothy Warriner Lewis Scholarship
Established in 1990 by family members in memory of Dorothy Warriner Lewis for a senior who has been accepted into the teacher education program in early childhood and elementary education.

Lichtenfelt Scholarship
Converted in 1988 from a loan fund established in 1967 by Richard J. Lichtenfelt, Jr. and family in memory of Richard, Ruth, and Wendell Lichtenfelt, parents and brother, for a junior or senior with preference given to hotel and restaurant management, law, ministry or K-12 education majors.

Heather Lichtle Memorial Scholarship Fund
Established in 2002 by friends and family of Heather Lichtle, former CMU student. Proceeds from the endowment will be used to establish a renewable scholarship for a student enrolled in the College of Education and Human Services who has an interest in teacher education and a GPA between 2.7 and 3.5. Applicants must complete an essay describing their reasons and motivation to pursue a career in education.

Leslie and Leonard Lieberman Scholarship
Established in honor of Leslie Lieberman, a specialist in family studies and faculty member at CMU from 1965 until her death in 1992, and Leonard Lieberman, specialist in physical anthropology and faculty member at CMU from 1965 until his retirement in 2004. Applicants must be majors in sociology, anthropology, social work, or family studies; have a GPA of 3.4 or better; and be a junior or senior in the semester following application. Recipients are chosen on the basis of excellence in academic performance and writing skills as demonstrated in an essay describing career goals to be submitted with the application. Several awards are made each year and vary from $500 to $1,000.
**Dr. Edward T. Marquardt Teacher Education Award**
Established by the estate of Margaret E. Sanford Marquardt in 2007 by Richard G. Marquardt. Income from the endowment will support a renewable scholarship in the Department of Communication Disorders for either a graduate student with a 3.5 GPA or higher or an undergraduate student with a 3.25 GPA or higher. First preference will be given to a physically challenged graduate student and then a physically challenged undergraduate student registered with the Office of Student Disability Services. For further information see the Office of Scholarships and Financial Aid.

**Linda Jaye Masak Scholarship**
Established in 1990 by the parents of Linda Jaye Masak for juniors or seniors majoring in accounting as awarded by the School of Accounting.

**Emer A. Mathias Endowed Scholarship**
Established in 2010 by a planned gift from the late Emer A. Mathias (Class of 1939). The renewable award will be for a student enrolled in the teacher education program in the College of Education and Human Services with a minimum 3.0 GPA.

**Paul Carl Mathis II Scholarship**
Established in 1987 in memory of Paul C. Mathis, professor of economics at CMU from 1962 to 1985, for an outstanding student in economics.

**Gilbert A. Maxwell Endowed Award in Art**
Established in 2010 by the estate of Gilbert A. Maxwell (Class of 1958, 1964) in memory of his parents, George (1938) and Irene Maxwell (1931), who met at Central Michigan State College in 1930. Income from this endowment will support an award for a full-time junior or senior major to support the tuition and housing expenses associated with a national or international art study experience.

**Keith L. Maxwell Scholarship**
Established in 1989 in memory of his parents, George (1938) and Irene Maxwell (1931), who met at Central Michigan State College in 1930. Income from this endowment will support an award for a student in the College of Business Administration with a minimum 2.8 GPA; preference will be given to a student coming from a rural farming community.

**Jean Mayhew Interdisciplinary Award in Language Arts**
Established in 2010 by Norma J. May, in memory of her husband Max A. May (Class of 1970). Income from the endowment will support a renewable scholarship for a junior or senior enrolled in the College of Science and Technology and the Department of Chemistry with a minimum 2.5 GPA, with preference given to a student coming from a rural farming community.

**Max A. May Endowed Scholarship in Chemistry**
Established in 2006 by Kirk H. Love (Class of 1977). Kirk is a current member of the CMU Development Board and the College of Business Administration Campaign Committee. Income from the endowment will support a renewable scholarship for students in the College of Business Administration with a minimum 2.8 GPA; preference will be given to members of Alpha Kappa Psi national business fraternity.

**Gilbert O. Maienknecht Communications Scholarship**
Established in 1987 by the estate of Jette MacNeil (Class of 1994), a student known as Jette Bookless of Rochester Hills. Proceeds from the endowment will be used to support scholarships, room and board, textbooks and other related expenses for students with demonstrated financial need by university standards.

**Susan Colby Maly Endowed Scholarship**
Established in 2007 by Richard G. Marquardt (Class of 1959), in memory of his wife Susan Colby Maly. Income from the endowment will support a renewable scholarship for a student whose family is or has experienced financial hardship due to the excessive costs and other related expenses of treating family cancer patients. Preference will be given to a junior or senior enrolled in the Teacher Education program in the College of Education and Human Services with a cumulative minimum GPA of 3.0. Preference will be given to a student who has graduated from Perry High School.

**Emer A. Mathias Endowed Scholarship**
Established in 2010 by the estate of Gilbert A. Maxwell (Class of 1958, 1964) in memory of his parents, George (1938) and Irene Maxwell (1931), who met at Central Michigan State College in 1930. Income from this endowment will support an award for a student in the College of Business Administration with a minimum 2.8 GPA; preference will be given to a student coming from a rural farming community.

**Diane McCann Memorial Endowed Scholarship**
Established in 2002 by Joseph McCann (Class of 1959) in memory of his wife Diane McCann. Proceeds from the endowment will be used to establish a renewable scholarship for a sophomore level student or higher with a GPA of 2.8 or higher and who is a member of the Central Michigan University Varsity Baseball Team.

**Walter W. McCarley, Ph.D., Scholarship**
Established in 1986 to provide a scholarship for a student pursuing a teaching career.

**McDonald Future Science Teachers Scholarship**
Established in 2006 by the estate of Jette MacNeil (Class of 1994), a student known as Jette Bookless of Rochester Hills. Proceeds from the endowment will support a renewable scholarship for a student whose family is or has experienced financial hardship due to the excessive costs and other related expenses of treating family cancer patients. Preference will be given to a junior or senior enrolled in the Teacher Education program in the College of Education and Human Services with a cumulative minimum GPA of 3.0. Preference will be given to a student who has graduated from Perry High School.

** intf Scholarship**
Established in 1990 by the parents of Linda Jaye Masak for juniors or seniors majoring in accounting as awarded by the School of Accounting.

**Emer A. Mathias Endowed Scholarship**
Established in 2010 by a planned gift from the late Emer A. Mathias (Class of 1939). The renewable award will be for a student enrolled in the teacher education program in the College of Education and Human Services with a minimum 3.0 GPA.

**Paul Carl Mathis II Scholarship**
Established in 1987 in memory of Paul C. Mathis, professor of economics at CMU from 1962 to 1985, for an outstanding student in economics.

**Gilbert A. Maxwell Endowed Award in Art**
Established in 2010 by the estate of Gilbert A. Maxwell (Class of 1958, 1964) in memory of his parents, George (1938) and Irene Maxwell (1931), who met at Central Michigan State College in 1930. Income from the endowment will support an award for a full-time junior or senior major to support the tuition and housing expenses associated with a national or international art study experience.

**Keith L. Maxwell Scholarship**
Established in 1989 in memory of his parents, George (1938) and Irene Maxwell (1931), who met at Central Michigan State College in 1930. Income from this endowment will support an award for a student in the College of Business Administration with a minimum 2.8 GPA; preference will be given to a student coming from a rural farming community.

**Jean Mayhew Interdisciplinary Award in Language Arts**
Established in 2010 by Norma J. May, in memory of her husband Max A. May (Class of 1970). Income from the endowment will support a renewable scholarship for a junior or senior enrolled in the College of Science and Technology and the Department of Chemistry with a minimum 2.5 GPA, with preference given to a student coming from a rural farming community.

**Max A. May Endowed Scholarship in Chemistry**
Established in 2006 by Kirk H. Love (Class of 1977). Kirk is a current member of the CMU Development Board and the College of Business Administration Campaign Committee. Income from the endowment will support a renewable scholarship for students in the College of Business Administration with a minimum 2.8 GPA; preference will be given to members of Alpha Kappa Psi national business fraternity.

**Gilbert O. Maienknecht Communications Scholarship**
Established in 1987 by the estate of Jette MacNeil (Class of 1994), a student known as Jette Bookless of Rochester Hills. Proceeds from the endowment will be used to support scholarships, room and board, textbooks and other related expenses for students with demonstrated financial need by university standards.

**Susan Colby Maly Endowed Scholarship**
Established in 2007 by Richard G. Marquardt (Class of 1959), in memory of his wife Susan Colby Maly. Income from the endowment will support a renewable scholarship for a student whose family is or has experienced financial hardship due to the excessive costs and other related expenses of treating family cancer patients. Preference will be given to a junior or senior enrolled in the Teacher Education program in the College of Education and Human Services with a cumulative minimum GPA of 3.0. Preference will be given to a student who has graduated from Perry High School.

**Joanne Sue Manshum Scholarship**
Established in 2008 by the estate of Joanne Sue Manshum (Class of 1960). Income from this endowment will be used to support a renewable scholarship for a student majoring in teacher education. Preference will be given to students in Elementary Education with a minimum GPA of 3.0.

**Marble Family Endowed Award**
Established in 1981 by Richard G. Marquardt (Class of 1959), in memory of his wife Susan Colby Maly. Income from the endowment will support a renewable scholarship for a student whose family is or has experienced financial hardship due to the excessive costs and other related expenses of treating family cancer patients. Preference will be given to a junior or senior enrolled in the Teacher Education program in the College of Education and Human Services with a cumulative minimum GPA of 3.0. Preference will be given to a student who has graduated from Perry High School.

**Dr. Edward T. Marquardt Teacher Education Award**
Established in 2013 by Erna Marquardt, in memory of her husband, Dr. Edward T. Marquardt, professor emeritus. Income from the endowment will support an award for junior or senior enrolled in the College of Education and Human Services who has earned a minimum GPA of 3.0 and has been accepted in to the teacher education program.
Scholarships and Financial Aid

Floyd H. McKibben and Olive Allen McKibben Scholarships
Mrs. McKibben bequeathed two scholarship funds in memory of her husband and herself for a worthy student. Both Mr. and Mrs. McKibben graduated from CMU and were well-known educators in Gratiot County.

Jane McNamara Physical Education Award
Established in 2008 by the estate of Jane McNamara, emerita faculty. Income from this endowment will be used to support a renewable scholarship for a student admitted to the physical education and sport program in The Herbert H. and Grace A. Dow College of Health Professions. Preference must have a minimum GPA of 3.0.

Mary Jane Merrill Scholarship
Established in 1969 by parents Elwyn E. Merrill, CMU Class of 1944 and Grace Bonnell Merrill, CMU Class of 1941, as a tribute to their daughter and her grandmother, Ernest J. Merrill, Ph.D. Mary Jane was a CMU junior majoring in education who lost her life in a car accident October 5. Ernest J. Merrill, Ph.D., was a CMU faculty member from 1921 to 1953 and was head of Chemistry and Physics when he retired. Spendable investment income will be awarded to one second semester CMU full-time junior or senior chemistry major who has earned a 3.00 or higher grade point average and has met other eligibility criteria. Additional scholarships may be distributed once the spendable income exceeds 50% of tuition for a full-time student.

Recipients must be Michigan residents with preference given to students who are residents of Midland or Isabella counties.

The Honorable Fred M. and Lynne M. Mester Family Endowment
Established in 2009 by friends and family of the Honorable Fred M. Mester (Class of 1959, 1995) and Lynne Mester (1959) to recognize their service and dedication as respected friends, colleagues, and mentors to the College of Humanities and Social and Behavioral Sciences. Income from this endowment will support a renewable award for students who plan a major or minor in Political Science, Sociology, Anthropology, and Social Work; or English Language and Literature. The recipient will have a minimum GPA of 3.0 and should be oriented to the service of others with a history of active involvement in community service with leadership qualities, holding leadership positions, be on the local or state level.

Metro Detroit Alumni Chapter Award
Established in 2005 by alumni of the Metro Detroit area. Income from the endowment will support a renewable scholarship for two students each year. The first scholarship will be awarded based upon need and the second scholarship will be awarded to a student-athlete. Each scholarship recipient must be at least a sophomore; have a minimum GPA of 2.5; and be from Livingston, Macomb, Monroe, Oakland, Washtenaw, or Wayne County.

Michigan 22nd and Beyond ROTC Endowment Fund
Established in 2008 by Army ROTC alumni and friends in honor of the dedication and support of the Michigan 22nd and retired secretary, Beverly Denise Gallagher. Income from this endowment will support a renewable scholarship for a student enrolled in the Department of Military Science Army ROTC with a minimum GPA of 2.5. Endowment may also be used for student program activities needs as deemed appropriate by the chair of the Military Science Department.

Miles Actuarial Award
Established in 2007 by CMU professor Dr. Thomas Miles and his spouse Cindy. Income from the endowment will support a renewable award to a student majoring in Actuarial Science who has successful performance in courses preparing for the actuarial exam, to assist in the expense of taking the actuarial exam. Preference will be given to active members of Gamma Iota Sigma.

Drayton and Minnie Miley Scholarship
Established in 1981 through the inest of Inez M. Vetter in honor of Drayton and Minnie Miley for a female student majoring in teacher education and professional development.

Evelyn and William Miller Honorary Scholarship
Established in 1990 by William and Delores Miller in honor of his parents, Evelyn and William Miller (Class of 1939), for a student with preference given to graduates from Glen Lake High School or Kingston High School, MI.

William and Delores Miller Endowed Award
Established in 2005 by Dr. Ernest L. Minelli and Delores Miller. Dr. and Mrs. Miller are CMU retirees, Dr. Miller from the math department and Mrs. Miller from health services. Income from the endowment will support a renewable award for a junior with a math major who can demonstrate financial need. Preference will be given to graduates from Michigan high schools.

KIMBERLY Sue Mills Scholarship
Established in 1988 by parents and friends in memory of Kimberly Sue Mills for a junior or senior student majoring in biology.

Minelli Family Endowed Scholarship
Established in 2005 by Dr. Ernest L. Minelli and Dr. Mark Minelli ’75. Income from the endowment will support a renewable award for a student with a signed major or minor in the School of Health Sciences who has a minimum GPA of 3.0. Preference will be given to students studying or interested in any of the public health fields.

Information Systems (IS) Student Award
Established in 1999 by the Department of Business Information Systems for an IS major with a 3.0 GPA overall and in IS courses. Preference will be given to members of The Association for Information Technology Professionals (AITP).

Doris A. Mitchell Endowed Award
Established in 2010 by Carol L. Pilon (Class of 1972, 1982) and Dawn M. Pilon (1988) in honor of Doris A. Mitchell (1942). Income from the endowment will support a renewable award for an incoming freshman from Clare High School who plans to pursue a teaching degree in the College of Education and Human Services or a degree in The Herbert H. and Grace A. Dow College of Health Professions and has a GPA of at least 3.3 or higher. In the event there are no qualified applicants from Clare High School, qualified applicants from high schools in the contiguous counties of Clare County may be considered.

Francis and Mary Lois Molson English Education Scholarship
Established in 1997 with a critical gift change to 2007, this renewable scholarship was established by Francis and Mary Lois Molson. The recipient will be an undergraduate student with an English major or minor, completing the secondary education certification and who has a minimum GPA of 3.25.

Dorothy G. and Robert E. Monica Endowed Scholarship Fund
Established in 2003 by Dorothy and Robert Monica, friends of CMU. Proceeds from this endowment will be used to support a renewable scholarship for a student enrolled in the College of Businessmajoring in Accounting or Information Systems with a GPA of 3.0 or higher. Recipient will be a resident of Michigan and demonstrate financial need.

Moon Family Scholarship
Established in 1998 in honor of the Martin Moon family of Brunswick, Michigan, for undergraduates of Fremont High School. This scholarship is awarded annually with preference given to incoming freshmen in need of financial assistance and pursuing a degree in teacher education with a minimum 3.0 GPA.

Moon/Gempel Burton-Bendle High School Endowment Fund
Established in 2005 by James H. Moon (Class of 1941) in honor of his good friend and retired superintendent of schools in Burton, Kenneth Gempel. Income from the endowment will support a scholarship for a freshman from Burton-Bendle High School with a minimum 3.0 GPA. Preference will be given to those who can demonstrate financial need.

Wayne and Ethel Moore Endowed Scholarship
Established in 2007 in honor of the late Dr. Wayne E. Moore, geology professor, and his spouse Ethel Moore. Income from the endowment will support an incoming freshman who declares an intent to major in geology. Award is renewable for a second year if the student maintains good academic standing and remains committed to geology major with a minimum GPA of 3.0. Students who enhance diversity are especially encouraged to apply.

Wayne E. and Ethel P. Moore Field Trip Award
Established in 2000 for junior or senior geology majors to support travel, lodging and other expenses for class and department sponsored field trips.

Wilbur Moore Prize
Established in 1989 in memory of Wilbur E. Moore, founder of what are now known as the Summer Remedia Clinics and the university’s first vice president for business affairs, for a junior who is enrolled as a major in one of the three departments formerly comprising the Department of Speech and Drama: Communication and Dramatic Arts, Communication Disorders and Broadcast and Cinematic Arts.

Moon Family CMU Endowed Scholarship
Established in 2009 by Laurie and Michael J. Morris (Class of 1980, 1993). Income from the endowment will support a rotating award for a student enrolled in the College of Business Administration, College of Communication and Fine Arts and for students enrolled in a master’s program with Global Campus. On Campus students must have successfully maintained a 3.2 GPA. If an incoming freshman, documentation will need to be provided indicating this was achieved in high school. The recipient of the Global Campus scholarship must be pursuing a master’s degree and must have received an undergraduate degree from CMU. It is the intent of the Morris Family that this scholarship not apply solely to the financially disadvantaged as defined by Federal and/or State of Michigan guidelines.

Robert and Laura Myers Scholarship
Established in 1997 by Robert and Laura Myers of Lapeer, Michigan for undergraduate or graduate students with demonstrated financial need as determined by the Office of Scholarship and Financial Aid. Preference will be given to students from Lapeer County.

Lenora Marie Starr Nelson Scholarship
Established in 1985 by Kenneth L. Nelson in memory of his wife and CMU alumna, Lenora, who devoted her life to the field of education teaching both general and special education in many different areas of the country.

Ron L. Nelson Memorial Award
Established in 2012 by Brenda Nelson, in memory of Ron L. Nelson, former Physician Assistant faculty at Central Michigan University. Income from this endowment will support an award for a full-time first year Physician Assistant student in The Herbert H. and Grace A. Dow College of Health Professions who has a minimum GPA of 3.5. Preference will be given to a student from a rural or underserved area, demonstrating previous community involvement and leadership skills along with proven financial need.
New Beginnings Award
Established in 2006 by alumni and friends of Central Michigan University. Income from the endowment will be used to support a renewable award for a senior who is working either on- or off-campus while attending CMU. A minimum 3.0 GPA must be maintained and financial need must be demonstrated.

Ronald and Luellen Newman Award
Established in 2008 by Ronald and Luellen Newman (Class of 1992). Income from this endowment will support a renewable award for a full-time student demonstrating financial need and from the Northern part of the Lower Peninsula.

Linda Nichols Scholarship
Established in 1985 by family and friends as a memorial to Linda (High) Nichols, CMU alumna and dedicated teacher at Bullock Creek High School in Midland County, for a freshman student residing in the Bullock Creek School District or Midland County. Recipient selection is made by a committee through the guidance department at Bullock Creek High School, 1420 Badour Road, Midland, MI.

Suzanne Nichols Endowed Scholarship in Journalism
Established in 2009 by Margaret A. (Yatooma) Bogle (Class of 1979) in honor of Suzanne Nichols (1957), emeritus journalism professor. Income from the endowment will support a renewable award for freshman or higher journalism major with a minimum 3.0 GPA. Recipient must have previously worked on a high school sponsored publication or broadcast.

Walter P. Nickell Scholarship
Established in 1995 from a loan fund established in 1973 to commemorate Walter P. Nickell, noted Michigan naturalist, ornithologist and teacher who was awarded an honorary CMU Doctorate of Law degree in 1964. Dr. Nickell was affectionately known as the “Birdman of Cranbrook” and served as a faculty member at the Cranbrook Institute of Science for 33 years. Annual spendable investment income will be awarded to a CMU student pursuing a career in museum natural history. Application may be made through the Center for Cultural and Natural History.

Patricia A. Nixon Scholarship
Established in 1986 in memory of Patricia A. Nixon, former Department of Music faculty member, for a music major.

Colonel William B. Nolde Scholarship
Established as a loan fund in 1973 and converted to an endowment in 1990 for a ROTC cadet. The fund honors Colonel Nolde’s devotion to God, country and family. Colonel Nolde was the last combat casualty of the Vietnam War. He was a graduate and former assistant professor of military science at CMU. Colonel Nolde’s life was characterized by a dedication to peace and rebuilding, with the hope that all mankind would try to understand one another.

Dr. Barbara Leiting-O’Connell Family Endowed Scholarship
Established in 2007 by Dr. John F. O’Connell (Class of 1983) in memory of Dr. Barbara Leiting-O’Connell. Income from the endowment will support a renewable award for a junior or senior with a minimum GPA of 3.25. First preference will be given to students majoring in chemistry, then students majoring in physics or math. Preference will also be given to students desiring to attend graduate school.

Michael F. and Mary F. O’Donnell Endowed Scholarship in Accounting
Established in 2006 by Michael F. (Class of 1970) and Mary F. O’Donnell. Mike is a current CMU Development Board member. Income from the endowment will support a renewable scholarship for a student majoring in accounting. The student must be a junior or senior, have completed a minimum of 60 credit hours, and have a minimum GPA of 3.0. Preference will be given to students who can demonstrate financial need.

C. W. Olmstead Award in Geography
Established in 1992 by Clarence W. Olmstead (Class of 1937). Income from the endowment will support a renewable award for a sophomore or higher with a signed major in geography. Recipient must have completed or be currently enrolled in GEO 105 or its equivalent GEO 120, GEO 121, and GEO 203, and also completed three additional courses towards the major at or above the 300 level. Student must have a minimum GPA of 3.5 in their major and a minimum overall GPA 3.5. Recipient must submit an application and cover letter as requested by the Department of Geography.

Tom Olson Scholarship Fund
Established in 1986 by friends, including Thomas J. Olson, (Class of 1958, 1968) in honor of William F. Brown, former Mt. Pleasant resident. Income from the endowment will support a graduating Mt. Pleasant High School or Sacred Heart Academy senior who will be a freshman at CMU.

Oppenheim-Muirko (Lazorshki) Award
Established in 2000 by the Edith M. Lemieux, ’65 estate for a senior philosophy major who submits an outstanding essay on the subject of the necessity for teaching ethics and/or character development in the elementary grades.

Oppenheimer Public Relations Internship Endowment
Established in 2010 by Trustee Sarah Rowley Oppenheimer (Class of 1981) and The Honorable Daniel S. Oppenheimer in honor of Dorothy and Eric Rowley. Income from the endowment will support an award for a public relations student participating in unpaid or underpaid public relations internships. Recipient will be enrolled in the Department of Journalism and/or Integrative Public Relations and have a GPA of at least 3.0. The internship must either be a graduation requirement for the recipient or the recipient must be returning to academic studies at CMU subsequent to completion of the internship.

Wallace Parker Scholarship
Established in 1995 from a loan fund established in 1963 to commemorate Wallace C. Parker who served CMU as a coach and director of athletics during the early years of the university’s development and for his continued interest throughout his lifetime. Annual spendable investment income will be awarded to a CMU student whose career objective is to become a physical education major. Application may be made through the Department of Physical Education and Sport.

Col. Harold L. Patrick Endowed Scholarship
Established in 2007 by Col. Harold L. Patrick (Class of 1957). Income from the endowment will support a renewable scholarship for a full-time undergraduate student that graduated from Mancelona High School with a minimum GPA of 3.0.

The Evelyn Hill Pender Memorial Endowed Scholarship
Established in 2002 by Paul Pender in honor of his wife Evelyn Hill Pender (Class of 1948), former teacher. Proceeds from the endowment will be used to establish a scholarship for a graduate student enrolled in the Department of Communication Disorders within the Herbert H. and Grace A. Dow College of Health Sciences, and who has a record of academic and clinical excellence. Preference will be given to a student with financial need.

Jacques E. and Helen M. Baer Perry Scholarship
Established in 1988 by Jacques E. Perry (Class of 1949) and Helen M. Baer Perry (1950), for a junior or senior majoring in foreign language who has a 3.0 or higher GPA.

Dr. Michael J. Petrick Journalism Scholarship
Established in 2013 from the estate of Dr. Michael J. Petrick, previous CMU Journalism chairperson and professor. Income from the endowment will be used to assist an undergraduate journalism news/editorial student with a minimum cumulative GPA of 3.0 also demonstrating financial need.

Phi Chi Theta Endowed Award
Established in 2012 by Linda Wicander ’81, Director of Business Student Services, and friends and members of Phi Chi Theta. Income from the endowment will support an award for a junior or senior with a minimum GPA of 2.5. Recipient must also be enrolled in the College of Business Administration and a member of Phi Chi Theta.

Phi Kappa Tau Scholarship
Established in 1994 by CMU Phi Kappa Tau alumni for sophomore, junior or senior Phi Kappa Tau members who have a minimum GPA of 2.5. Applications can be made by March 1 each year through Carlin Alumni House, Central Michigan University, Mt. Pleasant, MI 48859.

Joseph K. Piaseci Academic Excellence Scholarship
Established in 1994 by family and friends in memory of Joseph Piaseci (Class of 1998), who died tragically while on the job as a superintendent of the Chelsea School District. The award will be given each semester to an undergraduate Sigma Tau Gamma fraternity member achieving the highest GPA. Piaseci was a member of Sigma Tau Gamma.

Dr. Leonard E. and Louise A. Plachta Charter Public School Scholarship
Established in 2009 by Louise A. Plachta (Class of 1992) in honor of Dr. Leonard E. Plachta who served as president of Central Michigan University from 1992 to 2000. Dr. Plachta focused on developing effective academic programs, through improved student services and efficient management. Dr. Plachta was a professor of Accounting and then Dean of the College of Business Administration before being appointed president. Income from the endowment will support a renewable award for a graduate from a CMU-sponsored charter public school in Detroit, Michigan. Student must have a GPA of at least 3.0.

Dr. Leonard E. Plachta Accounting Scholarship
Established in 2012 by Louise A. (Mrs. Leonard E.) Plachta ’92 in memory of Dr. Leonard E. Plachta who served as president of Central Michigan University from 1992 to 2000. Income from the endowment will support a student enrolled in the College of Business Administration. The recipient shall be a junior, a senior, or a master’s degree candidate majoring in the study of accounting. The recipient must have a minimum GPA of 3.0 overall and a GPA of 3.2 in accounting courses. Preference will be given to candidates who aspire to receive a Ph.D. in accounting and plan to teach at the collegiate level.

Louise A. Plachta Endowed Award
Established in 2005 by Dr. Leonard E. and Louise A. Plachta (Class of 1992). Income from the endowment will support a scholarship for entering freshman majoring in music with a minimum GPA of 3.0 and a successful audition. The award is renewable at the discretion of the School of Music.

Ethel M. Polhemus Scholarship
Established in 1987 through the estate of Ethel M. Polhemus for a student from Greenville High School, MI.
GPA of 3.5 or higher. It will rotate between accounting and marketing degrees.

Newberry school system, for an education major with preference extended to Millard Quinlan Scholarship student in liberal arts without regard to financial need or academic standing.

G. William Quine Scholarship

Rapids. Bob and Teresa have actively supported CMU through participation on teaches kindergarten and first grade at Holy Name of Jesus School in Grand Rapids. He passed initiation and been a club member for three semesters.

Robert C. Prevette and Teresa H. Powell-Prevette Endowed Scholarship

Established in 2009 in memory of Millard J. Quinlan, a teacher-principal in the Newberry School system.

Dr. Glen D. Porterfield Scholarship

He served as social director of Ronan Hall, later moving to Sloan Hall. Helen served as assistant dean of women under Bertha Ronan and taught personnel classes to freshmen. For many years a counselor and friend of students, she never lost her interest in young people.

Roderick A. Powers Scholarship

Established in 1986 by Julia E. Powers in memory of her husband Rod who taught government and economics at Hart High School, MI for 19 years. His love of education will forever be a legacy to his former students. This legacy will also come from the endowment will support a renewable award for a sophomore or junior enrolled in the College of Business Administration, majoring in one of the Finance and Law programs with a minimum GPA of 3.0.

Pre-Medicine and Osteopathic Society Endowed Award

Established in 2011 by the Pre-Medicine and Osteopathic Society. Income from the endowment will support an award for a student demonstrating financial need with a minimum GPA of 2.7. The award will alternate yearly between the chemistry and anthropology departments. If no qualified recipient is available, the other department may award the scholarship for that year.

William H. Rivard Trombone Scholarship

Established in 2002 by Dee Pommerenk (Class of 1963), former CMU women’s basketball player. Proceeds from the endowment will support an award for a student employed by the CMU Libraries for a minimum of 10 hours, but no more than 100, prior to the semester of application. Students will be selected by a committee based on the following criteria: minimum GPA of 3.0 in all studies; minimum GPA of 3.25 within the field of music; contributions to CMU School of Music Ensembles; may be renewed. The second award will be for an incoming freshman or transfer student, to be selected by the trombone faculty and/or audition committee during the audition process for showing extraordinary musical promise. The award may be renewable for up to four years if the following criteria is met: full-time status as music major with emphasis in trombone; maintains GPA of 3.25 for all music classes; contributions to CMU School of Music Ensembles.

Tim Roberts Country Radio Broadcasters Endowed Scholarship

Established in 2006 by the Country Radio Broadcasters in honor of Tim Roberts (Class of 1982). Income from the endowment will be used to support a scholarship for a junior or senior in broadcast and cinematic Arts. The recipient will have an active past or planned present involvement at WMHU-FM and/or other BCA radio units with a minimum GPA of 2.75 overall and 3.0 in BCA courses.

Joan H. Rogers Endowed Award

Established in 2013 by Joan H. Rogers ’69 MS. Income from the endowment will support a renewable award for a student pursuing a career in music, which would also include teaching chemistry or a career in medicine or a health related field. Recipient must initially have a cumulative GPA of 3.0.

Joyce Rohlf’s Scholarship

Established by Mr. and Mrs. William E. Rohlf’s and Glen Rohlf in memory of their daughter and sister for junior or senior women who are residents of Midland, Tuscola or Saginaw counties in childhood and elementary education.

Tracy Marie Rondy Memorial Endowed Scholarship

Established in 2006 in memory of Tracy Marie Rondy by her parents Gary and Maureen (Class of 1984) Rondy, sister Tara Rondy (2000), family and friends. Income from the endowment will be used to support a scholarship for a junior or senior in broadcast and cinematic Arts. The recipient will have an active past or planned present involvement at WMHU-FM and/or other BCA radio units with a minimum GPA of 2.75 overall and 3.0 in BCA courses.
Dan and Bobbie Rose Scholarship
Converted in 1995 from a loan fund established in 1973 by family, alumni and friends for Dan's many years of service to the university and community as a teacher, coach and athletic director. Annual spendable investment income will be awarded to a CMU physical education major. Application may be made through the Department of Physical Education and Sport.

James and Ann Rosloniec Endowed Scholarship in Accounting
Established in 2009 by James (Class of 1968) and Ann Rosloniec. Jim and Ann have actively supported CMU through participation in many campus activities and events including the Development Board and the President's Grand Rapids Advisory Board. Income from the endowment will support a renewable award for a junior or higher with a minimum GPA of 3.5, enrolled in the College of Business Administration, majoring in Accounting. Preference will be given to a transfer student from Kent, Muskegon, or Ottawa County who demonstrates financial need.

Susan Rozman-Delia Memorial Scholarship
Established in 2003 by broadcast and cinematic arts alumni and friends wishing to honor Sue Rozman-Delia (Class of 1982). Proceeds from the endowed award will be used to support a student majoring in broadcast and cinematic arts. The recipient must have a 3.0 overall GPA and complete a BCA-sponsored internship.

Judge Bill and Eileen Rush Endowed Scholarship
Established in 2006 by The Honorable Bill and Eileen Rush. Income from the endowment will support a renewable scholarship for a junior or senior student with a minimum GPA of 3.0 who is interested in pursuing a career related to law.

Joanna M. Russ Memorial Undergraduate Research and Presentation Grant
Established in 2000 by family and friends in memory of MWI mathematics professor and son, Jack Serier (Class of 1968). Proceeds from the endowment will be used to support a renewable research and presentation grant. Income may be used for expenses related to research and/or travel to present the results of the students research. Priority will be given to research relating to ADHD/ADD, but other research topics that qualify are autism spectrum disorder and low incidence disabilities such as deafblindness. Recipient must possess a minimum 3.0 GPA and faculty sponsorship.

Grace L. Ryan Scholarship
The Grace L. Ryan Loan Fund established by alumni and friends of the university in honor of Miss Ryan's years of service was converted to an endowment in 1992 for physical education or business majors.

Grace Larsen Sagendorf Scholarship
Established in 1999 in memory of Grace Larsen Sagendorf (Class of 1939), former Greenville teacher, for an education major in good standing. Preference given to qualified students from the Greenville School System, then to students from Montcalm County, and then to any qualified student.

Lois A. and Richard C. Sandbrook Family Scholarship
Established in 2013 by Lois A. Sandbrook. $57,72. Income from the endowment will support an award for a junior or senior enrolled in the College of Education and Human Services, Department of Human Environmental Studies. Student will have demonstrated financial need and will have leadership or volunteer involvement with a minimum cumulative GPA of 3.0. First preference will be to a student majoring in Family Studies, second preference will be for a student majoring in Child Development. If no recipient fits the first and second preference, then the scholarship may be awarded to a student majoring in any program offered in the Department of Human Environmental Studies Department. Preference will also be given to a graduate from the Montabella, Shepherd or Midland school districts or a transfer student from Montcalm Community College.

Jack Saunders Jazz Award
Established in 2002 by retired CMU Marching Band Director and Professor of Horns, Jack Saunders (Class of 1960, 1965). Proceeds from the endowment will be used to support an award for an outstanding and dedicated junior or senior jazz musician with a positive attitude, who is enrolled in the College of Communication and Fine Arts and the School of Music, and has been accepted for full music candidacy or full time graduate student status.

Kenneth W. and Margaret Cuff Saunders Scholarship
Established in 1989 by family and friends for a junior, senior or graduate student with a 3.5 or higher GPA. Preference is given to English, journalism or politics majors; the scholarship is renewable provided the 3.5 or higher GPA. Preference is given to English, journalism or politics majors; the scholarship is renewable provided the 3.5 or higher GPA.

Jeanette & Frank Schmalzried Endowed Scholarship
Established in 2011 by Margo Donahue (Class of 1964) and Kay Schmalzried, in memory of their parents, Jeanette (1960) and Frank Schmalzried. Income from the endowment will support a renewable scholarship for a junior or senior student majoring in broadcast and cinematic arts and the School of Music, and has been accepted to the College of Education and Human Services with a cumulative minimum GPA of 3.0 enrolled in the Department of Human Environmental Studies. Preference will be given to a student studying Apparel Merchandising and Design. If no applicants meet the above criteria, then a student studying Dietetics may be awarded the scholarship.

John B. Slater Scholarship
Established through the estate of John B. Slater, former professor emeritus, Department of Industrial Engineering and Technology, for a School of Engineering and Technology junior or senior student.

Gail Sleeper Memorial Endowment
Established in 2011 by David C. Sleeper (Class of 1972, 1978) in memory of Gail E. Sleeper (1972). Income from the endowment will support an award for a full-time student enrolled in Teacher Education and Professional Development who has a minimum 2.6 GPA. Preference will be given to a student that was previously a classroom student of Gail Sleeper and a Gladwin High School graduate.

Irene N. Smith Scholarship
Established in 1978 by Nancy Pace Smith, family, and friends in memory of Irvine N. Smith, a member of the faculty for eight years and director of university theater from 1974 through 1976, for a freshman, sophomore or junior student as an incentive award in acting and/or directing.

John and Jeannette Smith Endowed Education Scholarship
Established in 2013 by John M. Smith '69, '74, '83 and Jeannette K. Smith '69, '75, '95. Income from the endowment will support a scholarship for junior or senior student enrolled in the College of Education and Human Services who has earned a minimum GPA of 3.0 and has been accepted in to the teacher education program with a focus on math or science.

Johnnie D. Smith Memorial Scholarship
Established in 2003 by the Association of Faculty and Staff of Color to honor Johnnie D. Smith '86, CMU professor of African-American history and constitutional history of the United States. Income from the award will be used to support two scholarships. All recipients must be committed to the advancement of underrepresented minorities in American society, demonstrate great academic potential, and submit a letter of recommendation and an essay addressing how the award would allow the student to achieve his/her academic goals and advance the cause of diversity at CMU. The recipient will be an incoming freshman from Saginaw, Midland, or Mount Pleasant. The second will be a current CMU undergraduate student of sophomore or greater standing demonstrating an interest in research or scholarly pursuits in social justice. Returning students must have a minimum 2.8 GPA upon applying.

Yda Lou Schultz Scholarship
Established for sophomore, junior or senior students in music education by sisters Frances Steel and Alma Miner and friends in memory of Yda’s long devoted service to CMU and valuable contributions in the fields of elementary music education, special education, Kodaly and Orff.

Scribner Family Scholarship for Film and Television
Established in 2006 by Charles (Class of 1960) and Gerry Scribner. Income from the endowment will support a renewable scholarship in the College of Business Administration for students who can demonstrate financial need and have a minimum GPA of 3.0. Preference will be given to students who graduated from either Mount Pleasant High School or Cadillac High School.

Ron Sendre Athletic Training Education Award
Established in 2013 by Ron and Beth Sendre. Ron is a retired Athletic Training professor. Income from this endowment will support an award for a full-time student majoring in Athletic Training within the Herbert H. and Grace A. Dow College of Health Professions. Recipient will be a 4th semester intern. Preference will be given to a student who is the first member of his/her family to attend college, demonstrates success with a minimum GPA of 3.3, SATO member in good standing that has held a leadership position and has been an active member within the community.

Sepanski Endowed Award in Math
Established in 2010 by Jungsywan Sepanski, CMU mathematics professor. Income from the endowment will support an award for a junior or senior in the department of math with a minimum 3.5 GPA.

Lester H. and Jack D. Serier Endowed Memorial Scholarship
Established in 2001 by Maryann Serier in memory of her husband Lester Serier, a former CMU student and professor. Proceeds from the endowment will be used to support a scholarship for a Michigan resident with junior or senior status majoring in mathematics with a minimum 3.0 GPA. Preference shall be given to students who demonstrate financial need.

Mary Kathleen Schuch Endowed Scholarship
Established in 2014 from the estate of Mary Kathleen Schuch ’51, ’54. Income from the endowment will support a renewable scholarship for a student enrolled in the Teacher Education program in the College of Education and Human Services with a cumulative minimum GPA of 3.0, demonstrating financial need. Preference will be given to a student(s) who are transfer students from a community college in the State of Michigan.

Freddie Link Simonds Scholarship
Established in 1987 to honor Freddie Link Simonds. Income from the endowment will support a scholarship for a junior or senior student with a minimum GPA of 3.0 enrolled in the Department of Human Environmental Studies. Preference will be given to a student studying Apparel Merchandising and Design. If no applicants meet the above criteria, then a student studying Dietetics may be awarded the scholarship.

John B. Slater Scholarship
Established through the estate of John B. Slater, former professor emeritus, Department of Industrial Engineering and Technology, for a School of Engineering and Technology junior or senior student.

Gail Sleeper Memorial Endowment
Established in 2011 by David C. Sleeper (Class of 1972, 1978) in memory of Gail E. Sleeper (1972). Income from the endowment will support an award for a full-time student enrolled in Teacher Education and Professional Development who has a minimum 2.6 GPA. Preference will be given to a student that was previously a classroom student of Gail Sleeper and a Gladwin High School graduate.

Irene N. Smith Scholarship
Established in 1978 by Nancy Pace Smith, family, and friends in memory of Irvine N. Smith, a member of the faculty for eight years and director of university theater from 1974 through 1976, for a freshman, sophomore or junior student as an incentive award in acting and/or directing.

John and Jeannette Smith Endowed Education Scholarship
Established in 2013 by John M. Smith '69, '74, '83 and Jeannette K. Smith '69, '75, '95. Income from the endowment will support a scholarship for junior or senior student enrolled in the College of Education and Human Services who has earned a minimum GPA of 3.0 and has been accepted in to the teacher education program with a focus on math or science.

Johnnie D. Smith Memorial Scholarship
Established in 2003 by the Association of Faculty and Staff of Color to honor Johnnie D. Smith '86, CMU professor of African-American history and constitutional history of the United States. Income from the award will be used to support two scholarships. All recipients must be committed to the advancement of underrepresented minorities in American society, demonstrate great academic potential, and submit a letter of recommendation and an essay addressing how the award would allow the student to achieve his/her academic goals and advance the cause of diversity at CMU. The recipient will be an incoming freshman from Saginaw, Midland, or Mount Pleasant. The second will be a current CMU undergraduate student of sophomore or greater standing demonstrating an interest in research or scholarly pursuits in social justice. Returning students must have a minimum 2.8 GPA upon applying.
<table>
<thead>
<tr>
<th>Scholarship Fund</th>
<th>Established</th>
<th>Eligibility Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>M. L. Smith Scholarship</td>
<td>1955</td>
<td>At Appleblossom Club in honor of M. L. Smith, former director of field services and head of the rural education department, for a student accepted into the teacher education program with a child development minor. The scholarship may be renewed provided a 3.0 or higher GPA is maintained. Applications may be made to the Department of Teacher Education and Professional Development.</td>
</tr>
<tr>
<td>Woodward C. and Constance E. Smith Scholarship</td>
<td>1995</td>
<td>Converted from a loan fund established in 1967 to recognize Woodward C. Smith for his lifelong devotion to education at all levels upon his retirement in 1971 as CMU vice president. Constance E. Smith was a very active ambassador for CMU and was involved in Faculty Dames and also housed many students with financial difficulty and students from overseas. Annual spendable investment income will be awarded to CMU students based on financial need as determined by the Office of Scholarships and Financial Aid.</td>
</tr>
<tr>
<td>Paul G. Smuts Endowed Scholarship Fund</td>
<td>2003</td>
<td>Established in 2003 by Paul (Class of 1962) and Sandy (1961) (Moore) Smuts. Paul retired from DaimlerChrysler in 2002 as vice president of human resources operations and facilities management. This renewable scholarship will support a student enrolled in the College of Business Administration who participates in extracurricular activities, demonstrates financial need, and has a minimum GPA of 3.0.</td>
</tr>
<tr>
<td>Sandy (Moore) Smuts Endowed Scholarship Fund</td>
<td>2006</td>
<td>Established in 2006 by Paul (Class of 1962) and Sandy (1961) (Moore) Smuts. Income from the endowment will support a scholarship for a student enrolled in the College of Education and Human Services with a major in elementary education who demonstrates financial need and has a minimum GPA of 3.0.</td>
</tr>
<tr>
<td>Paul Spece Award</td>
<td>1999</td>
<td>Established in 1999 in memory of CMU accounting professor Paul Spece, for a junior or senior accounting major.</td>
</tr>
<tr>
<td>Sport Management Endowed Award</td>
<td>2014</td>
<td>Established in 2014 by Dr. Vincent Mumford, and friends. Income from the endowment will support a renewable award for a student pursuing a Sport Management major or minor within the Department of Physical Education and Sport with a cumulative minimum GPA of 3.0 or higher.</td>
</tr>
<tr>
<td>Philip J. Squattrito Endowed Scholarship</td>
<td>2014</td>
<td>Established in 2014 by Philip J. Squattrito, a CMU chemistry professor. Income from the endowment will support a renewable award for a student with a signed chemistry major with a minimum of 8 credit hours in Chemistry. Recipient will also have a minimum GPA of 3.0 both cumulatively and for chemistry courses.</td>
</tr>
<tr>
<td>Richard and Karen St. Andre Endowed Award</td>
<td>2004</td>
<td>Established in 2004 by Richard and Karen St. Andre, the income from the endowment will support a non-renewable award for a sophomore student with a signed major in the Mathematics Department (currently mathematics, mathematics education and statistics). The recipient must be a Michigan resident and show good potential for being successful in their major.</td>
</tr>
<tr>
<td>Gilbert and Kay Starks Endowed Scholarship</td>
<td>2006</td>
<td>Established in 2006 by Drs. Gilbert and Kay Starks. Income from the endowment will support a scholarship for a student enrolled in a class on Beaver Island. The student will be enrolled in the College of Science and Technology majoring in Biology and seeking secondary education certification with a minimum GPA of 3.0.</td>
</tr>
<tr>
<td>Dr. Glenn and Kathryn Starner Homecoming Leadership Award</td>
<td>1998</td>
<td>Established in 1998 by family and friends in recognition of the tireless hours Dr. Starner contributed to establishing a successful homecoming program and developing student leaders at CMU. The awards will be granted to students who are elected by the CMU student body to represent them as the Homecoming Gold Ambassadors.</td>
</tr>
<tr>
<td>Nancy Stebbins Memorial Endowed Scholarship</td>
<td>2014</td>
<td>Established in 2014 by friends and family of Nancy Stebbins. Income from the endowment will support a renewable award for a junior or senior majoring in the field of social work with preference given to students demonstrating financial need. Recipient must have a minimum cumulative GPA of 3.5 and be a resident of the State of Michigan.</td>
</tr>
<tr>
<td>Martin Steinbis Endowed Scholarship in Geology</td>
<td>1997</td>
<td>Established in 1997 in memory of Martin Steinbis ’75. Income from this endowment will be used to support a junior, senior or transfer student enrolled in the College of Science &amp; Technology majoring in Geology. The renewable award will allow upperclassmen and transfer students the ability to focus on education and reduce student need for part-time employment. This endowment may also be used as partial support for internships with geoscience industries. Applicants should apply for the scholarship with a statement of their need, how the scholarship will impact them, and why they are a deserving candidate along with an unofficial CMU transcript or transcript from previous school. Scholarships are granted on the basis of need, scholastic performance, and leadership skills. Preference will be given to students planning a career in the energy sector.</td>
</tr>
<tr>
<td>James and Catherine Steinmetz Graduate Scholarship</td>
<td>2011</td>
<td>Established in 2011 by Dr. Joseph (Class of 1977, 1979) and Sandra Steinmetz to honor Joseph’s parents, James and Catherine Steinmetz. Income from this endowment will support a renewable award for a graduate student majoring in Experimental Psychology, studying neuroscience, within the College of Humanities &amp; Social and Behavioral Sciences.</td>
</tr>
<tr>
<td>Stephenson Engineering Scholarship</td>
<td>1985</td>
<td>Established in 1985 by Jo Stephenson and Dave Schook in honor of Jo’s parents, Betty and Jack Stephenson, for a student pursuing an engineering technology curriculum.</td>
</tr>
<tr>
<td>John W. Stressman, Jr. Scholarship</td>
<td>1971</td>
<td>Converted to an endowment in 1988. The SATC was a U.S. Army organization stationed on campus during World War I. Earnings provide an academic achievement award with preference given to children or grandchildren of any United States war veteran.</td>
</tr>
<tr>
<td>Kevin J. Summers Endowed Scholarship</td>
<td>2014</td>
<td>Established in 2014 by R. Kim Summers ’78, in honor of his brother, Kevin J. Summers. Income from the endowment will support a renewable award for a student enrolled in the College of Business Administration with a concentration in either Entrepreneurship or Marketing with a cumulative minimum GPA of 3.0. Preference will be given to those from either Kent or Otsego County who demonstrate financial need and are active in community service.</td>
</tr>
<tr>
<td>Leonard and Betty Summers Endowed Scholarship</td>
<td>2007</td>
<td>Established in 2007 by R. Kim Summers (Class of 1978) in honor of his parents, Leonard and Betty Summers. Income from the endowment will support a renewable award for a student enrolled in the College of Science and Technology and the Department of Computer Science. Student will have a minimum GPA of 3.0 and preference will be given to those from Otsego County who demonstrate financial need and are active in community service.</td>
</tr>
<tr>
<td>Mark and Michelle Szymczak Endowed Scholarship</td>
<td>1997</td>
<td>Established in 2001 by the Target Corporation. Proceeds from the endowment will be used to establish an award for full-time students who have demonstrated financial need and maintain a 3.0 GPA.</td>
</tr>
<tr>
<td>Ethel Nellie Taylor Scholarship</td>
<td>1910</td>
<td>Established through the will of Ethel N. Taylor (Class of 1910) for students selected by Scholarships and Financial Aid.</td>
</tr>
<tr>
<td>Mae Teeters History Award</td>
<td>1985</td>
<td>Established by V. Mae Teeters and her family in 1985 in appreciation of the opportunity to further her education and to encourage the pursuit of excellence in the study of history. Mrs. Teeters earned a B.A. in 1972 and M.A. in History in 1978 at age 87. Mae Teeters was a prime example of life-long learning, dedicated community service and an inspiration to those who knew her. The endowment will recognize similar people who have a quest for life’s knowledge and historical learning and provide an award to an outstanding history student.</td>
</tr>
<tr>
<td>Telephone Pioneers of America, Great Lakes Chapter 90 Scholarship</td>
<td>1995</td>
<td>Established in 1995 for Michigan resident, junior, senior or graduate students within teacher education with a cumulative GPA of 3.0 or higher and proven community service. The scholarship is based on full-time enrollment and renewable based on reapplication. First preference will be given to relatives of telephone industry employees or retirees. Application may be made through the Department of Teacher Education and Professional Development.</td>
</tr>
<tr>
<td>Harold E. and Nancy N. Telfer Scholarship</td>
<td>1970</td>
<td>Established in 1989 through the estate of Steven J. Thatcher (Class of 1970) for an undergraduate with preference given to students from high schools in Ionia County.</td>
</tr>
<tr>
<td>Thavenet Study Abroad Scholarship</td>
<td>1997</td>
<td>Established in 1997 by Dennis Thavenet, who served as professor in the Department of History from 1967 to 1997, for a junior or senior history student studying abroad, with some preference for study in the Netherlands.</td>
</tr>
</tbody>
</table>
Thavenet Study Abroad History Scholarship
Established in 1999 by colleagues in honor of Dennis Thavenet, who served as professor in the Department of History from 1967 to 1997, for a junior or senior history student studying abroad, with some preference given for study in the Netherlands.

Charles Warren and Denzil Slentz Thornthwaite Scholarship
Established in 1962 as the Denzil Slentz Thornthwaite Memorial Fund by C. Warren Thornthwaite in honor of his wife. Their daughters later made the scholarship a memorial to their parents, both of whom were alumni. The recipient is a student who plans to pursue a career in geography or climatology. The scholarship is available to juniors or seniors majoring in Geography with a minimum 3.00 GPA in Geography and a 2.75 GPA overall with demonstrated financial need.

Mike and Beth Tierney Endowed Scholarship
Established in 2007 by Michael (Class of 1977) and Elizabeth Tierney (1977). Income from the endowment will support a renewable award for a student from southeast Michigan with a minimum GPA of 3.0 and demonstrated involvement in leadership activities. Preference will be given to students pursuing a major in the College of Business Administration or a major in communication disorders in The Herbert H. and Grace A. Dow College of Health Professions.

Jean and James Townsend University Theatre Endowment Fund
Established in 2002 by Jean Townsend, Dow Chemical research leader, and James Townsend, retired manager, university relations and recruiting, The Dow Chemical Company. Proceeds from the endowment will be used to provide discretionary resources for the University Theatre program, including the support of student scholarships/financial aid, theatre production equipment and guest artists, in the College of Communication and Fine Arts, Department of Communication and Dramatic Arts.

Charlotte W. Trout Award in Human Environmental Studies
Established in 1979 by Mr. and Mrs. George J. (Elinor Trout) Verville for a junior or senior majoring in Human Environmental Studies who gives promise of becoming outstanding in the field and who is dedicated to preservation of the family. Selection is made by members of the department.

Troutman-Munson Education Scholarship
Established in 2012 by Linda Munson George '69 in memory of her father, Dr. Carl Munson '34 and her great uncle, Oliver W. Troutman. Oliver Troutman was a professor at CMU and the Oliver Troutman Residence Hall is named in his honor. He and his wife raised four nephews, including Carl Munson, a former member of the CMU Development Board, while he taught classes from 1913 - 1933. Income from the endowment will support a renewable award for a full-time student enrolled in the College of Education and Human Services with a minimum GPA of 3.0. Preference will be given to students from Michigan or New York.

Lem Tucker Journalism Scholarship
Established by the late Lemuel Tucker, an African American and CMU alumnus who made an enormous contribution to journalism, promoting the participation and success of minorities in print and electronic media. Scholarship candidate(s) must be a senior in high school with a cumulative GPA of 3.0 or higher with a minimum 18 on the ACT or minimum of 800 on the SAT; or a transfer student with proof that 24 credit hours will be completed prior to starting at CMU and also that he/she has maintained a cumulative GPA of 3.3 or higher.

Two Men and a Truck International Phi Chi Theta Endowment
Established in 2006 by Two Men and a Truck International to support the mission of Phi Chi Theta. Can be used for member scholarships/awards, travel to conferences, meetings, etc., programmatic support, on campus recruiting efforts, professional development and speakers.

Robert D. Ullohm Baseball Endowed Scholarship
Established in 2004 by Robert Ullohm (Class of 1957). Income from this endowment will support the CMU Baseball program with a renewable scholarship and/or operational budget. Preference will be given to a CMU baseball student athlete, of at least sophomore status and who possesses a minimum 3.0 GPA.

Katherine Ardis Ux Endowed Award in Art
Established in 2001 by Evart and Dorothy Ardis in honor of his sister Katherine Ardis Ux, former art department faculty member and accomplished artist. Proceeds from the endowment will be used to support one annual award for a student majoring in art and who intends to pursue further study or conduct research in the field of art in a master's program or other type of structured art program.

William E. Valle Design and Technical Theatre Award
Established in 2005 by William E. Valle and friends. Bill is a retired professor who taught scenery design, lighting design, and technical theatre at CMU for 35 years. Income from the renewable endowment will support an award for a student who participates and has an interest in the study of design or technical theatre, has demonstrated promise in the field of scenery design, lighting design, or technical theatre and has a minimum GPA of 2.0 on a 4.0 scale.

Deobold B. and Marcella M. Van Dalen Scholarship Fund
Established in 2010 by the estate of Deobold B. (Class of 1935) and Marcella M. Van Dalen. Income from the endowment will be divided equally between three areas: physical education majors (The Herbert H. and Grace A. Dow College of Health Professions); education majors (College of Education and Human Services) and a minor in a non-education field. The recipients will be juniors or seniors demonstrating financial need pursuing an approved major program of study while maintaining a minimum 3.0 grade point average. Priority will be given to students who are seeking graduate school, research work or leadership roles in their respective fields. The scholarship may be renewable for one additional year.

Charles and Suzanne Vannorsdall Endowed Award in Physics
Established in 2014 by Charles '63 and Suzanne Vannorsdall. Income from the endowment will support a renewable award for a full-time student majoring in Physics or Astronomy. The award may be used for conferences, presentations and field trips.

Robin Dilling Vatalaro Accounting Scholarship
Established in 2012 by Wendell and Marcia Dilling in honor of their daughter, Robin Dilling Vatalaro ’88. Income from the endowment will support a renewable award for a senior enrolled in the College of Business Administration, with a major in Accounting. Preference will be given to students who have a GPA of at least 3.0.

Richard E. Veazey Endowment
Established in 2011 by the estate of Richard E. Veazey (Class of 1966). The endowment will support special experiences for CMU College of Business Administration students, with preference given to accounting students, in the form of small stipends or scholarships to support transformational experiences such as (but not limited to) study abroad opportunities and internships at nationally-recognized institutions.

Ernest E. and Phyllis L. Vegter Scholarship
Established in 1984 by Ernest E. Vegter and friends of the late Ernest E. Vegter for graduating seniors of Bay City, MI, public high schools who desire to pursue a career in teaching secondary education.

Veler/Prasad Endowed Scholarship
Established in 2005 by Dr. S. Benjamin Prasad, a retired CMU professor of management and law. Income from this endowment will support a renewable scholarship(s) for a junior or senior who is enrolled in the College of Business Administration majoring in international business, has a minimum GPA of 3.25, and is a citizen of the United States.

Shirley Larzelere Viele Scholarship
Established in 2013 by George B. Viele ’60, ’65 in memory of Shirley Larzelere Viele ’55. Income from the endowment will support a renewable award for a student majoring in chemistry whose objective is to become a high school chemistry teacher and is involved in campus activities such as the American Chemistry Society Affiliate, intramural sports, etc. The scholarship will be awarded on the basis of merit and financial need, although it may be awarded on the basis of merit alone.

Voigtman Family Endowed Scholarship
Established in 2006 by Jon (Class of 1984) and Terri (1985) Voigtman. Income from the endowment will support a renewable scholarship for a junior or senior enrolled in the College of Business Administration with a minimum 3.0 GPA. The recipient must be a Michigan resident.

Wakely Associates Teacher Education Scholarship
Established in 2004 by Wakely Associates, Inc. of Mount Pleasant, Michigan. Income from this endowment will support a renewable scholarship for a junior student enrolled in the teacher education program who can demonstrate financial need. Preference will be given to students graduating from a specific list of Michigan schools. The list may be obtained from the Office of Scholarships and Financial Aid.

Sydney and Mary Walston Award
Established in 2000 by Dr. Sydney Walston and his wife Mary Walston, both professors in the Department of Health Promotion and Rehabilitation, for a junior or senior, 2.5 GPA, majoring in school or public health education, to support learning through attendance and participation at state, national or international professional conferences.

James H. Wanty Scholarship in Entrepreneurship
Established in 2011 by James H. Wanty (Class of 1971). Income from the endowment will support a renewable award for a junior or senior enrolled in the College of Business Administration and an entrepreneurship major. Preference will be given to students demonstrating financial need with a minimum GPA of 3.0.

John E. Warriner Scholarship
Established in 1987 through the estate gift of John Edward Warriner, author of Warriner’s Handbook of English and a six volume series titled English Grammar and Composition, for undergraduate and graduate students majoring in the humanities and social sciences. John was the son of Eugene C. Warriner, former CMU president.
Scholarships and Financial Aid

War Years Reunion Endowed Scholarship
Established in 2001 by generous contributions from Central Michigan University classes of 1946–1951 in honor of World War II Veterans. Proceeds from the endowment will be used to support a scholarship for a student who is a United States citizen with preference given to those students who can substantiate lineage to a World War II Veteran. Students must have a demonstrated financial need by university standards and solid academic standing.

MichaelWaskeScholarship
Established by Mrs. Michael Waske (Dorothy Wright, Class of 1951) in memory of her husband, Michael (1951), for students in need of financial aid with preference given to students from the Mariette and Sandusky areas.

Ruth M. M. Wesley Scholarship
Established in 1998 by Judith Mynsberge in memory of her aunt, Ruth M. M. Wesley, who graduated from Central State Teachers College with a “lifetime” certificate in 1933. This scholarship is available for students from the Bay County area with financial need who are pursuing a teaching career.

George R. Wheeler Scholarship
The loan fund established in honor of Mr. Wheeler’s career as chairperson of the Department of Conservation and Agriculture from 1947 to 1960 was converted to an endowment in 1993 for a student pursuing studies in outdoor environmental education, ecology or conservation.

Edward H. Whitmore and Stephen H. Whitmore Mathematics Scholarship
Established by family and friends to commemorate the lives of Edward Hugh Whitmore and Stephen Harper Whitmore for senior students who have earned a 3.6 or higher in their mathematics major. Dr. Edward Whitmore was a mathematics professor between 1965 and his retirement from CMU in December, 1987. He served as department chairman from 1965 to 1974 and from 1976 to 1982. Stephen Whitmore, son of Edward, was a partner with the New York law firm of Berlack, Israels, and Liberman. He specialized in the areas of corporate finance and securities law.

Craig Whitney Scholarship
Established through the estate of Mrs. Roxanna M. Whitney, widow of Clayton A. Whitney (Class of 1909), former chairman of the geography department of State Teachers College at LaCrosse, WI.

Helen A. and W. Lyle Willhite Scholarship
Established in 1986 by Mrs. W. Lyle Willhite, daughter Maryhelen, colleagues and friends in memory of W. Lyle Willhite, first dean (1960 to 1976) of what is now the College of Business Administration and a professor of finance.

Louise A. Williams Award
Established in 2009 by the estate of Louise A. Williams, emerita faculty. Income from the endowment will support a rotating award for a student enrolled in the physical education program in The Herbert H. and Grace A. Dow College of Health Professions, dance in the College of Communications and Fine Arts, or Athletics.

Louise A. Williams and Jane McNamara Endowed Award
Established in 2002 by Jane McNamara and Louise A. Williams, retired physical education and sport professors. Proceeds from the endowed award will be used to support a student with junior or senior class standing who has declared a major in a health professions area and who has a GPA of 3.5 or higher. First preference will be given to a student who is a resident of Isabella County.

Paul I. Willwerth Brass Endowed Award
Established in 2002 by Phi Mu Alpha, a music academic group, and Patricia G. Willwerth, in honor of her husband, Paul I. Willwerth, former faculty member. Proceeds from the endowment will be used to support a scholarship for an undergraduate student enrolled in the School of Music within the College of Communication and Fine Arts pursuing a bachelor’s in music or music education degree. The recipient must have reached 300 level music candidacy and study a brass instrument with a minimum 3.5 GPA.

Lillian M. Winsor Scholarship
Established in 1977 by a friend of CMU for students within the College of Business Administration who are gainfully employed during the academic year. The scholarship may be renewed provided the student maintains a satisfactory academic average and continues to be employed.

Corey Paul Woiteshek Beaver Island Endowed Award
Established in 2007 by friends and family in memory of Cory Paul Woiteshek (Class of 1997). Income from the endowment will support a junior or senior biology major with a minimum GPA of 3.0. The recipient will be enrolled in at least one class at the CMU Biological Station on Beaver Island and provide a paragraph on their interests and goals related to their love of nature.
Classification of Students
A student is classified in accordance with the semester hours of credit earned as follows:
- Freshman - 1-25 semester hours of credit
- Sophomore - 26-55 semester hours of credit
- Junior - 56-85 semester hours of credit
- Senior - 86 or more semester hours of credit
- Graduate - After admission to CMU School of Graduate Studies
Classification is determined by the current Bulletin, not the issue in effect when the student was admitted.

Full-Time Status
The definition of full-time status for a regular semester is as follows:
- Undergraduate students: a minimum of 12 credits
- Graduate students: a minimum of 9 credits

Undergraduate Grading System

<table>
<thead>
<tr>
<th>Grades</th>
<th>Honors Points Per Semester Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Superior</td>
</tr>
<tr>
<td>A-</td>
<td>4.0</td>
</tr>
<tr>
<td>B+</td>
<td>3.7</td>
</tr>
<tr>
<td>B</td>
<td>3.3</td>
</tr>
<tr>
<td>B-</td>
<td>3.0</td>
</tr>
<tr>
<td>C+</td>
<td>2.7</td>
</tr>
<tr>
<td>C</td>
<td>2.3</td>
</tr>
<tr>
<td>C-</td>
<td>2.0</td>
</tr>
<tr>
<td>D+</td>
<td>1.7</td>
</tr>
<tr>
<td>D</td>
<td>1.3</td>
</tr>
<tr>
<td>D-</td>
<td>1.0</td>
</tr>
<tr>
<td>E</td>
<td>0.7</td>
</tr>
<tr>
<td>CR</td>
<td>Failing</td>
</tr>
<tr>
<td>N</td>
<td>Credit</td>
</tr>
<tr>
<td>NC</td>
<td>No grade submitted</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawal computing hours</td>
</tr>
<tr>
<td>X</td>
<td>Audit and points</td>
</tr>
<tr>
<td>Z</td>
<td>Deferred Grade</td>
</tr>
<tr>
<td>H*</td>
<td>Honors Program</td>
</tr>
</tbody>
</table>

*(Designates Honors Credit in combination with letter grade of C or better)

The marking system for CMU graduate students is described in the Graduate Bulletin.

Grade Point Average
The grade-point average for undergraduate students is found by dividing the total honor points earned by the total graded hours.

Grade Reports
At the end of each on-campus semester or session, students may access their grades via CentralLink (https://centrallink.cmich.edu).

Point Deficiency - Undergraduate Students
A point deficiency is defined as the number of points lacking to make a cumulative grade point average of 2.00.

Enrollment at Other Institutions
A matriculated CMU undergraduate student who has enrolled at another college or university since his or her last enrollment at CMU must request that an official transcript be sent to the CMU Registrar’s Office as soon as the course has been completed. Refer to the Transfer Credit Policy in the Academic Policies and Procedures Section of this Bulletin.

Policy Requiring a Signed Major by Completion of 56 Credit Hours
All students enrolled on the Mt. Pleasant campus are required to complete an authorization for a major or sign a statement of intent to major by the time they earn 56 hours of credit. Students’ records will be reviewed and a registration hold placed on students who have completed 56 hours and have not signed a major or a “statement of intent to major.”

Class Attendance
Class attendance regulations are not inflexibly spelled out. Upon the assumption that class attendance is a responsibility shared by adults, as teachers and class members, there is no university-wide regulation requiring attendance by students, or requiring the instructor to excuse absences from class or examination.

Most classes meet for 50 or 75 minute periods. Students are traditionally obliged to wait ten minutes for an instructor who is late in meeting class.

Missed Class Policy
Students are expected to comply with an instructor’s established attendance policy, and they should avoid classes where there would be significant absences. In the case of an absence due to required attendance at a university-sponsored event such as a department trip, performing arts activity, ROTC function, or athletic competition, reasonable attempts should be made by faculty members to allow the student to make up missed work. Students are responsible for completing the work assigned or due on the days they are absent for these events. Both the sponsoring unit and the student should inform the faculty member as soon as possible in the semester so arrangements can be made for completing missed assignments or tests. The student is required to provide the instructor with an official notification in advance of the absence (e.g., a letter from the department chair or the coach). Optimally, this would be done by the third week of the semester, at the latest, so that the necessary arrangements for missed work can be made well in advance.

The student must decide when, if ever, it is necessary to be absent. In making such a decision, the student must bear in mind that an instructor is authorized to lower scholastic ratings if the student’s absences or latenesses require this action. If a student finds it necessary to be absent, an explanation should be made to the instructor of the class concerning the cause of the absence. Whenever possible the student is to notify the instructor in advance of proposed class absences. The instructor may choose to guide the student in making up work losses due to absences, if the student requests such assistance. The Office of Student Affairs will assist students in notifying instructors when absences are expected to extend for more than one week.
Religious Holidays

It is Central Michigan University policy to permit students to be absent from classes or examinations for reason of observing religious holidays. Students are allowed to make up course requirements when they are unable to avoid a conflict between their academic and their religious obligations. Absence from classes or examinations caused by observing religious holidays does not relieve students from responsibility for any part of the coursework required during the period of absence. It is the obligation of students to provide faculty with written notice of the religious holiday they will be observing and the date on which they will be absent at least two weeks prior to the date of the religious holiday. Students who miss classes or are absent on days of examinations or class assignments shall be offered an opportunity to make up the work, without penalty, unless it can be demonstrated that a makeup opportunity would interfere unreasonably with the delivery of the course. Should disagreement arise over any aspect of this policy, the parties involved should contact the department chair, the dean of the College or the Ombuds Office. Final appeals will be resolved by the Provost.

Minimum Class Enrollment

The university reserves the right to cancel any class in which too few students enroll.

Opportunities for the Superior Student

An enriched academic program which can be planned largely by the individual is available to the superior student at Central Michigan University. Numerous special opportunities exist for the student who wishes to enter university study at an advanced level, to move on rapidly to specialized studies, or simply to learn more. Larzelere Hall, where Honors Program first-year students are strongly encouraged to live, provides a specialized living and learning community for high-ability students.

Financial assistance is provided for many students of outstanding high school and college academic performance by means of Board of Trustees, State of Michigan, and endowed scholarships. Advanced placement earned through College Level Examination Program is another incentive to the academically talented and motivated student. The Honors Program also offers research and study abroad funding.

In addition to recognition upon graduation with high class standing, the University provides many honor societies in the various departments and fields of study.

Requirements for Athletic Participation

To be eligible for intercollegiate athletic competition, a student athlete must meet all admission and eligibility requirements of this University, the Mid-American Conference, and the National Collegiate Athletic Association.

Participation requires that the student athlete be registered for at least 12 semester hours of credit throughout the semester in which he or she participates.

Academic Dishonesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. Written or other work which a student submits must be the product of his/her own efforts. Plagiarism, cheating and other forms of academic dishonesty, including dishonesty involving computer technology, are prohibited.

In cases involving academic dishonesty, the determination of the grade shall be left solely to the discretion of the instructor. In a case where the instructor judges a student guilty of academic dishonesty, the instructor is encouraged to report the incident of dishonesty to the director of the Office of Student Conduct in order to discern potential patterns of egregious dishonesty. For a full copy of the Policy on Academic Integrity, see Appendix II in this Bulletin.

Misrepresentation of Affiliation with the University

It is important to Central Michigan University, its students and alumni that academic and cocurricular work done by students while at the university be accurately and honestly presented. When individuals report their academic performance and/or involvement in university related activities it is expected that they will do so in a truthful manner. Anyone involved in misrepresentation of student coursework, grades, degrees earned and/or involvement with cocurricular organizations or other university related activities may be barred from future enrollment and/or graduation from Central Michigan University. Such activity may also be criminal and subject the person to prosecution.
Academic Probation, Suspension and Dismissal Policy

Students with Academic Difficulties

Students at Central Michigan University have the responsibility to realize when they are having academic difficulties and to seek help as needed. Students are encouraged to seek assistance from their instructors, counselors or advisors, or from Academic Assistance Programs in the Office of Academic Advising and Assistance.

When a student is not succeeding in a course, the instructor is encouraged to help correct the difficulty or make a referral. Instructors may report their concerns to the associate director of Academic Advising and Assistance, who is available to assist in resolving difficulties.

Academic Probation

At the end of each semester or summer session, a student whose cumulative grade point average falls within the range for the number of credit hours shown in the following table is placed on academic probation. The range is determined by attempted hours or total hours, whichever is greater. Total hours include credits earned at CMU as well as transfer credits or hours earned in any other manner.

The university notifies students who are placed on academic probation, and encourages them to seek counseling and assistance via the Office of Academic Advising and Assistance. If a student is on academic probation for three consecutive semesters including summer session, the student is subject to academic dismissal.

Academic Suspension

New freshmen and transfer students are subject to academic suspension if their first semester, including summer session, grade point average falls below the range for academic probation as defined by the Academic Probation Policy. Suspended students may re-enroll for the next academic session if granted permission by the Committee on Rematriculation. Permission to re-enroll for the next session is requested through the Office of Academic Advising and Assistance. A written appeal, a personal interview, and payment of the Rematriculation Application Fee are required, following the procedures outlined under Rematriculation in the Admissions section of this Bulletin.

Academic Dismissal

A student is subject to academic dismissal if his or her cumulative grade point average falls below the cumulative grade point average range for academic probation as defined by the Academic Probation Policy (see Table), or when the student has been on academic probation for three consecutive semesters including summer session and has not made strong academic gains as reflected in the grade point average.

The University reserves the right to cancel the matriculation of a student at the end of any session when his or her total record indicates that such action is warranted. Likewise, a student whose total record indicates considerable ability and marked improvement may be given special consideration.

The University notifies students whose matriculation is canceled.

No student whose matriculation has been canceled, or would have been canceled had he or she been a student at the University, can enroll again unless readmitted. Consideration for readmittance will normally be given to dismissed students only after an absence of at least one academic year. If students wish to return to the University, they must apply for readmittance to the Committee on Rematriculation, through the Office of Academic Advising and Assistance. A written application, a personal interview, and payment of the Rematriculation Application Fee are required. The complete procedure is outlined under Rematriculation in the Admissions section of this Bulletin.

<table>
<thead>
<tr>
<th>Attempted/Total Credit Hours</th>
<th>GPA Range for Dismissal/Suspension</th>
<th>GPA Range for Probation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-18</td>
<td>0.0-0.99</td>
<td>1.00-1.99</td>
</tr>
<tr>
<td>19-35</td>
<td>0.0-1.49</td>
<td>1.50-1.99</td>
</tr>
<tr>
<td>36-45</td>
<td>0.0-1.69</td>
<td>1.70-1.99</td>
</tr>
<tr>
<td>46-58</td>
<td>0.0-1.79</td>
<td>1.80-1.99</td>
</tr>
<tr>
<td>59-71</td>
<td>0.0-1.84</td>
<td>1.85-1.99</td>
</tr>
<tr>
<td>72-85</td>
<td>0.0-1.89</td>
<td>1.90-1.99</td>
</tr>
<tr>
<td>86 and over</td>
<td>0.0-1.94</td>
<td>1.95-1.99</td>
</tr>
</tbody>
</table>

Attempted/Total Credit Hours include every course ever registered for that shows on the transcript and for which there is a grade or grade substitute like a W, an I, a CR, a NC, an N, a Z, etc. This does not include courses dropped during registration. It does include credits transferred from other schools.
## Advanced Standing

Undergraduate students may be granted credit at CMU by earning high scores on the following specified examinations: Advanced Placement (AP), College Level Examination Program (CLEP), and International Baccalaureate. Credit can be earned in some CMU classes by AP examination. In the following list, approved AP examinations are paired with the CMU courses in which credit is granted for a minimum score of three to five. The courses on this list are approved by individual academic departments and are subject to change.

### Accepted Advanced Placement Program Examinations

<table>
<thead>
<tr>
<th>Name of Examination</th>
<th>CMU Equivalent</th>
<th>Course Number</th>
<th>Credit</th>
<th>Min. Score Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art: History of Art</td>
<td>Introduction to Western Art, Part I</td>
<td>ART 283</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Art: 2-D Design Portfolio</td>
<td>2-D Design</td>
<td>ART 115</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Art: 3-D</td>
<td>3-D Design</td>
<td>ART 118</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Art: Drawing Studio</td>
<td>Introduction to Drawing</td>
<td>ART 106</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Biology</td>
<td>Concepts of Biology</td>
<td>BIO 110</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Survey of Chemistry &amp; Introductory Chemistry Laboratory</td>
<td>CHM 120 &amp; CHM 127</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

*Prior to Fall, 2013: CHM 131 (4) with score of 3 or CHM 131/132 (8) with score of 5.

<table>
<thead>
<tr>
<th>Name of Examination</th>
<th>CMU Equivalent</th>
<th>Course Number</th>
<th>Credit</th>
<th>Min. Score Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science A</td>
<td>Principles of Computer Programming</td>
<td>CPS 180</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science AB</td>
<td>Introduction to Data Structure</td>
<td>CPS 181</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>English Language &amp; Composition</td>
<td>Introduction to Literature</td>
<td>ENG 134</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>English Composition and Literature</td>
<td>Introduction to Literature</td>
<td>ENG 134</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>Introduction to Environmental Studies</td>
<td>ENV 101</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Government &amp; Politics: Comparative</td>
<td>Introduction to Comparative Politics</td>
<td>PSC 242</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>History: European</td>
<td>• The Development of Western Civilization: From Ancient Times to 1700 A.D.</td>
<td>HST 101 or HST 102</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>• Development of Western Civilization: From 1700 to the Present</td>
<td>HST 101/HST 102</td>
<td>6</td>
<td>4 or 5</td>
</tr>
<tr>
<td>History: U.S.</td>
<td>• The Quest for Liberty: The United States to 1865</td>
<td>HST 111 or HST 112</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>• The Struggle for Equality: United States, 1865-present</td>
<td>HST 111/112</td>
<td>6</td>
<td>4 or 5</td>
</tr>
<tr>
<td>History: World</td>
<td>World History to 1500</td>
<td>HST 201 or 202</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>World History since 1400</td>
<td>HST 201 and 202</td>
<td>6</td>
<td>4 or 5</td>
</tr>
<tr>
<td>Human Geography</td>
<td>Cultures of the World</td>
<td>GEO 121</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Languages:</td>
<td>French Language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>German Language</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Spanish Language</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Latin: Literature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Latin: Vergil</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>For each of these examinations, credit will be allowed as follows:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>• For a score of 3, credit will be given in the 201 course (4 hours)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• For a score of 4, credit will be given in the 201 and 202 courses (8 hours)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>• For a score of 5, credit awarded will be determined by the department section for that language based on a review of the examination and an interview with the student. A minimum of 10 hours and a maximum of 12 hours are recommended, with credit to be at the 200 level.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>• For each of these Latin examinations, credit for scores of 3, 4 or 5 will be awarded through Latin: consultation with the department chairperson.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>Principles of Macro- and Global Economics</td>
<td>ECO 204</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>Microeconomic Principles for Business</td>
<td>ECO 203</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics: Calculus AB</td>
<td>Calculus I</td>
<td>MTH 132</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics: Calculus BC</td>
<td>Calculus I and Calculus II</td>
<td>MTH 132/133</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics: Calculus BC</td>
<td>Subscore AB</td>
<td>MTH 132</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Physics I</td>
<td>College Physics I</td>
<td>PHY 130QR</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>College Physics Laboratory I</td>
<td>PHY 170</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Physics II</td>
<td>College Physics II</td>
<td>PHY 131</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>College Physics Laboratory II</td>
<td>PHY 171</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Physics B</td>
<td>College Physics I and College Physics II</td>
<td>PHY 130QR/131</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Physics C (Mechanics)</td>
<td>University Physics I</td>
<td>PHY 145QR</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Physics C (Electricity &amp; Magnetism)</td>
<td>University Physics II</td>
<td>PHY 146</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Psychology</td>
<td>Introduction to Psychology</td>
<td>PSY 100</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Statistics</td>
<td>• Introduction to Statistics</td>
<td>STA 282QR</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>• Elementary Statistical Analysis</td>
<td>STA 382QR</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
College-Level Examination Program (CLEP)

The College Level Examination Program (CLEP) sponsored by the College Board affords students and prospective students the opportunity to demonstrate their academic proficiency at the freshman-sophomore college level in various general areas and in specific subjects.

Policies concerning the use of CLEP General Examinations at Central Michigan University are developed and controlled by the Academic Senate. The minimum scores for CLEP Subject Examinations are determined by the department authorizing credit for the subject.

When a student submits evidence of achievement by CLEP, this evidence will be evaluated by the Registrar's Office with credit being granted in appropriate areas.

A. To be eligible for credit for CLEP scores, a student must have been granted regular undergraduate admission at CMU and an official score report must be on file.

B. The student may not at any time have been enrolled in the course for which credit is being sought nor in a higher level course in the same subject. A student is not considered to have been enrolled in a course if they have dropped the course during the regular drop/add period at the beginning of the semester.

C. Credit for the CLEP General Examinations in Humanities and/or Social Science and History will not be granted after university study has begun. In addition, credit earned through CLEP General examinations may not be applied to any University program group requirements. Exceptions: Students with concurrent high school and CMU enrollments or students who have participated in certain special vocationally oriented programs may be eligible to take these examinations. Answers to the specific questions on eligibility can be obtained from the Computer-based Testing Center at 989-774-1092 or https://www.cmich.edu/office_provost/AcademicAffairs/CBTC/. Eligibility in individual cases will be determined by the Undergraduate Academic Services.

D. Students may receive three (3) credit hours in ENG 101 for the CLEP College Composition Examination only if that examination is taken before the end of their first college semester. Transfer students may take this examination during their first semester at CMU to meet the Basic Freshman Composition requirement, but no credit will be awarded.

E. CLEP examination credit may not be used to repeat any course(s) previously taken.

F. Grades for the CLEP examinations, where credit is granted, will be recorded as Credit (CR) without points.

In the following list, each approved CLEP subject examination is paired with the CMU course in which credit is granted for a score at the 50th percentile or higher.

<table>
<thead>
<tr>
<th>Name of Examination</th>
<th>CMU Equivalent</th>
<th>Course Number</th>
<th>Credit</th>
<th>Score Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government</td>
<td>Introduction to American Government &amp; Politics</td>
<td>PSC 105</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>Analyzing &amp; Interpreting Literature</td>
<td>Introduction to Literature</td>
<td>ENG 134</td>
<td>3</td>
<td>58</td>
</tr>
<tr>
<td>Biology</td>
<td>Concepts of Biology</td>
<td>BIO 110 or BIO 101</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Calculus</td>
<td>Calculus I</td>
<td>MTH 132</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Chemistry</td>
<td>General Chemistry I</td>
<td>CHM 131</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>College Algebra</td>
<td>College Algebra</td>
<td>MTH 107</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>College Composition</td>
<td>Freshman Composition</td>
<td>ENG 101</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>English Literature</td>
<td>English Literature</td>
<td>ENG 235 &amp; 236</td>
<td>6</td>
<td>49</td>
</tr>
<tr>
<td>French Language</td>
<td>Elementary French I</td>
<td>FRN 101</td>
<td>4</td>
<td>48</td>
</tr>
<tr>
<td>German Language</td>
<td>Elementary German I</td>
<td>GER 101</td>
<td>4</td>
<td>43</td>
</tr>
<tr>
<td>Introductory Psychology</td>
<td>Introduction to Psychology</td>
<td>PSY 100</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>Introductory Sociology</td>
<td>Introductory Sociology</td>
<td>SOC 100</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>Pre-Calculus</td>
<td>Pre-Calculus Mathematics</td>
<td>MTH 130</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Principles of Accounting</td>
<td>Introduction to Financial Accounting</td>
<td>ACC 250 or ACC 201</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>Introduction to Management</td>
<td>MGT 312</td>
<td>3</td>
<td>52</td>
</tr>
<tr>
<td>Principles of Marketing</td>
<td>Introduction to Marketing</td>
<td>MKT 300</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>Social Science and History</td>
<td>Social Science Credit</td>
<td>SPN 101</td>
<td>4</td>
<td>46</td>
</tr>
<tr>
<td>Spanish Language</td>
<td>Elementary Spanish I</td>
<td>SPN 102</td>
<td>4</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Elementary Spanish II</td>
<td>SPN 201</td>
<td>4</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>Intermediate Spanish I</td>
<td>SPN 202</td>
<td>4</td>
<td>58</td>
</tr>
</tbody>
</table>
International Baccalaureate

High school students may be able to receive credit through the International Baccalaureate (IB) Diploma Programme. IB examination scores should be sent from the IB Office (New York, Geneva, or London) directly to Undergraduate Admissions, Warriner Hall, Central Michigan University, Mt. Pleasant, MI 48859 USA for evaluation. Strong scores on IB Higher Level examinations may allow for course waiver or course credit.

The following table shows the current credit awarded for specific IB examinations and scores. Additional IB course content and examinations are under review by departments. Students should contact Undergraduate Academic Services for the most current information.

### Additional Information on Advanced Standing

For information concerning AP and the International Baccalaureate, contact the Undergraduate Academic Services Office, Warriner 123, 989-774-3504. Further information on the CLEP program (including exam eligibility requirements) is available from the Computer-based Testing Center (https://www.cmich.edu/office_provost/AcademicAffairs/CBTC/) at 989-774-1092.

#### International Baccalaureate

<table>
<thead>
<tr>
<th>IB Course Name &amp; Exam Level</th>
<th>Score Required</th>
<th>CMU Equivalent</th>
<th>Credit</th>
<th>Course Number</th>
<th>U.P./Competency*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology HL</td>
<td>4 or Higher</td>
<td>General Biology/Concepts of Biology and Biology Credit</td>
<td>6</td>
<td>BIO 101 (3) or BIO 110 (4)</td>
<td>IA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BIO Credit (2 or 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry HL</td>
<td>4 or Higher</td>
<td>Chemistry Credit</td>
<td>5</td>
<td>CHM Credit and Lab (5)</td>
<td>IIB</td>
</tr>
<tr>
<td>Economics A HL</td>
<td>5 or Higher</td>
<td>Principles of Macroeconomics and Principles of Microeconomics</td>
<td>6</td>
<td>ECO 201 (3) or ECO 204 (3)</td>
<td>IA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ECO 202 (3) or ECO 203 (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English A1 HL</td>
<td>4 or Higher</td>
<td>Freshman Composition and Introduction to Literature</td>
<td>6</td>
<td>ENG 101 (3)</td>
<td>Freshman Composition</td>
</tr>
<tr>
<td>Foreign Language (see Spanish below)</td>
<td>3 or Higher and Department Review</td>
<td>Must see Department of Foreign Languages, Literatures and Cultures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of the Americas HL</td>
<td>4 or Higher</td>
<td>United States to 1865 and United States 1865 to Present</td>
<td>6</td>
<td>HST 111 (3)</td>
<td>IIIB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HST 112 (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History – Europe HL</td>
<td>4 or Higher</td>
<td>History Credit</td>
<td>6</td>
<td>HST Credit (6)</td>
<td>IA</td>
</tr>
<tr>
<td>History HL</td>
<td>4 or Higher</td>
<td>The African Experience and History Credit</td>
<td>6</td>
<td>HST 176 (3)</td>
<td>IVB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HST Credit (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History HL - World History</td>
<td>4 or Higher</td>
<td>History Credit</td>
<td>3</td>
<td>HST Credit (3)</td>
<td></td>
</tr>
<tr>
<td>Language A1 HL</td>
<td>4 or Higher</td>
<td>Freshman Composition</td>
<td>3</td>
<td>ENG 101 (3)</td>
<td>Freshman Composition</td>
</tr>
<tr>
<td>Language A1 HL - World Literature</td>
<td>4 or Higher</td>
<td>English Credit</td>
<td>3</td>
<td>ENG Credit (3)</td>
<td></td>
</tr>
<tr>
<td>Music HL</td>
<td>5 or higher</td>
<td>Listening Experience and Music Credit</td>
<td>5</td>
<td>MUS 114 (3)</td>
<td>IB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MUS Credit (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophy HL</td>
<td>4 or Higher</td>
<td>Introduction to Philosophy and Critical Reasoning in Everyday Life</td>
<td>6</td>
<td>PHL 100 (3)</td>
<td>IA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHL 105 (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics HL</td>
<td>4</td>
<td>University Physics I and University Physics Laboratory I</td>
<td>5</td>
<td>PHY 145QR (4) and PHY 175 (1)</td>
<td>IIB</td>
</tr>
<tr>
<td>Physics HL</td>
<td>5 or Higher</td>
<td>University Physics I &amp; University Physics Laboratory I University Physics II &amp; University Physics Laboratory II</td>
<td>10</td>
<td>PHY 145QR (4) and PHY 175 (1)</td>
<td>IIB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHY 146 (4) and PHY 176 (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology HL</td>
<td>4 or Higher</td>
<td>Introduction to Psychology</td>
<td>3</td>
<td>PSY 100 (3)</td>
<td>IIIA</td>
</tr>
<tr>
<td>Social and Cultural</td>
<td>4 or Higher</td>
<td>Anthropology Credit</td>
<td>3</td>
<td>ANT Credit (3)</td>
<td></td>
</tr>
<tr>
<td>Anthropology HL</td>
<td></td>
<td>SPN Credit (3)</td>
<td></td>
<td></td>
<td>IVB</td>
</tr>
<tr>
<td>Spanish A2 HL</td>
<td>4 or Higher</td>
<td>Spanish Credit</td>
<td>3</td>
<td>SPN Credit (3)</td>
<td>IVB</td>
</tr>
<tr>
<td>Theatre HL</td>
<td>4 or Higher</td>
<td>Acting I</td>
<td>3</td>
<td>TAI 182 (3)</td>
<td></td>
</tr>
<tr>
<td>Visual Arts Option A HL in English</td>
<td>No Credit</td>
<td>No Credit</td>
<td>0</td>
<td>No Credit</td>
<td></td>
</tr>
</tbody>
</table>

*Note: The University Program or Competency credit apply only to the course directly to the left of the University Program Group or the competency designator. For example, a score of 4 or higher on the Biology HL exam will gain the student 6 credits, 3 credits for BIO 101 and lab, and 3 unspecified BIO credits. Only BIO 101 with the lab counts for University Program Group II-A credit. The unspecified BIO credit does not count toward a University Program requirement.*
Auditing a Course
A CMU student interested in taking an undergraduate course on an audit basis must obtain, prior to registration, the approval of the department chairperson offering the course. An Approval to Audit Request Card, signed by the student and the department chairperson, must be filed in the Registrar's Office or Student Services Court by Friday of the third week of class.

No credit is granted for a course being audited, but such credit as the course normally would carry is included as part of the student's total load, and fees are assessed accordingly. No change from regular registration to audit, or from audit to regular registration is permitted after the published deadlines.

The student's responsibility to the class being audited is determined by the department chairperson and the instructor of the class.

Change of Grade
A request to change a grade may be requested by an instructor by filing a “Change of Grade Request Card” with the chairperson of the department. The chairperson will forward the request to the dean of the college.

Requests for change of grade involving error by an instructor—such as error in recording grade, transpositional error, error in transferring grade to Final Grade List, miscalculation, computational error, error in scoring final exam, test or assignment grade not recorded, papers misplaced by instructor and found after grade was recorded, error in graduate assistant or lab assistant reporting grade to grading instructor, or instructor forgetting that a student had been promised an “I” grade—shall be processed by the Registrar's Office without any action by a school Change of Grade Committee.

All other requests for change of grade are to be submitted by the dean to the College Change of Grade Committee. If the request is approved, the chairperson of the committee or the appropriate dean forwards the card to the Registrar's Office for processing.

“Change of Grade Request Cards” may be obtained by faculty members from either the department chairperson or the Registrar's Office.

Course Substitution
Every student is expected to take the required work prescribed for the degree plan he or she is following. It is sometimes necessary, however, to make substitutions, especially in the case of students who have not been in attendance for several years or who have transferred from other colleges. The following govern such deviations:

Degree Substitution. Substitution for a specific course prescribed on a particular degree, except as noted below, will be processed only when (1) approved by the chairperson of the department offering the course and (2) certified by the chairperson to the Registrar on an Application for Substitution form. No substitution may be made for courses comprising the University Program or competency requirements portions of the student’s degree requirements.

Modification for Major or Minor. Change of a required or elective course on an authorized major or minor will be processed only (1) when approved by the student’s departmental advisor who previously signed the authorization, and (2) when certified by the advisor to the Registrar on a “Modification for Major or Minor” form. The departmental chairperson shall authorize changes in the absence of the departmental advisor.

Substitution and modification forms are available at the Registrar's Office and online (www.cmich.edu/Registrars) under “Departmental Forms.”

Credit by Examination
A regularly matriculated student who has had experience or background comparable to a course at this university may file for Credit by Examination in a specific CMU course under the following conditions:

1. No credit transferable to CMU has been earned in the course requested by examination.
2. No advanced placement had been given for the course requested by examination.
3. No higher level course in that subject area was taken prior to requesting credit by examination.
4. Credit by examination may not be used to repeat any course previously taken, either to remove a failure or to improve a grade, as provided in the Repeat Course Policy.
5. Credit by Examination is not available by Credit/No Credit Option. The only class where Credit/No Credit is a valid grade by exam is a class that is only offered on the CR/NC basis.

“Credit by Examination” forms are available in the Registrar's Office, Warriner Hall. The form is then to be submitted to the appropriate department chairperson. If the department chairperson approves the course for credit by examination, an instructor will be assigned to give the examination and the student will be directed to pay for the course and submit the approved form to the Registrar's Office.

Credit by Examination when graded carries point values as do other courses. Credit by Examination in courses offered only on the CR/NC basis do not carry point values and count only as earned hours. Semester hours earned by Credit by Examination do not apply to meet any of the hours required in residence.

Foreign Language Placement/ Retroactive Credit
Students who have had French, German or Spanish in high school and want to continue the study of that language at CMU must take a placement exam in that language before registering for classes. Only those who have had no previous experience in the foreign language may enroll in 101 without taking the placement exam. Students with CMU or other college-level credit in the language do not have to take the placement exam.

You may take the foreign language placement exam online. Visit www.chsbs.cmich.edu/fllc and click on “placement test” button. Students do not earn credit for a high score. However, after completing the course and earning credit, they do have the opportunity to earn retroactive credit which is outlined below.

Retroactive credit: Students who enroll in an entry level course (102, 201, or 202) or a course beyond 202 (FRN 315 or 316, GER 311 or 312 or SPN 214 or 331) and receive a grade of B (3.0) or better are eligible for up to 8 hours of retroactive credit. To qualify, students must be enrolled at the level determined by their score on the placement exam, or at a higher level. For more information on retroactive guidelines, contact the CMU Foreign Language Department in Pearce Hall 305 or 989-774-3786.

Undergraduate Credit/No Credit Policy
An undergraduate student may take courses on a Credit/No Credit basis subject to regulations summarized here. The option is elected by submitting an Undergraduate Credit/No Credit Request Card to the Registrar's Office before the published deadline.

The instructor is not notified when a course is taken credit/no credit and so assigns the student a letter grade. The grade is automatically converted to credit or no credit according to the following guidelines. The student earns credit (CR) for the course and credit toward graduation when a grade of C or better is assigned. No credit (NC) is earned when the assigned grade is C-, D+, D, D-, or E. The course appears on the student's permanent record with the CR or NC grade, but the grade has no effect on the grade point average.

Departments designate which of their courses may be taken on a credit/no credit basis and whether such credit may be applied to a major or a minor. A department may offer certain courses exclusively on a credit/no credit basis after approval by the appropriate curricular authorities and publication in the University Bulletin.
A maximum of 25 semester hours of credit earned under the credit/no credit option may be applied toward an undergraduate degree. Courses exclusively offered on this basis are not included in the 25-hour restriction. Students may not take more than two courses or 7 hours for credit/no credit in the University Program.

Procedures and deadlines for registering for courses on a credit/no credit basis can be found in the current Course Search & Registration (www.cmich.edu/Registrars). A student who officially elects the credit/no credit option for a course may not change the registration to a letter grade designation after the deadline.

Regulations for graduate credit/no credit offerings are to be found in the Bulletin of the College of Graduate Studies.

Prior Learning Assessment Credit
Undergraduate students may apply for credit for past personal and professional experiences which have resulted in the attainment of college-level competencies. Academic credit may be awarded for learning resulting from career and personal experiences; job-related activities; extensive hobbies, travel and foreign residency; community service; and training received through on-the-job instruction, self-study, or specialized schooling. To be applied to a program plan, prior learning must be directly related to the degree being pursued. Credit from prior learning may not be used to meet any University Program or Competency requirement. For more information, contact the Prior Learning Assessment Coordinator at 989-774-7126.

Non-Degree Courses
Courses numbered (DESIGNATOR) 589 - Professional Development (1-6) do not apply to degree requirements. These courses cover selected issues designed for professional development, in-service training to meet specific staff development needs in education, business/industry, allied health, technology, and other professional settings. They are not applicable to degree requirements.

Undergraduate Appeal Process
An undergraduate student may request a review of the following through an appeal:
1. Course substitution or other modification of the University Program and competency requirements
2. Individual course transfer
3. Extension of bulletin
4. Graduation or degree requirements
Information concerning filing an appeal is available through the Academic Senate Office located in the Ronan Hall 280.

Family Educational Rights and Privacy Act
The Family Educational Rights and Privacy Act of 1974 (FERPA) affords students certain rights with respect to their educational records. They are:
1. The right to inspect and review the student’s educational records within 45 days of the date the University receives a request for access.
   Students should submit to the Registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
2. The right to request the amendment of the student’s educational records that the student believes are inaccurate, misleading, or otherwise in violation of the student’s privacy rights.

Students may ask the University to amend a record they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identifying the part of the record they want changed, and specify why it is inaccurate or misleading.

If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedure will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student’s educational records, except to the extent that FERPA authorizes disclosures without consent. One exception which permits disclosure without consent is disclosure to University officials with legitimate educational interest and/or needs to review an educational record in order to fulfill his or her professional responsibility. A University official for the purpose of this policy is defined as follows:
   • members of the faculty;
   • members of the professional, executive, and administrative staff;
   • members of the Central Michigan University Police Department in an emergency if knowledge of the information is needed to protect the health and safety of the student;
   • students, when properly appointed as members of a hearing panel or screening committee;
   • representatives of the State Auditor General and Department of Education when performing their legal function;
   • a person or company with whom the University has contracted (e.g. attorney, auditor, or collection agent) but limited to only the specific student information needed to fulfill their contract;
   • others as designated in writing by the President, a university vice president, or dean.

Upon request, the University discloses educational records without a student’s consent to officials of another school in which a student seeks to enroll.

Another exception which permits disclosure without consent is when the information consists solely of “Directory Information.” Directory information may be published or released by University faculty and staff at their discretion. Unless a student specifically directs otherwise, as explained more fully in paragraph (4) below, Central Michigan University designates all of the following categories of information about its students as “Directory Information”:
   a. name, campus address, home address, telephone listing, and campus e-mail;
   b. state of residence;
   c. age, date, and place of birth;
   d. major field of study, including the college, department, or program in which the student is enrolled;
   e. classification as a freshman, sophomore, junior, senior, graduate, specialist or doctoral student;
   f. enrollment status (full-time, half-time, less than half-time);
   g. participation in officially recognized activities and sports;
   h. weight and height of members of athletic teams;
   i. dates of attendance and graduation, and degrees received;
   j. the most recent educational institution attended;
   k. honors and awards received, including selection to the Dean’s or President’s list, honorary organization, or the GPA range for the selection.

4. A student has the right to refuse the designation of all categories of personally identifiable information listed above (a. through k.) as Directory Information. If a student exercises this right, it will mean that no Directory Information pertaining to the student will be published or otherwise released to third parties without consent, a court order, or a subpoena.
Any student wishing to exercise this right must inform the Registrar’s Office in writing by the end of Phase II registration regarding the withholding of all categories of personally identifiable information with respect to that student. Once a student has requested the withholding of information, “Directory Information” will be withheld until the student cancels the request in writing.

5. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Central Michigan University to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5901

Grade Grievance Policy

The University recognizes that it is the instructor’s prerogative to determine a grade. Responsibility for resolving grading disputes is shared among the instructor, the student, the department, and the college. If a question is raised by a student concerning a grade, the instructor should discuss the matter willingly and give evidence to make clear his/her basis for determining the grade. In turn, the student should recognize the need to demonstrate a valid basis for complaint. At any time, either upon the student inquiry or upon his/her own initiative, the instructor who believes a change of grade is justified may initiate a request for a change in grade.

The following steps are available for review of allegations of capricious grading under the grade grievance policy. They are not for review of the judgment of an instructor in assessing the quality of a student’s work nor are they to be used in cases involving violations of CMU’s Academic Integrity Policy. Determination of the grade in such cases is left solely to the instructor.

Capricious grading, as that term is used herein, constitutes any of the following: (a) the assignment of a grade to a particular student on some basis other than his/her performance in the course; (b) the assignment of a grade to a particular student based on more exacting or demanding standards than were applied to other students in that course (and it is understood that standards for graduate credit may be different from standards for undergraduate credit); (c) the assignment of a grade by a substantial departure from the instructor’s previously announced standards.

Step 1:
• A student who desires discussion of a complaint about a grade shall contact the instructor or, if the instructor is unavailable, the department chairperson either in person or in writing as soon as possible, but in no case later than thirty days after the grade is posted. Any exception to the time limitation shall be for unusual and most compelling reasons. Ordinarily, the student should accept the instructor’s decision. However, if the student is still not satisfied, he/she may request in writing a joint consultation with the instructor and the chairperson of the department involved.

In a case in which the student’s request for joint consultation involves an instructor who is also chairperson of the department, the student’s request in writing should be sent to the dean of the school or college involved. In such cases, the dean shall act in place of the department chairperson.

Step 2:
• A student who is not satisfied after consultation with the instructor and department chairperson and who alleges that the course grade is the result of capricious grading may file an appeal within forty-five days from the date of the posted grade to the dean of the instructor’s college for forwarding to the College Committee on Review of Change of Grade. The student shall file the appeal by submitting a written statement explaining the basis for the allegation that the grade was the result of capricious grading and presenting any evidence he/she may have.

• The appeal shall be dismissed if (a) the appeal was not timely; (b) the allegations, if true, would not constitute capricious grading; or (c) the student has not attempted to confer with the instructor or chairperson of the department. If the appeal is not dismissed, the committee* shall submit a copy of the student’s written statement to the instructor of the course with a request that the instructor promptly submit a written response thereto, a copy of which shall be made available to the student. If, upon the basis of these papers, the dispute appears to be attributable to inadequate or incomplete communication between the parties, the committee may arrange to meet individually or together with the student and instructor to discuss the problem. A teleconference can be arranged for a student who does not reside in proximity to the main campus.

Step 3:
• If such a meeting is not held or, if held, the meeting does not result in a mutually agreeable solution, the committee shall proceed to hold a fact-finding session concerning the allegations set forth in the appeal. Both the student and the instructor shall be entitled to be present throughout the session and to present any relevant evidence, including testimony by other persons. The student and the instructor both may be accompanied by a person to assist them in presenting evidence. The session shall not be open to the public.

At the close of the session, the committee shall deliberate privately. If a majority finds the allegations of capricious grading to be supported by substantial evidence, the committee shall determine the most appropriate remedy. The committee may direct the instructor to grade the student’s work anew, give the student a new examination in the course, or take such other action as will bring about substantial justice in the individual case. However, except in the most extraordinary circumstances, the committee itself should not award the student a new grade in the course. The decision of the committee shall be final and shall be reported in writing to the student, instructor, and the departmental office.

The College Committee on Review of Change of Grade may also resolve complaints involving suspected violation of grading policies for incomplete and deferred grades, dropping a class, or withdrawal from the university. The same procedures as outlined above for review of alleged capricious grading shall be followed.

*If the instructor of the course is a member of the Committee, he/she shall be disqualified from considering the appeal.

Incomplete and Deferred Grade

Incomplete Grade. I (Incomplete) is a temporary grade used by the instructor in cases when a student is unable to complete course requirements because of illness or other justifiable circumstances. It is assigned only in cases in which the student has completed satisfactorily the major portion of the course requirements, and has convinced the instructor of his or her ability to complete the remaining work without re-registering for the course. It is not to be given to a student who is already doing failing work. A form must be completed and signed by the faculty member (and the student, when possible) whenever a grade of I is assigned. The form is to be kept on file in the departmental office. An instructor who assigns a grade of I also submits a formal statement to the department chairperson of requirements to be satisfied for removal of the Incomplete grade. A copy of the statement of requirements, including deadlines for their completion, shall be made available to the student.

It is the student’s responsibility to contact the instructor to make arrangements for completing the remaining work. The required work should be completed and a grade reported by the end of the student’s next semester in residence, but in no case later than one calendar year following the receipt of the I. A student not completing the remaining work by the end of one calendar year following the receipt of an I would retain an I only if the instructor chooses not to change the I to a specific grade ranging from A to E by the end of the calendar year. An I (Incomplete) may not be removed by registering again for the course.

If the instructor of the class in which the I was incurred is no longer a member of the faculty, the student should contact the department chairperson, who shall act on behalf of the former instructor.

*Editor’s Note: This policy was revised at the April 7, 2015 Academic Senate Meeting, which was not in time for the paper Undergraduate Bulletin’s print date. The policy above supersedes the printed policy on page 79 of the paper 15-16 Undergraduate Bulletin.
Exceptions to these regulations can be made only when requested by the student and approved by the instructor or the department chairperson and the dean of the college, and certified by the dean of the college to the Registrar.

Deferred Grade. The Z (deferred grade) may be recorded for students registered for independent study, for thesis, International Program Studies courses, or for other courses specifically approved for Z grades in the Bulletin, if the instructor believes that the quality and quantity of work completed by the end of the semester justifies an extension of time. An instructor who assigns a grade of Z shall submit, on the proper form, a statement to the department chairperson of remaining requirements for removal of the deferred grade. A copy of the statement of requirements, including deadlines for their completion, shall be made available to the student.

Recomputation of Grade Point Average
An undergraduate student may petition for recomputation of his or her cumulative grade point average if:
1. the student has not attended CMU or any other institution for four or more consecutive years, and
2. the student re-enrolls after his or her matriculation was canceled or after withdrawing voluntarily with a cumulative grade point average under 2.00 (academic probation).
A petition form for recomputation may be obtained from the Academic Advising and Assistance office. This policy may apply to students presently enrolled at CMU.
If the petition is approved, all courses taken will remain on the permanent record. Those courses with grades of A, A-, B+, B, B-, C+, C, C-, or CR will be counted for credit only. The student resumes his or her academic program at CMU with no cumulative grade-point average, and thereafter is subject to the conditions of probation and dismissal that govern all students. A student may not graduate from Central Michigan University under this policy unless he/she earns at least 12 semester hours of credit at this institution after the recomputation has been granted.

Honors for Recomputations
Students who have had a recomputation of grade point average must meet the following criteria to be eligible for graduation with honors:
At the beginning of his/her final semester must have completed 45 hours of residence, of which 33 hours are letter graded, and a cumulative point average as indicated in the Graduation with Honors table. Only hours completed after the recomputation are eligible for this requirement.

Undergraduate Repeat Course Policy
Undergraduate students may repeat a course, but the following conditions apply:
1. A student may repeat a course in which they have earned a grade of A through E. All grades will appear on the transcript, but only the last grade received will be utilized in computing cumulative hours and GPA.
2. A student may not repeat a course on the CR/NC grading option.
3. If the designator or the course number has changed since the student’s previous attempt, the student is encouraged to complete a Repeat Course Request card with the Registrar’s Office by the deadline date. This will ensure that the repeat will be noted and will be included in the current semester calculations.
4. A student repeating a CMU course at another college/university must earn a higher grade than their original attempt for the course to transfer. Honor points will not transfer but the previous CMU honors points will be removed in computing the average.
5. A course taken after a student graduates will not change the previously attempted grade or credit hours.
6. A student is limited to 3 attempts of a course. This includes repeats where they have earned a grade of A through E, or attempts where they were awarded grades of CR, NC, I, W, Z, or X.
7. This limitation does not apply to independent study and similar courses for which course content varies significantly with each offering. (Often these are courses with variable credit hours.)
8. For exceptions to this limitation policy, a student may appeal to the Chairperson of the department offering the course.

Official Transcript Requests
Any current or former student who does not have a financial hold may request an Official Transcript from Central Michigan University.

How to request a transcript
- If you were a CMU student from 2000 to the present, you may log into CentralLink with your global I.D. and password to request a transcript online at https://apps.cmich.edu/TranscriptRequest.
- If you were a CMU student prior to 2000, please use the Official Transcript Request Form found at https://www.cmich.edu/ess/registrar/RegistrarRecords/Pages/Transcript_Request.aspx. After completing this form, print it and either fax to 989-774-3783 or mail to: Office of the Registrar, Attention: Transcripts, Central Michigan University, Mt. Pleasant, MI 48859.

Letters and faxed requests should include name, address, daytime phone number, CMU ID number or the last 4 digits of your SSN, dates of attendance, and birth date. If a student has both an undergraduate and graduate record, both must be sent. No transcript will be released without written authorization from the student.

Ordinarily, transcripts are processed within one to three business days. There is no charge for a transcript, unless a student orders more than 5 transcripts per week. Priority service is available by specifically requesting the priority service and paying a $10.00 priority charge. Priority requests will be prepared in time for the next outgoing mail. Priority transcripts requested in person will be prepared immediately.

Students may request that official transcripts be sent directly to them, but most businesses and educational institutions will accept as official only those transcripts sent directly to them from the issuing institution.

Transcripts of students with a financial obligation to the university are not released until the obligation is paid.

Transfer Credit Policy
I. Transfers from Accredited Schools and Foreign Institutions. Undergraduate courses from another college or university which is accredited by one of the regional institutional accrediting associations or from a foreign university or college approved by the government or the official regulating agency of the country in which the university or college is located will be considered for transfer credit at Central Michigan University, subject to the following conditions: a.) Courses must be germane to a program at Central Michigan University, b.) Transferable courses completed with a grade of C- or better or the equivalent will be accepted. For credit from institutions that have numeric grading only, you may contact Undergraduate Academic Services (989-774-3504) to verify the minimum grade required for transfer, c.) Credits from foreign institutions will be accepted using the guidelines developed by the World Education Series of American Association of Collegiate Registrars and Admissions Officers, and in consultation with affected departments, d.) Grades and honor or quality points are not transferable to or recorded on the CMU permanent record, e.) Acceptability of transfer coursework to fulfill CMU major or minor requirements is at the discretion of the individual department.

II. Transfers from Non-Accredited Schools. A student who has earned credit or a baccalaureate degree from an institution which is not accredited by one of the regional accrediting associations may appeal through the Board of Appeals who may consult with the individual departments for an exception to the above policy for up to a maximum of 62 credits. Before accepting such credit for
transfer credit consideration, the Board of Appeals will consult with the individual departments. If a positive decision results, transfer credit may then be granted subject to the same conditions that apply to transfers from accredited schools.

III. Exceptions. Academic units may request an exception to the Regional Accreditation portion of this policy from the Degrees, Admissions, Standards and Honors Committee.

IV. Military Training and Experience.

A. Military Service School Experiences. Granting of academic credit for military service school experiences will be guided by the evaluations prepared by the American Council of Education and published in the “Guide to the Evaluation of Educational Experiences in the Armed Services.” All Military Service School experiences that are recommended for undergraduate level credit will transfer to Central Michigan University. Acceptability of credit for military service school experiences to fulfill CMU major or minor requirements is at the discretion of the individual department.

B. Military Occupational Specialties. Granting of academic credit for military occupational specialties will be guided by the evaluations prepared by the American Council of Education and published in the “Guide to the Evaluation of Educational Experiences in the Armed Services.” All Military Occupational Specialties that are recommended for undergraduate level credit will transfer to Central Michigan University. Acceptability of credit for military occupational specialties to fulfill CMU major or minor requirements is at the discretion of the individual department.

C. Service Member Opportunity College (SOC) courses. Undergraduate courses from another college or university that is recognized as a Service Member opportunity College institution for either the army (SOCAD), navy (SOCNAV), or marine corps (SOCMAR) will transfer to Central Michigan University subject to the following conditions: 1) the student seeking the transfer of credit is an active or reserve military service member or the immediate family member of a service member; 2) transferable courses completed with a grade of C- or better or the equivalent will be accepted; 3) grades and honor points or quality points are not transferable to or recorded on the CMU permanent record; 4) coursework is taken after the issuance of a Student Agreement by Central Michigan University. The Student Agreement is a record of all of the student's prior learning (including military experience) and where that learning fits into his or her degree plan.

V. Non-military Training Experiences. Granting of academic credit for selected training experiences offered outside the sponsorship of colleges and universities will be guided by the evaluations prepared by the American Council on Education's PONSI program (ACE/PONSI). ACE/PONSI credit recommendations appear in the publication entitled The National Guide to Educational Credit for Training Programs.

VI. The MACRAO and MTA Transfer Agreements. A person who transfers from a community college in Michigan with a transcript documented as having satisfied the MACRAO or MTA Agreement, will also have satisfied the University Program portion of the General Education Requirements section at CMU. All other students may refer to the General Education Requirements in this Bulletin for guidelines on the applicability of their transfer credit toward University Program requirements.

VII. International Baccalaureate Credit. Courses within the International Baccalaureate Diploma and the International Baccalaureate Certificate for individual courses may be accepted as transfer credit on a course by course basis if the higher level examinations have been passed with a score of four or better.

VIII. 13th Year Credit. CMU will allow a student's 13th year (e.g., the German Abitur) or A-level credit from non-U.S. academic systems to count as undergraduate credit if it is approved by the department responsible for that area (e.g., Biology would have to approve credit for courses taken that relate to biology). Such approval must be done on a case-by-case basis. The student must submit course syllabi, including information as to textbooks used in the course, so that the department can determine whether to approve such credit. Progress of students who receive this credit will be monitored in order to determine the efficacy of this policy.

Withdrawals from all Classes

Student Initiated Withdrawals from All Classes

Students may withdraw from all courses through the 10th week of classes using the complete withdrawal functionality in Course Search and Registration on CentralLink. Students enrolled in short term courses, on-line courses, or have already withdrawn from a single course will be referred to the Registrar's Office for assistance.

A student will automatically receive W's as an indicator of withdrawal through the tenth week of the Fall and Spring semesters or through the midpoint of all courses shorter than one semester. The instructor will be notified of the course withdrawal. In cases of academic dishonesty, the instructor will notify the Registrar's Office to reinstate the course and the instructor will submit the final grade.

Students withdrawing from the university between the 10th week and the Friday of the 14th week of the semester must contact the Registrar's office. W's will be assigned for passing work of D- or better and E's for failing work. During this period, students enrolled in a CR/NC only course will receive W's for passing work of C or better and a grade of E (which is converted to NC) for failing work. The Registrar's Office will contact each instructor to verify whether or not the student is earning a passing grade.

No student may withdraw from all classes during the week preceding final examination week.

A student following the above procedures may receive certain refunds, if eligible, in accordance with university regulations.

A student leaving the university without officially withdrawing will not be eligible for refunds and will not be eligible for a W grade.

Involuntary Withdrawal

Students who are dismissed for administrative or disciplinary reasons or students who owe past due amounts may be subject to involuntary withdrawal from classes and will receive a “W” for each class as an indicator of withdrawal. In addition, students living in residence halls with a past due balance may have their meals and long distance telephone privileges discontinued until their accounts are brought to a current status. Any delinquencies in the Family Housing Apartments may result in the initiation of eviction proceedings.

University staff will counsel students who:

a. engage or threaten to engage in behavior that poses a danger of causing physical harm to self or others, or
b. engage or threaten to engage in behavior that would cause significant property damage, or directly or substantially impede the lawful activities of others.

In situations a. and b. above, the Associate Vice President for Student Affairs or designee may refer a student to the Behavior Evaluation Team to assist the student in functioning effectively within the university environment. Referral to the Behavioral Evaluation Team does not preclude removal from the university, or university housing, in accordance with provisions of the Code of Student Rights, Responsibilities and Disciplinary Procedures and/or the Housing Agreement. A student referred to the Behavioral Evaluation Team shall be notified in writing, and shall be provided written information on the procedures to follow.
Individual Class Drops/Withdrawals

Information on dropping a class or withdrawing from a class appears in the Registration section of this Bulletin.

Withdrawal To Enter Military Service

A graduate or undergraduate student who is drafted or recalled to military service after previous active duty may be entitled to receive (a) credit for the semester, (b) refund of fees, or (c) partial credit and partial refund, according to the following conditions:

1. The student who is unable to complete the first half of a session shall be entitled to a full refund of fees.
2. The student who has completed the first half or more of a given session may receive credit or partial credit and proportional refund of fees.

The student shall apply at the Registrar’s Office for confirmation of his or her eligibility to receive credit. The Registrar shall advise the student concerning withdrawal, refund, or credit procedures.

If the Registrar confirms eligibility for credit, the student may present the confirmation to the appropriate academic dean. The academic dean, the chairperson of the department in which the student is enrolled, and the instructor of the class shall determine the amount of credit which has been earned. The academic dean reports the amount which has been earned, in writing, to the Registrar and the instructor shall submit the appropriate grade at the end of the semester.

Students who enlist or volunteer for military service during the session must withdraw from the university according to regular withdrawal and refund procedures.

CMU Online Courses

Online course delivery provides each student with a virtual classroom where lectures, multimedia study materials and class discussion are all provided using the latest technology, over the internet. Interactive online tools offer students the opportunity to connect with faculty and peers to discuss course content in cyberspace. Online courses still have specific start and end dates and assignment/exam due dates. Careful review of the course syllabus prior to the enrollment of a course will provide these dates. Questions regarding online courses should be directed to staff at cmuonline@cmich.edu or 989-774-1129.

Courses offered through CMU Online mirror main campus face-to-face courses in terms of their scope, study requirements and level of difficulty. Most students limit themselves to two online courses per term, especially if a student is new to independent learning. is employed full time, or has a large semester class load.

Online Learning Environment

To ensure success in online classes, CMU encourages students to familiarize themselves with the online learning environment prior to enrolling in CMU Online courses. Preview a sample online class, run a diagnostics check on your computer and take the Online Learning Assessment on our website at: http://global.cmich.edu/cmuonline/about.

Drop and Withdrawal Policy for Online Courses

All CMU Online courses start on a Monday and end on a Friday. Students are encouraged to frequently and consistently log into their online course, ideally every day. Tuition refunds requested prior to the start date of the course shall be made in full. The start time for CMU Online courses is 12:01 a.m. on the first day of class. Drop/withdrawal requests received after that will be assessed a $50 fee. Each new week for an online class begins on Monday at 12:01 a.m. and ends on the following Sunday at 12:00 midnight. The amount of tuition refunded is based on the week the request is received within. Holidays do not have any effect on this definition of a week. Students may not withdraw after the midpoint of the course.

Students who cease/fail to attend (virtual or otherwise) and have not formally withdrawn from the course will receive a grade of “E.” A charge-back for financial aid may be incurred based on student’s last date of academic participation in the class. See Scholarships and Financial Aid section of this Bulletin for additional information.

Examination Proctors

A proctor is a person approved by CMU Online to administer exams to a student for an online course requiring a proctor. Not all online courses require a proctor. For those courses that do require a proctor, students must identify a proctor and provide the necessary information through the Proctor Designation Form to CMU Online for approval. Once a proctor has been approved, CMU Online will provide exam materials to the proctor. The student arranges for an exam appointment with the proctor to take their exam.

Acceptable proctors include school counselors, school/college administrators/teachers, military/industry education or testing centers, or librarians at a local library. In addition, CMU centers proctor exams. Unacceptable proctors include, but are not limited to, family members, friends, co-workers, other CMU students, anyone with whom the student has a personal relationship, or anyone who cannot provide a suitable testing environment. CMU reserves the right to deny any proctor or assign proctors to students as deemed necessary by the CMU Online staff. More information on proctoring can be found on the Proctor FAQs at: http://global.cmich.edu/CMUOnline/proctoring/what-is-a-proctor.aspx.

CMU Online proctors exams at the Park Library and Global Campus offices at CMU North. For more information on using CMU Online as a proctor see: http://global.cmich.edu/cmuonline/proctoring/examappointment.aspx.

The student is responsible for any proctor’s fees. If one of the CMU centers is to be used as a proctor, please check with that center to determine available times and dates for testing. Should you have any questions, contact CMU Online at 800-688-4268, option 1.
Summary of Graduation Requirements

Each candidate for a baccalaureate degree shall:

1. Matriculate as a regular undergraduate student.
2. Fulfill the requirements prescribed on a degree.
3. Complete a major, or a major and a minor, or minors as indicated on the chosen degree and authorized in consultation with the departmental advisors.
4. File application for graduation with Undergraduate Academic Services early in the enrollment period or semester in which the student will complete 86 semester hours of credit, but not later than the beginning of the semester or session prior to the semester or session in which he or she plans to graduate.
5. Present 30 semester hours of credit earned at Central Michigan University. Fifteen of the 30 hours must be taken on campus. Ten of the last 30 semester hours of credit prior to graduation must be taken at this university in on-campus or off-campus courses. Correspondence credit, Advanced Placement credit, CLEP credit, and hours earned by Credit by Examination may not be applied toward any of these requirements.
6. Fulfill the General Education Requirements including University Program and Competency Requirements. Students may not take more than two courses or seven hours for CR/NC in the University Program. Students must earn a minimum cumulative grade point average of 2.00 in University Program courses in order to graduate.
7. Present a cumulative point average of 2.00 (C) or higher and a point average of 2.00 (C) or higher in major(s) and minor(s).
8. Present at least 40 semester hours in courses numbered 300 or above.
9. Present a minimum of 124 semester credit hours which may include a maximum of six hours RLA and/or PED activities. Sixty semester credit hours must be earned at an accredited four-year degree-granting institution or from a foreign university or college approved by the government or the official regulating agency of the country in which the university or college is located. None of these sixty hours may include physical education activity courses. The Office of Undergraduate Academic Services makes the decision regarding the acceptability of transfer credits according to the Transfer Credit Policy (See index). Appeals of the decisions of the Office of Undergraduate Academic Services may be filed with the Board of Appeals.

Candidates for a teaching certificate must file an application to a Teacher Education Program. Refer to Teacher Certification section for details.

Bulletin Used to Determine Graduation Requirements

Graduation requirements for a baccalaureate degree are based on the regulations and requirements printed in the Central Michigan University Bulletin in effect at the time of a student’s initial registration at a regionally accredited two- or four-year college or university or from a foreign university or college approved by the government or the official regulating agency of the country in which the college or university is located. A Bulletin published after initial registration may be chosen by the student when it is to his or her advantage. The time limitation on this provision is that no student may graduate under the requirements of a Bulletin published more than seven calendar years prior to the date of graduation.

The University Bulletin covers a 12-month period, July 1 through June 30. Courses, majors, minors, programs, and degrees in this catalog are subject to change without notice and may not be available in the future.

Residence Credit

Candidates for a bachelor’s degree must earn at least 30 semester hours of credit at this institution. Of these 30 hours, a minimum of 15 semester hours must be earned on campus. The remaining 15 hours may be taken in off-campus courses.

At least 10 of the last 30 semester hours of credit prior to graduation must be earned from this institution in on-campus or off-campus courses.

Candidates for a short course certificate must earn at least one-fourth of the credits required on the program at this university.

Candidates who already hold a bachelor’s degree and are seeking a provisional certificate must earn at least 15 semester hours of credit at this institution.

Correspondence course credits, CLEP credit, and hours earned by Credit by Examination may not be applied to meet any of the hours required in residence.

Distance Learning Courses

Courses in distance learning format (e.g. web-based courses and other non-face-to-face formats for delivering instruction) may be used to complete degree requirements unless otherwise specifically excluded. CMU courses and programs approved for distance learning delivery (as well as restrictions) are given in the descriptions of courses, majors, minors and degrees in this Bulletin.

Application for Graduation

Degrees are not awarded automatically upon completion of scholastic requirements. It is recommended undergraduate students file an application for graduation in the office of Undergraduate Academic Services, Warriner Hall 123 or the Student Services Court, during the semester in which 86 semester hours of credit are completed.

Applications are processed in the order they are received for each graduation. Submission should be based on the following timeline: September 15 for May graduation, January 15 for August graduation, and April 15 for December graduation.

There is no application fee. For additional information call 989-774-3504.
Requirements for Graduation

Conferring of Degrees
Candidates completing requirements for a degree in December or May will participate in their respective commencement ceremonies. Candidates completing requirements for a degree in August will be invited to participate in the December commencement ceremony. Diplomas will be mailed to all students on the graduation list who satisfactorily complete all graduation requirements.

Two Degrees
A student may apply for a second baccalaureate degree from Central Michigan University if the degrees are different and the pertaining criteria are met.

1. Satisfy all requirements for each of the two degrees, including graduation and degree requirements.
2. Present a minimum of 154 semester hours of acceptable credit.
3. Present a minimum of 60 semester hours from Central Michigan University, of which at least 30 hours must have been earned on campus.

To earn a second baccalaureate degree from Central Michigan University after having earned the first degree, a student must:

1. Satisfy all requirements for the second degree, including graduation and degree requirements.
2. Present a minimum of 30 semester hours of credit from Central Michigan University beyond those required for the first degree. The additional hours need not be taken after completion of requirements for the first degree.
3. Present a minimum of 60 semester hours from Central Michigan University, of which at least 30 hours must have been earned on campus.

To earn a second baccalaureate degree after earning the first degree at another regionally accredited, four-year, degree-granting institution or from a foreign university or college approved by the government or the official regulating agency of the country in which the university or college is located, a student must:

1. Satisfy all requirements for the second degree, including graduation and degree requirements.
2. Present a minimum of 30 semester hours of additional credit from Central Michigan University, of which at least 15 hours must have been earned on campus.

Degree Program for Pre-professional Students
A degree program for students on a combined pre-professional program at Central Michigan University and an accredited professional school has been approved as follows:

A student who has pursued a pre-professional course at Central Michigan University for a period of three years, and completed a minimum of 94 semester hours of credit prior to entering a professional school, and completed a B.A. or B.S. degree, with a major and minor as authorized, will be allowed to graduate from Central Michigan University by submitting one year of satisfactory work consisting of not less than 30 semester hours from a professional school accredited by the North Central Association or by the official accrediting agency for the professional school.

Outstanding Scholarship Recognition
The university recognizes the importance of high scholarship and seeks to stimulate and encourage students in high achievement.

Semester Recognition
The Dean’s List is published by the Office of Student Affairs, which names students who have achieved a high scholastic standing for a given semester. Students’ academic standings are provided by the Office of the Registrar. The Associate Vice President for Student Affairs recognizes this achievement by sending a congratulatory letter and posting the list online: https://www.cmich.edu/ess/studentaffairs/Pages/Deans_List.aspx.

To qualify for this recognition, a student must have earned a grade point average of 3.50 or higher while completing 12 or more letter-graded hours of CMU credit during a given semester. Those students achieving a 4.00 semester grade point average are named to the President’s List.

Graduation with Honors
In order to be graduated with honors a student must have, at the beginning of his or her last required semester, a total cumulative point average at Central Michigan University as indicated in the following table and must at that time have completed 45 hours of residence of which 33 hours must be letter-graded credit.

Point Average
- 3.90-4.00 Summa Cum Laude
- 3.75-3.89 Magna Cum Laude
- 3.50-3.74 Cum Laude

Request Process for Adjustment in Graduation with Honors
A student who has attained, at the end of his/her final semester prior to graduation, 45 hours of residence of which 33 hours are letter-graded credit and has attained a GPA that now qualifies him/her for honors or a higher honors classification may request this new honors classification. The student must complete a Request for a Change in Graduation Honors with Replacement Diploma form and submit it to Undergraduate Academic Services.

This request must be made no later than the Friday prior to the next graduation date (May, August, December).

Honors for Recomputations
Students who have had a recomputation of grade point average must meet the following criteria to be eligible for graduation with honors:

At the beginning of his/her final semester must have completed 45 hours of residence, of which 33 hours are letter-graded, and a cumulative point average as indicated in the Graduation with Honors table. Only hours completed after the recomputation are eligible for this requirement.

Undergraduate Certificates
A credit-bearing Undergraduate Certificate is awarded in recognition of a prescribed pattern of courses and/or experiences when taken together to produce an emphasis that gives a student a competence which is noted on the transcript.

An undergraduate certificate program may be available to degree-seeking or non-degree-seeking students. Undergraduate certificates are able to stand alone, or be part of another curriculum. Some credit-bearing certificate programs are restricted to degree-seeking students only (see the index under “Undergraduate Certificates” for more information).

Undergraduate Certificates are only noted on the transcripts, no additional form of recognition will be distributed. Students do not participate in commencement ceremonies.
Introduction

Students seeking to enter the Teacher Education program at Central Michigan University are screened using multiple criteria related to teacher excellence and the CLEAR model for teacher education. The selection criteria assess characteristics appropriate for students pursuing a professional teaching practice that is Content–or knowledge–driven, LEArner–centered and Reflective/Relevant to the multiple roles and contexts of the professional educator. Once a student is admitted, cognitive and affective skills are both developed and monitored throughout the teacher education experience, which stresses faculty mentoring of all prospective teachers.

Excellent teachers demonstrate an interest in students, an ability to relate to and communicate with diverse students in varied ways, as well as the ability to motivate and facilitate learning. Teacher candidates at CMU must be learner-centered and able to communicate both in writing and in face-to-face interactions with spontaneity and clarity. In addition, students must demonstrate the professional dispositions appropriate to the field of teaching in order to be recommended for certification. Such dispositions include values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and all members of the learning community and affect student learning, motivation, and development as well as the educator’s own professional growth and development. Only qualified candidates will be recommended for certification. It is important to note any legal charge or conviction may impede a student’s ability to progress through or be admitted to the teacher education program.

The Three Cycles of Candidacy

There are three cycles for teacher education candidates to complete in order to fulfill the requirements leading to teacher certification. Students must follow the requirements located on the Teacher Education Road Map (www.ehs.cmich.edu/css) and the requirements of the Michigan Department of Education in effect at the time of admission to the teacher education program.

Cycle I: Admission Candidacy

Each student who expects to earn either an Elementary Provisional Certificate or a Secondary Provisional Certificate must submit an application for admission to the teacher education program. Application forms and related information can be found on the Center for Student Services website at www.ehs.cmich.edu/css. Admission to teacher education occurs twice a year, once in September and once in February, and is based upon the student’s completion of all admission requirements.

Students must be admitted to the teacher education program before being eligible to enroll in professional education courses that indicate “admission to teacher education” as a prerequisite. Admission to the program is valid for five years from the date of admission to teacher education. Changes mandated by the Michigan Department of Education may become effective at any time in a student’s education program.

Cycle II: Continuing Candidacy

This point in the teacher education program has been established as a method to verify candidates’ ongoing growth and development in the teacher education program. All requirements must be fulfilled to continue in the teacher education program and be eligible to move to their student teaching experiences. Cycle II includes, but is not limited to items such as completion of a specified pre-student teaching field experience, departmental approval of all majors and minors and successful completion of all professional education courses. For specific requirements, consult the EHS Teacher Education Road Map located at (www.ehs.cmich.edu/css).

Cycle III: Exit Candidacy

This point in the teacher education program is intended as a verification of eligibility related to graduation and certification. For specific requirements and details about Cycle III, consult the College of Education and Human Services, Center for Student Services web site at www.ehs.cmich.edu/css.

Conflict Resolution and Appeal Procedure

1. A student who has a complaint regarding teacher certification decisions should make known his or her complaint as soon as possible, but in no case later than thirty days after the end of the semester. Any exception to the time limitation shall be for unusual and most compelling reasons. At each step of the process, the student will be given the opportunity to present relevant information, and the reasons for the decision will be explained to the student.

2. A student who feels that arbitrary and/or capricious decisions have been made in evaluating admission, or continuing requirements for the teacher education program, or in the recommendation for certification, should meet with the Assistant Director of Professional Education.

3. If the student is still not satisfied, he or she may request in writing a consultation with the Director of Professional Education. In the absence of the Director of Professional Education, the student’s request in writing should be sent to the Dean of the College of Education and Human Services. In such cases, the Dean shall act in place of the Director.

4. If the student is not satisfied with the decision of the Director of Professional Education, the student may submit an appeal in writing to the Professional Education Selection, Admission and Retention Committee. The Professional Education Selection, Admission and Retention Committee has the authority to override decisions made by the Director of Professional Education regarding admission or continuing requirements for the teacher education program or in the recommendation for certification. Appeal decisions made by the Professional Education Selection, Admission and Retention Committee are final.

Teacher Certification

Postbaccalaureate Students

A postbaccalaureate student is defined as a student with a non-teaching bachelor’s degree from a four-year regionally accredited institution who is seeking teacher certification, a student with a teaching degree who is seeking teacher certification and/or endorsement in an additional area, or a student with a teaching degree who is seeking provisional or professional certification and/or endorsement in an additional area.
Provisional Teacher Certification for non-degree seeking Postbaccalaureate Students

1. Postbaccalaureate students must follow the "Standards Leading to Teacher Certification" as published in the Bulletin and meet Michigan Department of Education requirements.
2. Postbaccalaureate students must have majors and/or minors signed by a department advisor in the department offering the major or minor. The request for the signed major/minor will be initiated by the staff in the EHS Center for Student Services. Certification will be recommended for those teaching areas in which CMU presently offers a major or minor. Course substitutions may be approved only by the department advisor.
3. Postbaccalaureate students must complete all Professional Education courses and other degree/certification requirements for either elementary or secondary students as published in the Bulletin.
4. The Teacher Education and Professional Development Department (TEPD) will submit a list of the names of all students applying for student teaching the following semester to each student's major and minor department for approval or denial.
5. The EHS Center for Student Services will audit the BSed degree of all students to certify that candidates have met all the requirements before confirming them for certification.

Validity of Provisional Certificate

A current Elementary Provisional Certificate is valid for teaching all subjects in grades kindergarten through five, and major and minor fields in grades six through eight (upon completion of the required subject area tests) as specified on the certificate and kindergarten through eight in a self-contained classroom. It is valid for six years and may be renewed for three years, provided the applicant presents six semester hours of credit in a planned program when earned after the issuance of the initial certificate and within three years of the application date of the first renewal. A second three-year renewal may be granted provided the applicant presents six semester hours of credit in a planned program as approved by the university when earned after the issuance of the first provisional renewal and within three years of the second renewal date.

A current Secondary Provisional Certificate is valid in subject matter fields in grades six through twelve in which the applicant has completed a major(s) or minor(s) as specified on the certificate. It is valid for six years and may be renewed for three years, provided the applicant presents six semester hours of credit in a planned program when earned after the issuance of the initial certificate and within three years of the application date of the first renewal. A second three-year renewal may be granted provided the applicant presents six semester hours of credit in a planned program as approved by the university when earned after the issuance of the first provisional renewal and within three years of the second renewal date.

Requirements for Professional Education Certification

Professional Education Certificate: The Elementary or Secondary Professional Education Certificate may be issued to a candidate who has met the following requirements:
1. Has submitted the appropriate application to www.michigan.gov/moecs.
2. Has taught successfully for three years, according to the validity of his or her provisional certificate.
3. Has presented evidence that he or she has completed six semester hours in a planned course of study beyond the issuance date of the most recent provisional renewal and within five years of application date of the professional certificate.
4. Elementary applicants for the Professional Education Certificate must have completed six semester credit hours of reading methods, and secondary applicants must have completed three semester credit hours of reading methods; and three semester credit hours in the diagnosis and remediation of reading disabilities and differentiated instruction which includes a field experience. Beginning July 1, 2009, all teachers progressing from a Provisional to the Professional Education Certificate must have completed 3 semester credit hours of reading diagnostic and remediation coursework in accordance with Michigan Revised School Code MCL 380.1531(4). At this time, Central Michigan University has established EDU 603 (Elementary Assessment in Reading) and EDU 606 (Secondary Assessment in Reading) to meet this requirement.

Procedures for Professional Education Certification

The Candidate Shall:
1. Submit a planned program of study beyond the bachelor’s degree to www.michigan.gov/moecs.
   A. If the candidate has been admitted to a master’s degree program, he/she may submit a copy of the Authorization of Graduate Degree Program, signed by the advisor, with the application as evidence that the student is pursuing a “planned course of study beyond the bachelor’s degree.”
   B. A candidate who is not pursuing a graduate degree or who has initially been granted non-degree status in graduate school, or who is pursuing undergraduate study must obtain approval for a “planned course of study” beyond the bachelor’s degree from an advisor in the appropriate department by contacting the EHS Center for Student Services. The student is expected to have a signed program on file before registering for his or her first coursework at Central Michigan University.
2. Apply for a Professional Certificate at www.michigan.gov/moecs when the last of the requirements have been met.
3. Return a copy of the provisional certificate.

Professional Education Certificate Renewal

1. Apply for a professional certificate renewal at www.michigan.gov/moecs.
2. A Professional Education Certificate is valid for 5 years and shall be renewed at the end of the 5-year period for an additional 5 years upon the applicant’s completion of 6 semester hours of academic credit from an approved teacher preparation institution, or the submission of evidence of the equivalent in continuing education units completed through professional development programs or professional activities defined and approved by the State Board. Submission is made to the Michigan Department of Education.
3. For persons who do not complete the requirements of subrule (1) of this rule, the certificate expires on June 30 of the year of the certificate’s expiration.
4. To reinstate an expired Professional Education Certificate, a person shall apply to www.michigan.gov/moecs for a reinstatement and shall present evidence of the completion of the 6 semester hours, or their equivalent, in approved professional development programs or approved professional activities specified in subrule (1) of this rule.
5. Credit completed out of state shall be in an approved teacher education institution and approved by the Michigan State Board of Education prior to enrolling in a course.

Certificate Fee

Public Act 339 of 1988 requires the collection of a certification fee paid when billed by the Michigan Department of Education.
The Honors Program

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www.cmich.edu/honors

Since 1961 the Honors Program has challenged CMU’s brightest, most talented, highly motivated, and creative students both in and outside of the classroom while pursuing an enriched program of study.

The Honors Program Mission:

Providing high academic ability students with unique educational opportunities and experiences, the CMU Honors Program challenges students to aim higher and to achieve more academically, personally, and professionally for the greater good of our disciplines, our society, and our world.

Core Values

The primary values that guide the implementation of the Honors Program mission include:

- Critical thought, scholarly inquiry, and creative expression;
- Respect and appreciation for diverse peoples and ideas in a global society;
- High standards for integrity and personal aspirations;
- Active citizenship and service for the greater good Benefits of Honors Study.

In addition to a unique learning environment, there are many tangible benefits of Honors study:

- Honors Faculty and Alumni mentoring;
- Academic Planning Document that helps map out all courses you will need each semester to graduate from Central Michigan University;
- Eligibility for Honors scholarships and awards including an International Study Award for all advanced Honors students;
- Undergraduate research opportunities;
- Small class size, limited to 20 students in most Honors sections;
- Recognition of achievement through transcript designation “Graduated in the Honors Program” and commencement program notation;
- Eligibility to live in Larzelere Hall, the designated Honors residence hall and community;
- Individualized academic advising through the Honors Program Academic Advisors;
- Eligibility to enroll in graduate courses;
- Opportunity to participate in Honors registered student organizations;
- Participation in a variety of Honors sponsored social, cultural, and international activities;
- Priority registration.

Honors Study Options

Honors study is flexible in nature and can fit into any degree, major, or minor.

Several options exist through which students can earn Honors credits:

- Honors sections of departmental courses along with special topics Honors courses offered every semester.
- Special Honors faculty-led courses on Beaver Island, throughout the United States, and around the world each spring and summer terms.
- Honors Contracts which allow a student to take some CMU classes for Honors credit through an arrangement between the student and the instructor, with the approval of the Honors Director.
- An Honors Independent Study of a specific topic under the direction of a faculty member, allowing for more in-depth investigation, empirical research, or expanded coverage.
- A Senior Project, mentored by a faculty member, in which the student makes an original contribution in research, scholarship, or creative endeavor.

Admission and Completion of Honors Study

The University invites all high ability students to review the admission requirements and Honors application available on the Honors Program website listed above.

In order to remain active in the Honors Program and graduate in the Honors Program, students must maintain a cumulative grade point average of 3.25 and earn a grade of at least "B-" in all Honors courses, Honors Contracts, Honors Independent Study, or Senior Project taken for credit. Graduation from the Honors Program also requires completion of the protocol specified in the year of admission.

Honors Program Protocol Requirements

For students accepted to the CMU Honors Program on or after Fall, 2014. Honors students must complete each of the following requirements to graduate with Honors Program distinction. Completion of the Honors Protocol will result in "Honors Program Graduate" being noted on the student’s permanent transcript. Transfer students and CMU students admitted to Honors after the first year should follow Honors Program Track II requirements (next page).

1. Completion of HON 100 (3), Introduction to Honors, during one’s first semester at CMU.
2. Completion of an Honors First Year Seminar, (3 credits), during one’s first semester at CMU. Honors first year seminars are also University Program courses that satisfy the general education “writing intensive” requirement. Options include: HON 201, HON 202, HON 203, HON 204, HON 205, HON 206, HON 207, or HON 208.
3. Completion of ENG 201H (3), English Composition, during one’s second (spring semester at CMU).
4. Complete at least an additional 15 credits of Honors coursework before graduation from CMU (In addition to HON 499). Honors coursework is defined as HON courses, H-designated courses, and Honors Contracts successfully completed. Honors Contracts may be used to fulfill a maximum of 6 of these 15 credits, with the approval of the Honors Director.
5. To enhance exposure to cultural diversity (the study of a cultural aspect substantially different than one’s own either in or outside the United States for college credit), complete a minimum of 6 credit hours of the following at the college level:
   - Study Abroad courses for college credit
   - HON 309: Global Citizenship

HON 309: Global Citizenship
3.2.1. Track II CMU Honors Program Requirements:

- Foreign language courses
- American Sign Language courses (ASL 101 or above)
- Honors Cultural Diversity courses approved by the Honors Council

6. Complete 120 service hours while a student at CMU.

7. Develop and get approval for an Honors Senior Project Proposal. The senior project involves research or a creative endeavor conducted with a faculty advisor from the student's major or minor discipline. Students are encouraged to begin planning for the senior project during their junior or third year of study at CMU. Proposals must be approved by the senior project advisor and the Honors director. The Senior Project Proposal is due two full semesters before the student plans to graduate (excluding summer semesters).

8. Complete an Honors Senior Project and simultaneously enroll in HON 499* (3 credits). The completed senior project and all other Protocol requirements are due at least one full semester before the student plans to graduate. Students are required to present work from their project in a public venue which may include professional conferences, public exhibitions, or the CMU Student Research and Creative Endeavors Exhibition. Submission of work for publication or juried exhibition is also encouraged.

*HON 499 can be taken as a writing intensive course if the proposal outlines it as such.

Notes:
- At least 9 credits total of Honors coursework on the Honors Protocol must be taken at the 300 level or above (in addition to HON 499).
- Students must maintain a cumulative CMU grade point average of 3.25 to remain active in and graduate from the Honors Program.
- Students are required to earn a grade of at least "B-" in all H, HON, or Honors Contract courses.
- An Honors course may not be counted in more than one area of the Protocol. For example, if a student takes ASL 101H the student must decide if he/she would like to count it as an Honors course or a cultural diversity course.

CMU Honors Program Requirements: Track II

- Honors Program Track II admission is reserved for current CMU and transfer students who have a 3.5 or higher cumulative college GPA.
- Priority consideration will be given to applications received by March 15 of the spring semester immediately preceding the desired fall admission term.
- Track II applicants must complete each of the following requirements if they desire to graduate with Honors Program distinction. Completion of these requirements will result in "Honors Program Graduate" being noted on the student's permanent transcript.

1. Completion of HON 300, Introduction to Honors II (1 credit), taken during fall semester of student's first year in the Honors Program.
2. Complete an HON-designator Honors Seminar Course (3 credits) during first year in the Honors Program.
3. Complete at least 9 additional credits of Honors coursework before graduation from CMU (in addition to HON 499). Honors coursework is defined as HON courses, H-designated courses, and Honors Contracts successfully completed. Honors Contracts may be used to fulfill a maximum of 6 of these 9 credits, with the approval of the Honors Director.

4. To enhance exposure to cultural diversity (the study of a cultural aspect substantially different than one's own either in or outside the United States for college credit), complete a minimum of 3 credit hours of the following at the college level:
   - Study Abroad courses for college credit
   - HON 309, Honors Global Citizenship
   - Foreign language courses
   - American Sign Language courses (ASL 101 or above)
   - Honors Cultural Diversity courses approved by the Honors Council

5. Complete 90 service hours during one's time at CMU.

6. Develop and get approval for an Honors Senior Project Proposal. The senior project involves research or a creative endeavor conducted with a faculty advisor from the student's major or minor discipline. Proposals must be approved by the senior project advisor and the Honors director. The Senior Project Proposal is generally due two full semesters before the student plans to graduate.

7. Complete an Honors Senior Project and simultaneously enroll in HON 499* (3 credits). Students are required to present work from their project in a public venue which may include professional conferences, public exhibitions, or the CMU Student Research and Creative Endeavors Exhibition. Submission of work for publication or juried exhibition are also encouraged.

*HON 499 can be taken as a writing intensive course if the proposal outlines it as such.

Notes:
- At least 6 credits total of Honors coursework on the Honors Protocol must be taken at the 300 level or above (in addition to HON 499).
- Students must maintain a cumulative CMU grade point average of 3.25 to remain active in and graduate from the Honors Program.
- Students are required to earn a grade of at least "B-" in all H, HON, or Honors Contract courses.
- An Honors course may not be counted in more than one area of the Protocol. For example, if a student takes ASL 101H the student must decide if he/she would like to count it as an Honors course or a cultural diversity course.

Honors Program Academic Honesty Statement

As a member of the Honors Program at Central Michigan University, you are participating in a community of scholarship based on the values of honesty, respect, fairness, and responsibility. You are expected to adhere to the CMU policies on academic integrity stipulated in the CMU Bulletin. In all of your academic work, you must adhere to the highest standards of integrity. You will not cheat, plagiarize, or receive or provide inappropriate assistance on any course activity for which a grade or credit is awarded. Examples of academic dishonesty include: cheating on examinations; plagiarism; fabrication/forgery/obstruction; multiple submissions; complicity (assisting or attempting to assist another person in any act of academic dishonesty); misconduct in research and creative endeavors; computer misuse; misuse of intellectual property; unethical and unprofessional behavior; disruption of learning; disruptive behavior during class; and disruption of university events. Membership in the Honors Program is based on academic performance and all forms of cheating call into question the validity of a student's grades. Participation in the CMU Honors Program is a privilege, and failure to adhere to standards of academic integrity may result in dismissal from the Honors Program.
Leader Advancement Scholarship (LAS) Protocol

Recipients of the Leader Advancement Scholarships follow a comprehensive four-year leadership development protocol. During the first two years, students will be enrolled in leadership-tailored classes and engaged in a variety of activities that will provide them with the foundations necessary to assume positions of responsibility during their last two years. The protocol consists of academic offerings (courses) and experiential opportunities.

Freshman Year. Courses will focus on human and social behavior, interpersonal and communication skills, and leadership development.

Leadership experiences will include involvement in a student organization, attendance at leadership lectures, and participation in a leadership seminar or workshop. Participants will also be active in a LAS committee and volunteer for community service.

Sophomore Year. Students will take courses in social sciences, ethics, interpersonal communication, and social and political issues.

Students will be active in a LAS committee, plan an activity or event in a leadership capacity, attend designated leadership activities, and serve as a mentor to a freshman LAS recipient. Experiences also will include being involved in two student organizations, holding a leadership position in one, and continuing with a community service project or activity.

Junior Year. Class time is reserved for concentrating on the student’s chosen major and minor programs. The student will be a member of at least one student organization, hold a leadership position on a university committee, serve on a university academic committee, and continue involvement in a community service project. The participant also will attend leadership activities and assume a committee position in the LAS.

Senior Year. While the student works to complete his or her major and minor coursework, leadership experiences will include ongoing community service, involvement in two student organizations with a leadership position in one, serving as a member of a university committee, chairing a LAS committee, attending leadership activities, and planning a leadership activity for a community or student organization. Ultimately, the student will have the opportunity to “shadow” a community leader or participate in an internship.
Student mentors are expected to attend both the FYE 301 class and their assigned FYE 101 class. Additionally, students are expected to make themselves available to meet with their FYE 101 instructor and students outside of class.

Student mentors receive extensive training and by the completion of this course, they are able to 1) Develop and lead activities that contribute to a positive classroom community in FYE 101; 2) Articulate a theory of college student development and apply it to first-year students; 3) Implement appropriate responses to first-year students who engage in problem behaviors that interfere with a successful transition to college (e.g. alcohol, drug use, depression, eating disorders, loneliness, etc.); 4) Introduce and model positive decision-making strategies to first-year students; 5) Demonstrate effective mentoring techniques such as active listening, coaching, advising, and providing feedback to first-year students; 6) Identify their own mentors and the role they played in the student’s personal, academic and professional development; 7) Collaborate with a university faculty member; 8) Define personal learning goals for their experience as FYE mentors and develop an action plan for achieving these goals; and 9) Demonstrate how the experience as FYE mentors supported their own personal development.

McNair Scholars Program

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Background. The McNair Scholars Program prepares undergraduate participants for doctoral study through involvement in research and other scholarly activities. McNair scholars are from disadvantaged backgrounds and demonstrate strong academic potential. Funded by the U.S. Department of Education and named after the late Dr. Ronald E. McNair, the goal of the program is to increase attainment of the Ph.D. by students from underrepresented segments of society.

Eligibility. Students are eligible to become McNair scholars if they are seriously interested in pursuing graduate study (specifically a Ph.D.), U.S. citizens or permanent residents, full-time students at CMU with a minimum GPA of 2.8, at the junior level (at least 56 completed credits when the program begins), and are low-income and first-generation college students and/or members of a population underrepresented in graduate education (typically African American, Native American or Hispanic).

Activities. New scholars (spring and summer) identify a faculty research mentor, develop a research proposal, investigate graduate programs of interest, prepare to take the Graduate Record Exam (GRE), conduct supervised research, write a research report, attend a graduate school training camp, and complete the Summer Research Institute (SRI). Continuing scholars (fall and spring) present their research at professional meetings and national conferences accompanied by their mentors or McNair staff, visit their top choice graduate school, apply for admission to graduate programs, and complete their bachelor’s degree.

Benefits. McNair scholars receive a $2400 stipend plus a living allowance during the summer. Scholars receive a travel allowance to attend undergraduate research conferences and/or professional meetings to present their research and are funded to visit potential graduate schools. They also receive GRE waivers and graduate admission fee waivers for most institutions to which they apply. Scholars participate in a research writing course and attend a GRE training class, which are also covered by the program.

To Apply. Applications are accepted throughout the year; however, a formal recruitment period occurs each fall. Feel free to stop by the office to learn more about the program and/or pick up an application.

Pre-Professional Studies

Pre-professional Studies are designed to assist students in understanding the requirements for applying to professional schools. Students are urged to contact an advisor as soon as possible to discuss a plan of action for selecting courses, to gather information regarding requirements for entrance in professional schools, and to determine an appropriate undergraduate major at Central Michigan University. Advisors are listed in the current Course Search & Registration (www.cmich.edu/Registrars), under Pre-Professional Advisors.

Special Programs and Studies

Pre-Professional Studies are NOT majors or minors at Central Michigan University. Students choose an undergraduate major to satisfy the policy requiring a signed major or a statement of an intent to major by the completion of 56 credit hours. Students should consult the chart of available majors (see Majors and Minors in the index).

Pre-Architecture

Advisors: Consult the current Course Search & Registration for a list of Pre-Professional Advisors.

Architects plan, design and inspect the construction of all types of buildings, including private homes, offices, hospitals, laboratories, theatres, libraries, museums, schools and factories. Some architects have private practices and work alone although most architects work as members of a team under the direction of a project manager or a more experienced architect. Their work requires using design, engineering, managerial and supervisory skills to produce structures that are aesthetically pleasing, functional and safe.

There are architectural schools in Michigan. Landscape architecture is also available. Applicants should transfer after completing a maximum of two years of professional coursework at CMU. Students should apply to the architectural school by January of the second year of studies. Accredited degree programs typically include: 1) a four-year, nonprofessional baccalaureate degree followed by a two-year, master of architecture degree; 2) a five-year bachelor of architecture degree; and 3) a six-year curriculum leading to a master of architecture degree.

No special examinations are generally required for admission to the architectural schools. The architectural schools review the quality and content of all previous academic education, personal statements of professional purpose and letters of recommendation. A number of architectural schools may require an architectural related essay and/or a portfolio of art and architectural related projects.

Typically, a student will transfer to an architectural school after a maximum of two years. Coursework must include extensive art/design classes, together with two courses in English Composition, a minimum of one course each in calculus and physics. Additional courses are to be selected from the areas of: humanities, natural sciences, social sciences and introductory computer science.

Typical First Semester Schedule:
ART 106 (3) or ART 115 (3); MTH 130 (4) or MTH 132 (4); ENG 101 (3) or COM 101 (3); Humanities electives (6)

Pre-Dentistry

Advisors: Consult the current Course Search & Registration for a list of Pre-Professional Advisors.

Most dental school have the following minimum requirements of one year each in: general chemistry, organic chemistry, biology, physics, and English. All of the above science classes must include a laboratory. Some schools recommend other courses. Further information about these requirements and other pertinent information concerning dental schools may be obtained from the advisor and from a book entitled ADEA Official Guide to Dental Schools. The choice of a major is not critical, but careful planning is needed if one is to move effectively towards being a successful dental school applicant.

First Semester:
BIO 110, CHM 131, ENG 101, MTH 107 or higher
Elective, see advisor (1-3)
Dental Admission Test (DAT): Dental school applicants must also score well on the Dental Admission Test. This test, required by most dental schools, is usually administered as a computerized exam offered year round. Students can register for the exam online. It is strongly suggested that students plan on taking this test in April, just prior to the beginning of the application process.

Application to Dental Schools: These materials should be obtained and prepared during the spring semester prior to the application process, which normally occurs during the summer. Most dental schools use the ADEA Associated American Dental School Application Service (AADSAS). This application service can be found online.

Pre-Law
Advisors: Consult the current Course Search & Registration for a list of Pre-Professional Advisors.

Students interested in the legal profession should consult with pre-law advisors early in their university career. Since pre-law draws on numerous academic disciplines, we encourage students to consult with several advisors. Many avenues of study can lead to law school.

Students should keep in mind the words of the Pre-Law Handbook published by the Association of American Law Schools: “The Association’s responsibility in matters of prelegal education cannot best be met by prescribing of certain courses for students planning later to study law. Such an endeavor is foreclosed by the wide range for choice of relevant pre-law preparation...”

The Association calls attention to the quality of undergraduate instruction which is fundamental to the later attainment of legal competence. That quality of education requires that pre-law students develop basic skills and insights. It thus involves education fostering:

- comprehension and expression of words;
- critical understanding of the human institutions and values with which the law deals;
- creative power in thinking.

Pre-Medicine and Osteopathy
Advisors: Consult the current Course Search & Registration for a list of Pre-Professional Advisors.

This course of study is designed for a student who believes that medicine might be his or her chosen field for life. Although no specified CMU major is required, a student should plan to earn an undergraduate degree from CMU and must select a degree program from those found elsewhere in this Bulletin and successfully complete all its requirements. The student should contact the CMU pre-medical advisor during the first semester of their freshman year to develop a program of study and to obtain information about medical schools.

Requirements: Most medical schools have the following minimum requirements of one year each in: biology (with laboratory), general chemistry (with laboratory), organic chemistry (with laboratory), physics (with laboratory), English, and behavioral science. Most require ninety semester hours of college credit, but a baccalaureate is strongly recommended, in order to apply. Some schools recommend other courses. Further information about these requirements and other pertinent information concerning medical schools may be obtained from the advisor and from a book entitled Medical School Admission Requirements (MSAR). The admission requirements for Osteopathic Schools can be obtained from a book entitled Osteopathic Medical College Information Book.

Recommended Course of Study: The following abbreviated schedule indicates some of the recommended courses for a student interested in medicine. Only the first year is indicated so that all students may begin without undue delay. No later than the second semester of the first year, students should consult with the pre-medical advisor concerning appropriate coursework.

First Semester
ENG 101 (3); BIO 110 (4); CHM 131 (4) or CHM 161 (5); MTH 130 (4); Elective, see advisor (1-3)

Second Semester
BIO 208 (3); CHM 132 (4) or CHM 211QR (4) [to follow CHM 161]; PSY 100; Elective, see advisor (1-3)

Medical College Admission Test (MCAT): This test, required by most medical and osteopathic schools, is usually administered as a computer based test on multiple dates throughout the year. Students can register for the exam online. It is strongly suggested that students plan on taking this test in April, just prior to the beginning of the application process. The new MCAT Student Manual will be useful in preparation for this test and it may be obtained from the Association of American Medical Colleges.

Application to Medical Schools: These materials should be obtained and prepared during the spring semester prior to the application process, which normally occurs during the summer. Most medical schools use the American Medical College Application Service (AMCAS), while osteopathic schools use the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS). These application services can be found online.

Pre-Occupational Therapy
Advisors: Consult the current Course Search & Registration for a list of Pre-Professional Advisors.

Students interested in pursuing a career in occupational therapy have a number of undergraduate majors they can select from at CMU that will complement a Master’s degree in Occupational Therapy. Students interested in OT should contact the OT advisor early in their first semester for guidance in selecting a major and identifying prerequisite coursework required for admission to a Master’s degree program at other institutions. CMU has articulation agreements with Grand Valley State University and Saginaw Valley State University. Contact the Pre-Occupational Therapy advisor for more information.

Typical courses to select from for the first semester:
ENG 101 (3); BIO 110 (4); SOC 100 (3); PSY 100 (3); COM 101 (3); Math Competency Course (3); University Program course

Pre-Optometry
Advisors: Consult the current Course Search & Registration for a list of Pre-Professional Advisors.

Optometry schools require at least two years of pre-optometric study. Most students accepted by an optometry school have completed three undergraduate years and a large percentage has earned baccalaureates. Minimum requirements common to all optometry schools are one-half to one year of biology or zoology and one year each of chemistry, physics, English, and mathematics. The American Optometric Association recommends that the science courses include the laboratory and that they be the courses designed for science majors and minors. Most optometry schools require that the student complete differential calculus. All optometry schools have additional requirements. It is, therefore, important that the prospective optometry student consult the pre-optometry advisor prior to registering for courses.

First Semester:
BIO 110 (4); CHM 131 (4); ENG 101 (3); MTH 130 (4); Elective (3), see advisor

Optometry Admission Test (OAT): This test, required by all optometry schools, is usually administered as a computerized exam offered year round. Student can register for the exam online and should plan on preparing for the exam 3 months before the scheduled test date.

Application to Optometry Schools: These materials should be obtained and prepared during the spring semester prior to the application process, which normally occurs during the summer. Most optometry schools use the Optometry Centralized Application Service (OptomCAS). This application service can be found online.
Pre-Pharmacy

Advisors: Consult the current Course Search & Registration for a list of Pre-Professional Advisors.

The practice of pharmacy in the United States requires the Doctor of Pharmacy (Pharm.D.) Degree plus an internship. This degree requires six years of post high school study. In Michigan, accredited pharmacy programs are offered at Ferris State University, University of Michigan and Wayne State University. Internships can be completed at a variety of sites and are typically arranged before graduation. Each program has a different set of admission requirements. The two year pre-pharmacy program can be completed at CMU. The program is completed at a regular college of pharmacy. Please consult the Pre-Pharmacy advisor for complete admission requirements.

The following abbreviated schedule indicates some of the recommended courses for a student interested in pharmacy. Only the first semester is indicated so that all students may begin without undue delay. No later than the second semester of the first year, students should consult with the pre-pharmacy advisor concerning appropriate coursework.

First Semester

ENG 101 (3); CHM 131 (4) OR CHM 161 (5); BIO 110 (4); MTH 130 OR 132 (4); Elective, see advisor (2)

Pharmacy College Admission Test (PCAT): This test, required by all pharmacy schools, is usually administered as a computerized exam offered in July, September and January. Student can register for the exam online and should plan on preparing for the exam 3 months before the scheduled test date.

Application to Pharmacy Schools: These materials should be obtained and prepared during the spring semester prior to the application process, which normally occurs during the summer. Most pharmacy schools use the Pharmacy College Application Service (PharmCAS). This application service can be found online.

Pre-Physical Therapy

Advisors: Consult the current Course Search & Registration for a list of Pre-Professional Advisors.

School of Rehabilitation and Medical Science: Central Michigan University offers a Doctor of Physical Therapy (DPT). For a student to become eligible to apply for entry into the graduate DPT program, they must complete both: 1) the requirements for their undergraduate major, and 2) a series of prerequisite courses (listed below).

The student has the option to choose from a wide variety of undergraduate majors to prepare them for the physical therapy program. Suggested undergraduate majors include Exercise Science with an option in Kinesiology, Health Fitness or Clinical Exercise Science, Biology, Neuroscience, Psychology, Child Development, Therapeutic Recreation, Athletic Training and Health Administration. Students should consult with an advisor to identify the most appropriate undergraduate major for their interests, skills and career goals. Students must be assigned an advisor from their chosen undergraduate major to identify the courses that they need to take to complete the requirements of their undergraduate major.

Students also must complete a series of required prerequisite courses to prepare them for the graduate curriculum.

Prerequisite Courses for Physical Therapy

Biology/Health Science. 14 credits are required, including courses in Anatomy (recommended CMU courses include HSC 214 OR BIO 337), Physiology (recommended CMU courses include HSC 215 OR BIO 392), and Exercise Physiology (recommended CMU course is HSC 308). Laboratories required for both Anatomy and Physiology.

Chemistry. 8 credits are required. Recommended sequences at CMU include CHM 131 and 132 OR 120, 127 and 342. Laboratory experience required for all courses.

Psychology. 9 credits are required, including a course in developmental psychology. A course in rehabilitation or health psychology is strongly recommended.

Physics. 8-10 credits are required, including a laboratory experience. Suggested course sequences at CMU include either PHY 130QR, 170, 131, 171 or PHY 145QR, 146, 175, 176.

Mathematics. A background in algebra and trigonometry sufficient for success in chosen physics sequences. MTH 109 is a recommended course prior to PHY 130QR at CMU.

Statistics. An introductory course in statistics is required. Recommended CMU courses include BIO 500, PSY 211QR, HSC 544, or STA 282QR or 382QR.

To gain admittance into the professional portion of the program, students need to complete a secondary application. Applications will be considered only if students have completed (or are in the process of completing) their major requirements, university program requirements and physical therapy prerequisite courses. Admission to the program is competitive. Students should contact their advisor for specific information on this process.

For a complete description of the application process and the Graduate Program in Physical Therapy, please consult the current Central Michigan University College of Graduate Studies Bulletin.

Note for Transfer Students: The recommended prerequisite courses have been chosen to provide students with the appropriate background to be successful in the professional curriculum. For students transferring from other institutions, the specific courses taken may vary and the equivalency of the content in those courses to meet the prerequisite requirements will be determined by the faculty of the physical therapy program. Under special circumstances, students may be admitted who have not completed the exact series of recommended prerequisite courses but can demonstrate that they possess an academic background that provides them an equivalent preparation. In those cases, the faculty of the program determines whether a student has received an equivalent preparation.

Accreditation: The Graduate Program in Physical Therapy at Central Michigan University is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA).

Pre-Physician Assistant

Advisors: Consult the current Course Search & Registration for a list of Pre-Professional Advisors.

As health professionals who are licensed to practice medicine with physician supervision, physician assistants provide many services that have been traditionally performed by physicians. Physician assistants take patient histories, conduct physical examinations, diagnose and treat illness, order and interpret laboratory tests, perform minor surgery and, in most states, prescribe medication.

Physician assistants work in a variety of medical settings including emergency departments, private practice physicians, health care clinics, mental health facilities, and hospitals. Because physician assistants can deliver care in such diverse settings and are cost-effective members of the traditional health care team, employment opportunities are abundant for graduates of this master’s degree program.

The Program: The CMU physician assistant program is a graduate program and was established to provide physician assistants for central and northern Michigan. However, graduates of the program are not required to work in Michigan.

Students will complete the curriculum in 27 months. The first 15 months are spent primarily on campus in classroom and laboratory instruction. The remaining 12 months consist of clinical rotations in various medical specialties.

Most rotations are conducted in central and northern Michigan.
Prerequisite Courses
At CMU prerequisites are met by:
Anatomy: BIO 337 or HSC 214
Physiology: BIO 392 or HSC 215
Microbiology: BIO 208 or BIO 580
Pathophysiology: HSC 411

Chemistry Courses:
General Chemistry - CHM 120 and 127, or CHM 131 and 132
Organic Chemistry - CHM 342, or 345, 346 and 349
Biochemistry - CHM 421 or 425

Psychology Courses:
Introductory Psychology - PSY 100
Developmental Psychology - PSY 220

Statistics Courses:
Biostatistics - HSC 544, BIO 500, STA 282QR or PSY 211QR

Like all programs that have competitive admissions, students meeting the admission criteria are not guaranteed admission to the program.

Admission Criteria for students entering in 2016:
Please reference the PA Admission website http://chp.cmich.edu/pa-admissions to determine application requirements.

To be eligible for admission, a prospective student must:
• complete a minimum of 500 direct patient care hours by December 31, 2015, of which, 100 hours must be “paid” patient care work
• complete or be in the final stages of completing an undergraduate degree
• complete all prerequisites by December 31, 2015
• obtain a minimum of 3.0 (a grade of B) in each prerequisite courses
• obtain an overall, undergraduate cumulative GPA of at least 3.25
• submit official GRE scores (and official TOEFL scores, if applicable)
• submit all application requirements

Accreditation: At its March 2014 meeting, the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) placed the Central Michigan University Physician Assistant program on Accreditation - Probation until its focused visit review in March 2016. Probation is a temporary status of accreditation limited to two years and conferred when a program does not meet the Standards and when the capability of a program to provide an acceptable educational experience for its students is threatened. Once placed on probation, programs that still fail to comply with accreditation requirements in a timely manner, as specified by the ARC-PA, may be scheduled for a focused site visit and/or risk having their accreditation withdrawn. Specific questions regarding the program and its plans should be directed to the program director (gardo1jj@cmich.edu) and/or the appropriate institutional official(s).

The Physician Assistant program is proud of the contributions our alumni provide to society and we remain strongly committed to maintaining the highest standards of our profession. We are fully dedicated to exceeding all expectations for optimal performance as determined by our accreditation commission (ARC-PA) and have made significant improvements towards meeting our accreditors’ concerns. Our graduates continue to outperform the majority of programs nationally on the PANCE examination. Our focused ARC-PA revisit is slated for December 2015. Please be advised that we are very confident we will be reinstated with full accreditation in late March 2016. In the very unlikely scenario that continuing accreditation is not granted, applicants accepted into the program following the fall 2015 interview process would not be allowed to start in the program in the spring of 2016. Class enrollment hold fees would be returned. Please periodically visit our accreditation webpage at http://cmich.ly/arcpa for the latest updates on how the program is progressing.

Pre-Veterinary Medicine
Advisors: Consult the current Course Search & Registration for a list of Pre-Professional Advisors.

For information, go to https://www.cmich.edu/colleges/cst/preprofessional/Pages/pre-veterinary_medicine.aspx.

In addition to private practice, numerous career paths are available to veterinarians. These include public health, pharmaceutical and biomedical research, zoo and aquarium medicine, wildlife medicine and rehabilitation, teaching, and military service. Veterinarians are employed by state and federal government agencies, private industry, universities and teaching hospitals, and the Army Veterinary Corps.

Admission to a professional program in veterinary medicine is highly competitive. Two to four years of college courses are required to complete the admission requirements for admission to veterinary school. The College of Veterinary Medicine at Michigan State University will accept applications for admission after completion of both the CMU program and either GRE or MCAT examination.

Before or during the first semester of college, students should make an appointment with a Pre-Veterinary advisor at CMU to outline a program of study that will satisfy the course requirements for application to the College of Veterinary Medicine at MSU.

Courses required by MSU are as follows:
• BIO 110 (4)
• CHM 131 (4) and CHM 132 (4) or CHM 161 (5), CHM 345 (3), CHM 346 (3), CHM 349 (2), CHM 425 (3)
• PHY 130QR (4), PHY 131 (4), PHY 170 (1), PHY 171 (1)
• FNS 370 (3)
• MTH 109 (3), MTH 107(3) or MTH 130 (4)*
• ENG 101 (3), ENG 201 (3). Students who are excused from ENG 101 should take ENG 201 and three hours of literature.
• Arts and Humanities: Two courses with a minimum of three semester credits each that must include two or more of the following subject areas: history, literature, art history or appreciation, music history or appreciation, theatre history or appreciation, philosophy, and religion.
• Social Science: Two courses with a minimum of three semester credits each that must include two or more of the following subject areas: cultural anthropology, economics, human geography, political science, psychology, and sociology. One of these courses must be at the 200 level, and one course must be at the 300 level or higher.

*Higher level math courses may substitute.
Your Degree Plan

The undergraduate program of study at CMU consists of at least 124 credit hours of academic work completed according to a planned program. The degree plan you choose to follow will be largely influenced by your choice of a major and your decision to earn or not to earn teacher certification. As you complete your degree requirements you will need to read carefully with your advisor the sections in this Bulletin entitled:

- Degree Plan, page 94
- General Education Requirements:
  - The Competencies, page 113
  - University Program, page 117
- Requirements for Graduation, page 83
- Undergraduate Majors and Minors, page 122

General Education Requirements

You should include in your beginning studies the General Education Requirements which consist of the Competencies and the University Program.

If you are pursuing teacher certification, you will also need to complete Teacher Certification Requirements. You must immediately and carefully read Standards Leading to Teacher Certification (page 85). Students interested in teaching in the elementary and secondary grades may contact the College of Education and Human Service Center for Student Services for pre-admission advising.

Other Degree Requirements

This coursework will provide a plan of study appropriate to a particular degree outside of the major and minor field(s).

Specialized Studies (Major and Minor)

Majors and minor(s) (if any) have their own requirements. Each is detailed under the department that offers it. A list of all majors and minors offered and the degrees to which they are applicable can be located on page 122.

Professional Studies Requirements and Electives

Several degrees contain a block of courses to satisfy professional studies requirements. An example may be found under the requirements for the B.S. in Education degree. Read these sections carefully and note their applicability to the degree plan which you have chosen.

Several degrees also contain electives which are blocks of credit hours that are completely unspecified. Students pursuing those degrees may elect to take courses in any department of the university to complete the minimum number of credit hours required for graduation.
Degree Requirements

This degree indicates significant exploration and achievement in the liberal arts, including studies in a foreign language, humanities, natural sciences, and social sciences.

**General Education Requirements (30-42 hours)**

See General Education Requirements on pages 113-121.

**Area Requirements (18 hours)**

In addition to the University Program requirements, each area requirement below must be completed. Courses taken to satisfy the University Program Requirements may NOT be used to satisfy area requirements.

**Area 1 - Humanities (6 hours)**

Any 100-500 courses in the following disciplines:
- ARB - Arabic
- ART - Art
- CHN - Chinese
- ENG - English Language and Literature
- FREN - French
- GER - German
- GREEK - Greek
- HUM - Humanities
- JPN - Japanese
- LAT - Latin
- MUS - Music
- OJIBWE - Ojibwe
- PHILOSOPHY - Philosophy
- REL - Religion
- RUS - Russian
- SPAN - Spanish
- TAI - Theatre and Interpretation

Broadcast and Cinematic Arts Courses

These courses also fulfill Area 1 requirements:
- BCA 101 - History and Appreciation of the Cinema 3(2-2)
- BCA 290 - French Film and Other Media 3(3-0)
- BCA 300 - African and African American Film 3(3-0)
- BCA 503 - Critiquing Mass Media 3(3-0)

Note: Courses used to satisfy the foreign language requirement may not also be used to satisfy this requirement.

**Area 2 - Natural Sciences (6 hours)**

Any 100-500 level courses in the following disciplines:
- AST - Astronomy
- BIO - Biology
- CHM - Chemistry
- ENV - Environmental Studies
- ESC - Earth Science
- GEL - Geology
- MET - Meteorology
- MTH - Mathematics
- PHS - Physical Science
- PHY - Physics
- SCI - Sciences
- STA - Statistics

Note: MTH 101 cannot be used to fulfill the Area 2 Natural Sciences requirement.

**Anthropology (ANT): Physical Anthropology Courses**

These courses also fulfill Area 2 Requirements:
- ANT 171 - Human Origins: Introduction to Physical Anthropology 3(3-0)
- ANT 173 - Laboratory in Physical Anthropology 1(0-2)
- ANT 342 - Principles of Forensic Anthropology 3(3-0)
- ANT 347 - Human Evolution 3(3-0)
- ANT 351 - The Race Concept and Human Variation 3(3-0)
- ANT 356 - Primate Behavior 3(3-0)
- ANT 358 - Diseases and Human Evolution 3(3-0)
- ANT 461 - Race, Racism and Human Evolution 3(3-0)
- ANT 542 - Methods in Forensic Anthropology: Osteology and Skeletal Analysis 4(3-2)

**Communication Disorders Courses**

These courses also fulfill Area 2 Requirements:
- CDO 335 - The Anatomy and Physiology of Speech and Hearing 3(3-0)
- CDO 463 - Introduction to Acoustic Phonetics 3(3-0)

**Computer Science Courses**

These courses also fulfill Area 2 Requirements:
- CPS 110 - Information Technology Programming I 3(3-0)
- CPS 150 - FORTRAN Programming 3(3-0)
- CPS 180 - Principles of Computer Programming 3(3-0)
- CPS 181 - Introduction to Data Structures 3(3-0)
- CPS 210 - Assembly Language and Computer Organization 3(3-0)
- CPS 280 - Alternative Programming Languages 1-6(Spec)
- CPS 340 - Advanced Data Structures and Algorithms 3(3-0)
- CPS 360 - Computer Design and Architecture 3(3-0)
- CPS 370 - File Manipulation Techniques 3(3-0)
- CPS 380 - Microcomputer Architecture 3(3-0)
- CPS 410 - Software Engineering 3(3-0)
- CPS 450 - Programming Language Concepts 3(3-0)
- CPS 468 - Systems Programming and Software 3(3-0)
- CPS 530 - Simulation of Discrete Event Systems 3(3-0)
- CPS 541 - Databases 3(3-0)
- CPS 560 - Digital Computer Design 3(3-0)
- CPS 575 - Computer Graphics 3(3-0)

**Geography (GEO): Physical Geography and Geographic Information Science Courses**

These courses also fulfill Area 2 Requirements:
- GEO 105 - Physical Geography 3(2-2)
- GEO 201 - Weather and Climate 4(4-0)
- GEO 203QR - Introduction to Geographic Information Science 3(2-2)
- GEO 205/GEL 205 - Oceanography 3(3-0)
- GEO 210 - Landforms 3(2-2)
- GEO 303 - Geographic Information Systems I 3(2-2)
- GEO 305 - Remote Sensing of the Environment 3(2-2)
- GEO 310 - Surface Hydrology 3(2-2)
- GEO 330 - Resource Perception and Utilization 3(3-0)
- GEO 334/BIO 334 - Soil Science 3(2-2)
- GEO 335 - Biogeography 3(3-0)
- GEO 355 - Environmental Catastrophes 3(3-0)
- GEO 404 - Global Positioning System 1(1-0)
- GEO 405 - CAD Mapping for GIS 3(2-2)
- GEO 500 - Advanced Cartography 3(2-2)
- GEO 501 - Principles and Applications of Geographic Information System 3(2-2)
- GEO 503 - Advanced Geographic Information Systems 3(2-2)
- GEO 508 - Digital Remote Sensing 3(2-2)
- GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)
- GEO 516 - Advanced Remote Sensing Systems 3(2-2)
- GEO 528 - Environmental Modeling with GIS 3(2-2)
- GEO 553 - GIS Operations and Practices 3(3-0)
Human Environmental Studies Courses
These courses also fulfill Area 2 Requirements:
FNS 361 - Experimental Foods 3(2-2)
FNS 370 - Nutrition 3(3-0)
FNS 473 - Advanced Nutrition 4(4-0)

Area 3 - Social Sciences (6 hours)
Any 100-500 level courses in the following disciplines:
ANT - Anthropology (All ANT courses except those included in Area 2); ECO - Economics; GEO - Geography (All GEO courses except Physical Geography and Geographic Information Science courses listed in Area 2); HDF - Human Development & Family Studies; HST - History; PAD - Public Administration; PSC - Political Science; PSY - Psychology; SOC - Sociology

Fashion Merchandising & Design Courses
These courses also fulfill Area 3 Requirements:
FMD 252 - Dress and Culture 3(3-0)

Communication Disorders Courses
These courses also fulfill Area 3 Requirements:
ASL 101 - American Sign Language, Level I 3(3-0)
CDO 130 - Normal Speech and Language Acquisition 3(3-0)

Foreign Language Requirement (0-16 hours)
Completion of the 202 course in any foreign language. This requirement may also be satisfied by passing the 202 examination or equivalent. Two foreign language courses from the University Program may be counted toward satisfying this requirement.

Specialized Studies
Major: Any university-approved major except the Communication Disorders major, Geology major, Geology major: Hydrogeology/Environmental Geology Concentration, Health Administration major, Meteorology major, or majors on specialized degrees, such as BFA, BMus, BMusEd, BSAT, BSBA, BSCmpE, BSEE, BSET, BSME, BSEd, or BSW.
Minor: Optional, however certain majors require a particular minor or one chosen from a list of acceptable minors. See departments for major requirements.

Electives
The number of elective hours will vary depending upon the requirements for the major.

Minimum Total for Graduation: 124 hours
- To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the Requirements for Graduation in this Bulletin for a complete description.
This degree indicates achievement in one or more areas of applied knowledge.

**General Education Requirements**

*(30-42 hours)*

See General Education Requirements on pages 113-121.

**Specialized Studies**

*(50-100 hours)*

**Major in one of the following fields (30-72 hours):**
- Art Major: Studio Concentration
- Broadcast & Cinematic Arts Major
- Child Development Major
- Communication Major
- Communication Disorders Major
- Community Health Education Major
- Early Childhood Development and Learning Major
- Entrepreneurship Major
- Exercise Science Major: Clinical Exercise Science Option
- Exercise Science Major: Health Fitness Option
- Exercise Science Major: Kinesiology Option
- Family Studies Major
- Fashion Merchandising and Design Major: Apparel Design Concentration
- Fashion Merchandising and Design Major: Apparel Merchandising
- Health Administration Major
- Integrative Public Relations
- Interior Design Major
- Recreation: Outdoor and Environmental Recreation Concentration
- Recreation: Recreation & Event Management Concentration
- Recreation: Therapeutic Recreation Concentration
- Sport Management Major
- Women and Gender Studies Major

**Note:** Certain majors require a particular minor or one chosen from a list of acceptable minors. See departments for major requirements.

**Minor in any university approved minor or internship (20-30 hours):**

Internship must be 20-30 hours and sponsored by the department of the major. Administration and registration may be through related disciplines but the responsibility of the internship requirements, parameters, etc., must be that of the department of the major.

**Electives**

The number of elective hours will vary depending upon the requirements for the major and minor. No more than 8 hours of electives taken from the same department as the student’s major field will count towards graduation requirements.

**Minimum Total for Graduation: 124 hours**

- To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the requirements for graduation in this Bulletin for a complete description.
This degree indicates significant exploration and achievement in the fine arts. Students may either specialize professionally in a selected fine arts field or study extensively in one field while gaining a broad background in the other fine arts.

**General Education Requirements (30-42 hours)**

See General Education Requirements on pages 113-121.

**Specialized Studies (70-78 hours)**

**Major** in one of the following:
- Art Major: Graphic Design Concentration
- Art Major: Studio Concentration
- Music Theatre Major

**Minor:** optional

**OR**

**Major** (30-45 hours) in either Broadcast and Cinematic Arts (BCA) or Theatre and Interpretation (TAI).

**Fine Arts Electives:** (25-40 hours) outside the major, authorized by the major advisor.
- Broadcast & Cinematic Arts Major: Fine Arts Concentration
- Theatre & Interpretation Major, Acting/Directing Concentration
- Theatre & Interpretation Major, Design/Technical Theatre Concentration

**Minor:** optional

**Electives**

The number of elective hours will vary depending upon the requirements for the major.

**Minimum Total for Graduation: 124 hours**

- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the Requirements for Graduation in this Bulletin for a complete description.
This degree is designed for those students whose goals and learning objectives require more flexibility than is provided by the more conventional structured programs. In consultation with a faculty advisor, the student plans an academic program which must be submitted to the Committee on Individualized Studies for approval. **Note:** This degree may not satisfy requirements for admission to some graduate programs or for professional employment.

**General Education Requirements**

(30-42 hours)

See General Education Requirements on pages 113-121.

**Area Studies**

(18 hours)

In addition to University Program Requirements, 18 hours of area requirements must be met as follows:
- 6 hours in Humanities
- 6 hours in Natural Sciences
- 6 hours in Social Sciences.

**Specialized Studies**

Major in Individualized Studies

**Minimum Total for Graduation: 124 hours**

- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the Requirements for Graduation in this Bulletin for a complete description.

**Special procedures for earning this degree:**

The B.I.S. student selects a faculty advisor who assists in planning an academic program which is submitted to the Committee on Individualized Studies for preliminary approval at least 45 semester hours before graduation. The program plan must include the goals and objectives of the course of study and methods of attaining them, including such things as senior papers and written and oral examinations.

A final plan, including a complete list of courses, must be approved by the Committee on Individualized Studies 30 semester hours prior to graduation.

Students are required to earn at least 30 of the final 45 semester hours of credit on the CMU campus.

Further information concerning the Individualized Studies Program, including the forms for applying for preliminary and final approval for the degree program, are available from the Office of Academic Affairs, Warriner 312 or call 989-774-3631 to arrange an appointment for guidance.
Bachelor of Music (B.Mus.)

This degree is awarded upon completion of a professional program for students aspiring to careers in musical performance or theory/composition.

General Education Requirements
(30-42 hours)
See General Education Requirements on pages 113-121.

Specialized Studies (89 hours)
Major in Music with a specific concentration:
- Music: Orchestral Instruments Major
- Music: Organ Major
- Music: Piano Major
- Music: Theory/Composition Major
- Music: Voice Major
A minor is optional.

Electives
The number of elective hours will vary depending upon the hours completed in General Education.

Minimum Totals for Graduation: 124 hours
- To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the Requirements for Graduation in this Bulletin for a complete description.

Bachelor of Music Education (B.Mus.Ed.)

Completion of this degree will qualify a student for recommendation to the Michigan State Board of Education for a Secondary Provisional Certificate which will permit the holder to teach music in grades K-12. All students pursuing this degree should see the section on Admission to Teacher Education Programs.

General Education Requirements
(30-42 hours)
See General Education Requirements on pages 113-121.

Other Degree Requirements
(0-10 hours)
Courses selected outside the major or minor.

Professional Education Requirements
(28 hours)
EDU 107 - Introduction to Teaching 3(3-1)
EDU 310 - Psychological Foundations of Education 3(3-0)
EDU 432 - Student Teaching Seminar 3(3-0)
EDU 450 - Content Area Literacy 3(3-0)
EDU 458 - Student Teaching 10(Spec)
EDU 495 - Foundations of Education 3(3-0)
SPE 504 - Teaching Students in Inclusive Settings 3(3-0)

Specialized Studies (70 hours)
In order to complete this degree a student must major in Music Education with either the Instrumental, Choral, or General option. Both the major and the minor must be in the same option.

Majors:
- Music Education Major: Choral Option
- Music Education Major: Instrumental Option
- Music Education Major: General Option

Minors:
- Music: Choral Minor
- Music: Instrumental Minor
- Music: General Music Minor

Note: A minimum 2.7 GPA (B-) must be earned in all teaching majors and minors.

Minimum Total for Graduation: 134 hours
- To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- You must earn a minimum overall grade point average of 2.70 in order to graduate with the Bachelor of Music Education degree.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the Requirements for Graduation in this Bulletin for a complete description.
This degree indicates significant exploration and achievement in the liberal arts, including humanities but with an emphasis on natural or social sciences.

**Degree Requirements**

**General Education Requirements**
*(30-42 hours)*

See General Education Requirements on pages 113-121.

**Area Requirements (18 hours)**

In addition to the University Program requirements, each area requirement below must be completed. Courses taken to satisfy the University Program Requirements may NOT be used to satisfy area requirements.

**Area 1 - Humanities (6 hours)**

Any 100-500 courses in the following disciplines:
- ARB - Arabic
- ART - Art
- CHN - Chinese
- ENG - English Language and Literature
- FRN - French
- GER - German
- GRK - Greek
- HUM - Humanities
- JPN - Japanese
- LAT - Latin
- MUS - Music
- OJB - Ojibwe
- PHL - Philosophy
- REL - Religion
- RUS - Russian
- SPN - Spanish
- TAI - Theatre and Interpretation

**Broadcast and Cinematic Arts Courses**

These courses also fulfill Area 1 requirements:
- BCA 101 - History and Appreciation of the Cinema 3(2-2)
- BCA 290 - French Film and Other Media 3(3-0)
- BCA 300 - African and African American Film 3(3-0)
- BCA 503 - Critiquing Mass Media 3(3-0)

**Area 2 - Natural Sciences (6 hours)**

Any 100-500 level courses in the following disciplines:
- AST - Astronomy
- BIO - Biology
- CHM - Chemistry
- ENV - Environmental Studies
- ESC - Earth Science
- GEL - Geology
- MET - Meteorology
- MTH - Mathematics
- PHS - Physical Science
- PHY - Physics
- SCI - Sciences
- STA - Statistics

**Note:** MTH 101 cannot be used to fulfill the Area 2 Natural Sciences requirement.

**Anthropology (ANT): Physical Anthropology Courses**

These courses also fulfill Area 2 Requirements:
- ANT 171 - Human Origins: Introduction to Physical Anthropology 3(3-0)
- ANT 173 - Laboratory in Physical Anthropology 1(0-2)
- ANT 342 - Principles of Forensic Anthropology 3(3-0)
- ANT 347 - Human Evolution 3(3-0)
- ANT 351 - The Race Concept and Human Variation 3(3-0)
- ANT 356 - Primate Behavior 3(3-0)
- ANT 358 - Diseases and Human Evolution 3(3-0)
- ANT 461 - Race, Racism and Human Evolution 3(3-0)
- ANT 542 - Methods in Forensic Anthropology: Osteology and Skeletal Analysis 4(3-2)

**Communication Disorders Courses**

These courses also fulfill Area 2 Requirements:
- CDO 335 - The Anatomy and Physiology of Speech and Hearing 3(3-0)
- CDO 463 - Introduction to Acoustic Phonetics 3(3-0)

**Computer Science Courses**

These courses also fulfill Area 2 Requirements:
- CPS 110 - Information Technology Programming I 3(3-0)
- CPS 150 - FORTRAN Programming 3(3-0)
- CPS 180 - Principles of Computer Programming 3(3-0)
- CPS 181 - Introduction to Data Structures 3(3-0)
- CPS 210 - Assembly Language and Computer Organization 3(3-0)
- CPS 280 - Alternative Programming Languages 1-6(Spec)
- CPS 340 - Advanced Data Structures and Algorithms 3(3-0)
- CPS 360 - Computer Design and Architecture 3(3-0)
- CPS 370 - File Manipulation Techniques 3(3-0)
- CPS 380 - Microcomputer Architecture 3(3-0)
- CPS 410 - Software Engineering 3(3-0)
- CPS 450 - Programming Language Concepts 3(3-0)
- CPS 468 - Systems Programming and Software 3(3-0)
- CPS 530 - Simulation of Discrete Event Systems 3(3-0)
- CPS 541 - Databases 3(3-0)
- CPS 560 - Digital Computer Design 3(3-0)
- CPS 575 - Computer Graphics 3(3-0)

**Geography (GEO): Physical Geography and Geographic Information Science Courses**

These courses also fulfill Area 2 Requirements:
- GEO 105 - Physical Geography 3(2-2)
- GEO 201 - Weather and Climate 4(4-0)
- GEO 203QR - Introduction to Geographic Information Science 3(2-2)
- GEO 205/GEL 205 - Oceanography 3(3-0)
- GEO 210 - Landforms 3(2-2)
- GEO 303 - Geographic Information Systems I 3(2-2)
- GEO 305 - Remote Sensing of the Environment 3(2-2)
- GEO 310 - Surface Hydrology 3(2-2)
- GEO 330 - Resource Perception and Utilization 3(3-0)
- GEO 334/BIO 334 - Soil Science 3(2-2)
- GEO 335 - Biogeography 3(3-0)
- GEO 355 - Environmental Catastrophes 3(3-0)
- GEO 404 - Global Positioning System 1(1-0)
- GEO 405 - CAD Mapping for GIS 3(2-2)
- GEO 500 - Advanced Cartography 3(2-2)
- GEO 501 - Principles and Applications of Geographic Information System 3(2-2)
- GEO 503 - Advanced Geographic Information Systems 3(2-2)
- GEO 508 - Digital Remote Sensing 3(2-2)
- GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)
- GEO 516 - Advanced Remote Sensing Systems 3(2-2)
- GEO 528 - Environmental Modeling with GIS 3(2-2)
- GEO 553 - GIS Operations and Practices 3(3-0)

**Health Sciences Courses**

These courses also fulfill Area 2 Requirements:
- HSC 211 - Human Anatomy and Physiology 3(3-0)
- HSC 214 - Human Anatomy 4(3-3)
- HSC 215 - Human Physiology 4(3-2)

**Human Environmental Studies Courses**

These courses also fulfill Area 2 Requirements:
- FNS 361 - Experimental Foods 3(2-2)
- FNS 370 - Nutrition 3(3-0)
- FNS 473 - Advanced Nutrition 4(4-0)
Area 3 - Social Sciences (6 hours)
   Any 100-500 level courses in the following disciplines:
   ANT - Anthropology (All ANT courses except those included in Area 2); ECO - Economics; GEO - Geography (All GEO courses except Physical Geography and Geographic Information Science courses listed in Area 2); HDF - Human Development & Family Studies; HST - History; PAD - Public Administration; PSC - Political Science; PSY - Psychology; SOC - Sociology

Fashion Merchandising & Design Courses
   These courses also fulfill Area 3 Requirements:
   FMD 252 - Dress and Culture 3(3-0)

Communication Disorders Courses
   These courses also fulfill Area 3 Requirements:
   ASL 101 - American Sign Language, Level I 3(3-0)
   CDO 130 - Normal Speech and Language Acquisition 3(3-0)

Natural and Social Sciences Requirements (0-9 hours)
   A minimum of 33 credit hours in the natural and social sciences are required. Courses taken to satisfy University Program Competencies, Area Requirements, or Specialized Studies requirements may be counted toward fulfilling this requirement.

Specialized Studies
   Major:
   Any University-approved major, except majors on specialized degrees, such as BFA, BMus, BMusEd, BSAT, BSBA, BSCmpE, BSEE, BSET, BSME, BSEd, or BSW.
   The major on the BS degree may include courses taken to satisfy other degree requirements.
   Minor:
   Optional; however, certain majors require a particular minor or one chosen from a list of acceptable minors. See departments for major requirements.

Electives
   The number of elective hours will vary depending upon the requirements for the major.

Minimum Totals for Graduation: 124 hours
   • To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
   • Please note: the combination of some majors and minors may require more than 124 hours for graduation.
   • Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
   • No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
   • You should read the Requirements for Graduation in this Bulletin for a complete description.
Bachelor of Science in Athletic Training (B.S.A.T.)

This degree provides professional preparation for students aspiring to enter the athletic training profession. See the School of Rehabilitation and Medication Sciences section, Athletic Training Major for additional information.

General Education Requirements (30-42 hours)
See General Education Requirements on pages 113-121.

Degree Requirements (35-44 hours)
Foundational Sciences (17 hours)
- CHM 120 - Survey of Chemistry 4(4-0)
- CHM 127 - Introductory Chemistry Laboratory 1(0-2)
- FNS 370 - Nutrition 3(3-0)
- HSC 211 - Human Anatomy and Physiology 3(3-0)
- HSC 212/PES 212 - Applied Physiology and Kinesiology 3(2-2)
- HSC 308/PES 308 - Physiology of Sport and Exercise 3(3-0)

Quantitative Literacy and Critical Thinking (8 hours)
- ATR 478 - Research for the Health Professions 2(2-0)
- PHL 105 - Critical Reasoning in Everyday Life 3(3-0)
- STA 282QR - Introduction to Statistics 3(3-0)

Behavioral Science and Cultural Perspective (6 hours)
- HSC 532 - Diversity Issues in the Health Professions 3(3-0)
- PSY 100 - Introduction to Psychology 3(3-0)

Integrative Learning Experience: Requirement I (1 hour)
- ATR 441 - Professional Development 1(Spec)

Integrative Learning Experience: Requirement II (3-12 hours)
Select one of the following:
- ATR 481 - Athletic Training Practicum 3(Spec)
- ATR 482 - Athletic Training Internship 12(Spec)

Specialized Studies (40 hours)
Major:
Athletic Training Major

Minor: Optional

Electives
The number of elective hours will vary depending upon the hours needed to complete the general education program and degree requirements.

Minimum Totals for Graduation: 124 hours

- To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the Requirements for Graduation in this Bulletin for a complete description.
This degree provides professional preparation for students aspiring to administrative careers in business, industry, and government.

**Degree Requirements**

**Admission Requirements, Retention & Termination Standards**

For information on Admission Requirements to Professional Business Studies, refer to the College of Business Administration section of this bulletin on page 145.

**General Education Requirements**

(30-42 hours)

See General Education Requirements on pages 113-121.

**Other Degree Requirements I (9 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours (Lecture-Tutorial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS 101</td>
<td>Essential Business Communications Skills</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>ECO 203</td>
<td>Microeconomic Principles For Business</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>ECO 204</td>
<td>Principles of Macro and Global Economics</td>
<td>3(3-0)</td>
</tr>
</tbody>
</table>

**Other Degree Requirements II (4 hours)**

Select one of the following:

- MTH 132 - Calculus I 4(4-0)
- MTH 217 - Business Calculus 4(4-0)

**Other Degree Requirements III (3 hours)**

Select one of the following:

- STA 282QR - Introduction to Statistics 3(3-0)
- STA 382QR - Elementary Statistical Analysis 3(3-0)

**Other Degree Requirements IV (3 hours)**

- PHL 318 - Business Ethics 3(3-0)

**Professional Studies I (15 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours (Lecture-Tutorial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 250</td>
<td>Introduction to Financial Accounting</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>ACC 255</td>
<td>Managerial Accounting &amp; Decision Making</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>BIS 255</td>
<td>Information Systems</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>BLR 235</td>
<td>Business Law</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MGT 258</td>
<td>Effective Management of Human Resources</td>
<td>3(3-0)</td>
</tr>
</tbody>
</table>

**Professional Studies II (12 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours (Lecture-Tutorial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 301</td>
<td>Integrated Business Experience</td>
<td>3(2-1)</td>
</tr>
<tr>
<td>FIN 302</td>
<td>Integrated Financial Analysis</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MGT 303/MKT 303</td>
<td>Integrated Supply Chain Management</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MKT 304</td>
<td>Integrated Marketing Management</td>
<td>3(3-0)</td>
</tr>
</tbody>
</table>

**Specialized Studies (30-42 hours)**

Major in one of the following:

- Accounting Major
- Economics Major
- Finance Major
- General Business Administration Major: Applied Business Communication Concentration
- General Management Major
- Hospitality Services Administration Major: Hospitality Services Concentration
- Human Resources Management Major
- Information Systems Major
- International Business Major
- Law and Economics Major
- Logistics Management Major
- Marketing Major - General
- Marketing Major - Professional Sales Concentration
- Personal Financial Planning Major
- Purchasing & Supply Management Major
- Real Estate: Development and Finance Major

**Minor: Optional**

**Electives**

The number of elective hours will vary depending upon the requirements for the degree and the major.

**Minimum Totals for Graduation:**

124-126 hours

- To graduate from CMU you must complete a minimum of 124-126 hours, at least 40 of which must be in courses numbered 300 or above.
- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- You should read the Requirements for Graduation in this Bulletin for a complete description.
- Students interested in this degree should consult Business Student Services (Grawn 105, 989-774-3124) in the College of Business Administration as soon as possible after their initial registration at CMU.
Degree Requirements

Bachelor of Science in Computer Engineering (B.S.Cmp.E.)

General Education Requirements (30-42 hours)
See General Education Requirements on pages 113-121.

Mathematics & Science Requirements I (30 hours)
CPS 180 - Principles of Computer Programming 3(3-0)
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 175 - Discrete Mathematics 3(3-0)
MTH 233 - Calculus III 4(4-0)
PHY 145QR - University Physics I 4(4-0)
PHY 146 - University Physics II 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)
STA 392 - Probability and Statistics for Engineers 3(3-0)

Note: MTH 132, PHY 175, and CPS 180 may also be used to fulfill University Program Requirements.

Mathematics & Science Requirements II (3-6 hours)
Select one of the following options:

Option A
MTH 232 - Linear Algebra and Differential Equations 3(3-0)

Option B
MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
MTH 334 - Differential Equations 3(3-0)

Mathematics & Science Requirements III (4-5 hours)
Select one of the following:
CHM 131 - General Chemistry I 4(3-3)
CHM 161 - Principles of Chemistry 5(4-4)

Note: CHM 131 satisfy Group II lab requirement.

Specialized Studies (66 hours)
Major in Computer Engineering (see the Index for more information)
A minor is optional.

Minimum Totals for Graduation: 130 - 136 hours
- To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the requirements for graduation in this Bulletin for a complete description.
- Note: Those who fail to submit CLEP or AP credit (for ENG 101) and pass the oral competency examination (for COM 101) will need to complete a minimum of 136 hours.
Bachelor of Science in Electrical Engineering (B.S.E.E.)

General Education Requirements (30-42 hours)
See General Education Requirements on pages 113-121.

Business Component - Required (3 hours)
BLR 202 - Legal Environment of Business 3(3-0)
Note: BLR 202 may also be used to fulfill University Program requirements.

Mathematics & Science Requirements I (24 hours)
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 233 - Calculus III 4(4-0)
PHY 145QR - University Physics I 4(4-0)
PHY 146 - University Physics II 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)
PHY 176 - University Physics Laboratory II 1(0-2)
STA 392 - Probability and Statistics for Engineers 3(3-0)
Note: Select only ONE of PHY 175 or 176, not both.
MTH 132 and PHY 175 may also be used to fulfill University Program requirements.

Mathematics & Science Requirements II (3-6 hours)
Select one of the following options:

Option A
MTH 232 - Linear Algebra and Differential Equations 3(3-0)

Option B
MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
MTH 334 - Differential Equations 3(3-0)

Mathematics & Science Requirements III (4-5 hours)
Select one of the following:
CHM 131 - General Chemistry I 4(3-3)
CHM 161 - Principles of Chemistry 5(4-4)
Note: CHM 131 may also be used to fulfill University Program requirements.

Specialized Studies (72 hours)
Major in Electrical Engineering (see the School of Engineering and Technology section for more information).
Minor is optional.

Minimum Totals for Graduation:
130 - 134 hours
• To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
• Please note: the combination of some majors and minors may require more than 124 hours for graduation.
• No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
• You should read the Requirements for Graduation in this Bulletin for a complete description.
• Note: Those who fail to submit CLEP or AP credit (for ENG 101) and pass the oral competency examination (for COM 101) will need to complete a minimum of 136 hours.
This degree prepares graduates with knowledge, problem solving ability, and hands-on skills to enter careers in the design, installation, testing, evaluation, technical sales, or maintenance of engineering systems. This degree provides students with an opportunity to pursue an approved major in Construction Management, Industrial Engineering Technology, Mechanical Engineering Technology, or Product Design Engineering Technology within the School of Engineering and Technology.

1. General Education Requirements (30-42 hours),
2. Basic Science and Mathematics Requirements (21-25 hours), and
3. Specialized Study (63 hours).

### General Education Requirements (30-42 hours)

See General Education Requirements on pages 113-121.

### Basic Science and Mathematics Requirements (19-22 hours)

All students pursuing a degree in engineering technology must complete the following basic science and mathematics requirements.

#### Core Courses I (12 hours)
- CHM 131 - General Chemistry I 4(3-3)
- MTH 130 - Pre-Calculus Mathematics 4(4-0)
- MTH 132 - Calculus I 4(4-0)

**Note:** MTH 130 may be waived upon the results of the mathematics placement examination or permission of a mathematics advisor.

#### Core Courses II (5 hours)

Select one of the following options:

**Option 1**
- PHY 130QR - College Physics I 4(4-0)
- PHY 170 - College Physics Laboratory I 1(0-2)

**Option 2**
- PHY 145QR - University Physics I 4(4-0)
- PHY 175 - University Physics Laboratory I 1(0-2)

#### Core Courses III (5 hours)

Select one of the following options:

**Option 1**
- PHY 131 - College Physics II 4(4-0)
- PHY 171 - College Physics Laboratory II 1(0-2)

**Option 2**
- PHY 146 - University Physics II 4(4-0)
- PHY 176 - University Physics Laboratory II 1(0-2)

**Note:** The following courses may be used according to rules regarding University Program Requirements: MTH 132, PHY 130QR, PHY 170, PHY 175, CHM 131.

### Specialized Studies (66 hours)

All students must pursue an approved major in Construction Management, Industrial Engineering Technology, Mechanical Engineering Technology, or Product Design Engineering Technology within the School of Engineering and Technology.

A minor is optional. Students who wish to complete a minor are encouraged to select Computer Science, Industrial Technology, Mathematics, or Physics.

#### Majors:
- Construction Management Major
- Industrial Engineering Technology
- Mechanical Engineering Technology Major
- Product Design Engineering Technology

### Electives (0-6 hours)

The number of elective hours will vary depending upon the requirements for the degree and major.

### Minimum Total for Graduation: 124 hours

- To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
- **Please note:** the combination of some majors and minors may require more than 124 hours for graduation.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the Requirements for Graduation in this Bulletin for a complete description.
Degree Requirements

Bachelor of Science in Mechanical Engineering (B.S.M.E.)

General Education Requirements (30-42 hours)
See General Education Requirements on pages 113-121.

Business Component - Required (3 hours)
BLR 202 - Legal Environment of Business 3(3-0)
Note: BLR 202 may also be used to fulfill University Program requirements.

Mathematics & Science Requirements I (24 hours)
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 233 - Calculus III 4(4-0)
PHY 145QR - University Physics I 4(4-0)
PHY 146 - University Physics II 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)
STA 392 - Probability and Statistics for Engineers 3(3-0)
Notes:
• MTH 132 and PHY 175 may also be used to fulfill University Program requirements.

Mathematics & Science Requirements II (3-6 hours)
Select one of the following options:

Option A
MTH 232 - Linear Algebra and Differential Equations 3(3-0)

Option B
MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
MTH 334 - Differential Equations 3(3-0)

Mathematics & Science Requirements III (4-5 hours)
Select one of the following:
CHM 131 - General Chemistry I 4(3-3)
CHM 161 - Principles of Chemistry 5(4-4)
Note: CHM 131 satisfies Group II lab requirement.

Specialized Studies (72 hours)
Major in Mechanical Engineering (see the School of Engineering Technology section for more information).
Minor is optional.

Minimum Totals for Graduation: 130 - 134 hours
• To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
• Please note: the combination of some majors and minors may require more than 124 hours for graduation.
• No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
• You should read the Requirements for Graduation in this Bulletin for a complete description.
• Note: Those who fail to submit CLEP or AP credit (for ENG 101) and pass the oral competency examination (for COM 101) will need to complete a minimum of 136 hours.
Completion of this degree will qualify a student for recommendation to the Michigan State Board of Education for an Elementary Provisional Certificate, which will permit the holder to teach in the elementary schools.

General Education Requirements (30-42 hours)
See General Education Requirements on pages 113-121.

Planned Program/Comprehensive Major (45 hours)
Note: Many of the courses in the Planned Program/Comprehensive Major double count in the University Program and in majors and minors.
- ART 345 - Art in the Elementary School 2(1-2)
- AST 165 - Foundations of Astronomy 1(0-2)
- BIO 165 - Life Science for Elementary Teachers 4(3-3)
- CHM 265QR - Chemical Physical Science for Elementary Teachers 2(0-6)
- ENG 315 - Teaching Writing in Elementary and Middle Schools 4(3-1)
- ENG 381 - Children's Literature 3(3-0)
- GEO 120QR - Environmental Geography 3(3-0)
- GEO 350 - United States and Canada 3(3-0)
- HSC 343 - Health Education in the Elementary School 2(2-0)
- HST 210 - United States History through Michigan Eyes 3(3-0)
- MTH 151 - Mathematics for Elementary Teachers I 3(3-0)
- MTH 152 - Mathematics for Elementary Teachers II 3(3-0)
- MUS 330 - Music for Elementary Classroom Teachers 2(2-0)
- PES 310 - Physical Education for the Classroom Teacher 2(Spec)
- PHS 265QR - Quantitative Physical Science 2(1-3)
- PSC 105 - Introduction to American Government and Politics 3(3-0)
- SCI 165 - Earth Systems Science for Elementary Teachers 3(2-2)

Professional Education Sequence Requirements (38 hours)
All of the courses below (except EDU 107 and HDF 100) require students to be admitted to the teacher education program. Students cannot continue in the education program until each previous EDU course is completed with a C+ or better. EDU 432 and EDU 458 may be taken at any point after the course prerequisites are met.
Note: For main campus students, all of these courses except EDU 432 and EDU 458 are offered in cohort blocks and must be taken in a specific order. In order to proceed to the next cohort block of classes, all EDU courses in the previous block must be successfully completed with a grade of C+ or better. Read carefully the section on Standards leading to Teacher Certification for additional requirements.
- EDU 107 - Introduction to Teaching 3(3-1)
- EDU 330 - Reading in the Elementary School 3(3-0)
- EDU 380 - Pre-Student Teaching 10(10-5)
- EDU 393 - Learning Theory in Elementary Education 3(3-0)
- EDU 432 - Student Teaching Seminar 3(3-0)
- EDU 458 - Student Teaching 10(Spec)
- HDF 100 - Lifespan Development 3(3-0)
- SPE 504 - Teaching Students in Inclusive Settings 3(3-0)

Specialized Studies
Select one of the following options:

Option 1 - Choice 1: (Major)
Select a major:
- Integrated Science Major
- Language Arts Major
- Mathematics Major
- Social Studies Major: Geography Concentration
- Social Studies Major: History Concentration

Option 1 - Choice 2: (Minors)
Select two minors from the following:
Note: Students may not select both Language Arts and Reading in the Elementary Grades minors together.
- Integrated Science Minor
- Language Arts Minor, Teaching Elementary
- Mathematics Minor, Teaching Elementary
- Reading in the Elementary Grades Minor, Teaching Elementary

Option 2 - (Major or Minor)
Select one major or one minor:
- Early Childhood Development and Learning Major
- French Major
- German Major
- Spanish Major
- Special Education Major: Teachers of Students With Cognitive Impairment
- Special Education Major: Teachers of Students With Emotional Impairment
- Early Childhood Development and Learning Minor
- English as A Second Language Minor, Teaching

Optional Minor:
The Middle Level Education Minor may be added on to an addition content major:
- Middle Level Education Minor

Minimum Totals for Graduation: 124 hours
- To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- You must earn a minimum overall grade point average of 2.70 in order to graduate with the Bachelor of Science in Education degree.
- Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the Requirements for Graduation in this Bulletin for a complete description.
- Note: Early advisement and planning are necessary to be able to complete this degree with as few hours as possible.
Completion of this degree will qualify a student for recommendation to the Michigan State Board of Education for a Secondary Provisional Certificate, which will permit the holder to teach the major and minor in the secondary grades.

Majors in School Health Education (HSC) and Physical Education (PES) will qualify for recommendation for a Secondary Provisional Certificate, permitting the holder to teach the major in grades K-12 and an additional minor in grades 6-12.

Visual Arts Education (ART) will qualify for recommendation for a Secondary Provisional Certificate, permitting the holder to teach the major in grades K-12, and no minor is required.

Majors in Spanish (SPN), French (FRN), and German (GER) will qualify for recommendation for a Secondary Provisional Certificate, permitting the holder to teach their major in the secondary grades. K-12 Majors in World Languages (SPN/FRN/GER) require additional hours of coursework.

General Education Requirements (30-42 hours)

The Michigan State Board of Education requires a minimum of 40 hours of General Education for teacher certification. This includes University Program courses and Competencies. For more information, see General Education Requirements on pages 113-121.

Degree Requirement (3 hours)

HDF 100 - Lifespan Development 3(3-0)

Note: HDF 100 also satisfies University Program Requirements.

Professional Education Requirements (34 hours)

EDU 107 - Introduction to Teaching 3(3-1)
EDU 290 - Technology in Education 3(1-4)
EDU 310 - Psychological Foundations of Education 3(3-0)
EDU 325 - Middle Level and High School Teaching Methods 3(3-0)
EDU 432 - Student Teaching Seminar 3(3-0)
EDU 450 - Content Area Literacy 3(3-0)
EDU 458 - Student Teaching 10(Spec)
EDU 495 - Foundations of Education 3(3-0)
SPE 504 - Teaching Students in Inclusive Settings 3(3-0)

Note: EDU 458 is required for 10 credit hours on this degree.

Read carefully the section on Standards Leading to Teacher Certification for additional requirements.

Specialized Studies (51-82 hours)

Note: A few major/minor combinations are not allowed. Please consult with a university advisor to make sure the combination you select is available.

Select one of the following majors (33-53 hours):

- Biology Major
- Chemistry Major
- Chemistry-Physics Major
- Earth Science Major
- English Major
- French Major
- Geography Major
- German Major
- History Major
- Integrated Science Major (no minor required)
- Mathematics Major
- Physical Education Major
- Physics Major
- School Health Education Major
- Social Studies: Geography Concentration 6-12
- Social Studies: Political Science Concentration 6-12
- Spanish Major
- Speech Major: Broadcast & Cinematic Arts Emphasis
- Speech Major
- Visual Arts Education Major (no minor required)

Select one of the following minors (20-29 hours):

- Biology Minor, Teaching Secondary
- Chemistry Minor, Teaching
- Earth Science Minor, Teaching
- English as A Second Language Minor, Teaching
- English Minor, Teaching Secondary
- Geography Minor, Teaching
- History Minor, Teaching Secondary
- Mathematics Minor, Teaching Secondary
- Physical Education Minor, Non-Teaching and Secondary
- Physics Minor, Teaching Secondary
- School Health Education Minor, Teaching
- Speech Minor, Teaching Secondary

Middle Level Education (MLE) Option:

Select the following additional minor:

Middle Level Education Minor, Teaching

Minimum Totals for Graduation:

124 - 161 hours

- To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
- Please note: the combination of some majors and minors may require more than 124 hours for graduation.
- You must earn a minimum overall grade point average of 2.70 in order to graduate with the Bachelor of Science in Education degree.
- Not all major/minor combinations are allowed. Please consult with an university advisor to confirm your choice.
- No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
- You should read the Requirements for Graduation in this Bulletin for a complete description.
- Note: Early advisement and planning are necessary to be able to complete this degree with as few hours as possible.
Completion of this degree will qualify a student for recommendation to the Michigan State Board of Education for a Secondary Provisional Certificate, which will permit the holder to teach in the secondary schools.

Majors in Special Education (SPE) will qualify for recommendation for either an Elementary Provisional Certificate, which will permit the holder to teach in the elementary school and teach students with emotional or cognitive impairment in grades K-12, or a Secondary Provisional Certificate which will permit the holder to teach in the secondary school and teach students with emotional or cognitive impairment in grades K-12.

General Education Requirements
(30-42 hours)

The Michigan State Board of Education requires a minimum of 40 hours of General Education for teacher certification. This includes University Program courses and Competencies. For more information, see General Education Requirements on pages 113-121.

Professional Education Requirements I
(34 hours)

Take all of the following:

EDU 107 - Introduction to Teaching 3(3-1)
EDU 290 - Technology in Education 3(1-4)
EDU 310 - Psychological Foundations of Education 3(3-0)
EDU 325 - Middle Level and High School Teaching Methods 3(3-0)
EDU 432 - Student Teaching Seminar 3(3-0)
EDU 450 - Content Area Literacy 3(3-0)
EDU 458 - Student Teaching 10(Spec)
EDU 495 - Foundations of Education 3(3-0)
SPE 504 - Teaching Students in Inclusive Settings 3(3-0)

Note: EDU 458 is required for 10 credit hours on this degree.

Read carefully the section on Standards Leading to Teacher Certification for additional requirements.

Professional Education Requirements II
(6 hours)

Select one of the following:

SPE 456 - Special Education Student Teaching: Emotional Impairment 6(Spec)
SPE 458 - Special Education Student Teaching: Cognitive Impairment 6(Spec)

Specialized Studies (72-110 hours)

Note: Some majors require a particular minor and some minors are available only to particular majors. Check major and minor requirements in departmental description sections for further information.

Select one of the following options:

Option A
This option requires two majors.

Major Group I
Select one of the following majors:

• Special Education Major: Teachers of Students With Cognitive Impairment
• Special Education Major: Teachers of Students With Emotional Impairment

Major Group II
Select one of the following majors:

• Biology Major
• Chemistry Major
• Chemistry-Physics Major
• Earth Science Major
• English Major
• Geography Major
• History Major
• Mathematics Major
• Physical Education Major
• School Health Education Major
• Spanish Major

Option B
This option requires one major and two minors (one from Group I and one from Group II OR two from Group I).

Majors

• Special Education Major: Teachers of Students With Cognitive Impairment
• Special Education Major: Teachers of Students With Emotional Impairment

Minors Group I

• Biology Minor, Teaching Secondary
• Chemistry Minor, Teaching
• Earth Science Minor, Teaching
• English Minor, Teaching Secondary
• Geography Minor, Teaching
• History Minor, Teaching Secondary
• Mathematics Minor, Teaching Secondary
• Physical Education Minor, Non-Teaching and Secondary
• Physics Minor, Teaching

Minors Group II

• School Health Education Minor, Teaching
• Speech Minor, Teaching Secondary

Minimum Totals for Graduation:
150-203 hours

• To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.
• Please note: the combination of some majors and minors may require more than 124 hours for graduation.
• You must earn a minimum overall grade point average of 2.70 in order to graduate with the Bachelor of Science in Education degree.
• Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.
• No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.
• You should read the Requirements for Graduation in this Bulletin for a complete description.
• Note: Early advisement and planning are necessary to be able to complete this degree with as few hours as possible.
The Bachelor of Social Work degree program is accredited by the Council of Social Work Education and leads to eligibility for licensure as a licensed Bachelor’s Social Worker in Michigan. A supervised experience and passage of an examination after graduation are required for licensure.

See the Department of Sociology, Anthropology and Social Work section for additional requirements for admission to the Social Work Program.

General Education Requirements
(30-42 hours)
See General Education Requirements on pages 113-121.

Other Degree Requirements I (3 hours)
Select one of the following:
HDF 100 - Lifespan Development 3(3-0)
PSY 220 - Developmental Psychology 3(3-0)

Other Degree Requirements II (3 hours)
Select one of the following:
BIO 151 - Human Biology 3(3-0)
HSC 211 - Human Anatomy and Physiology 3(3-0)

Other Degree Requirements III (3 hours)
Select one of the following:
PSY 330 - Social Psychology 3(3-0)
SOC 201 - Social Psychology 3(3-0)

Specialized Studies (68-72 hours)

Major: Social Work (48 hours)

Minor: (20-24 hours) a student will select one of the following alternatives:
a. Any University-approved minor.
b. 20 or more hours of coursework from at least two departments (not including required courses in the degree program, Sociology or Social Work courses) planned in advance by a student with a Social Work advisor. These courses are to be a planned program to meet the students’ individual learning objectives or to complement their professional interest.

Electives
The number of elective hours will vary depending upon the requirements for the degree and the major.

Minimum Totals for Graduation: 124 hours

To graduate from CMU you must complete a minimum of 124 hours, at least 40 of which must be in courses numbered 300 or above.

Please note: the combination of some majors and minors may require more than 124 hours for graduation.

Not all major/minor combinations are allowed. Please consult with a university advisor to confirm your choice.

No more than a total of 27 hours may be taken from the College of Business Administration and counted towards graduation.

You should read the Requirements for Graduation in this Bulletin for a complete description.
I. Introduction

The General Education Program at Central Michigan University provides students with a common set of academic skills, referred to as Competencies, as well as exposure to a broad knowledge base, referred to as the University Program.

Courses in the General Education Program are continuous with the rest of the university curriculum but present material in a manner that links knowledge and skills with the 21st-century lives students will lead after they graduate.

Graduates of Central Michigan University demonstrate an understanding of the basic forces, ideas, and values that shape the world. They are aware of the structure of organized human knowledge—the arts and humanities, natural and social sciences. They can organize and access a broad knowledge base relevant to the modern world. They are skilled in working with others, including those of diverse ethnic and cultural backgrounds, and in thinking reflectively about themselves as individuals and as members of society. Graduates value rational inquiry, honesty in scholarship, and life-long learning.

Specific Student Learning Objectives

The General Education Program is intended to assist students in attaining the specific learning outcomes listed below:

A. Demonstrate undergraduate level competence in written communication, oral communication, mathematics, and quantitative reasoning.
B. Examine and conceptualize contemporary problems through the application of procedures common in the natural sciences, social sciences, and humanities.
C. Display sensitivity to the influence of cultural values and diversity on human functioning.

II. The Competencies

General Education Competencies are important skills that students expand during their course of study at Central Michigan University. Graduates are expected to demonstrate adeptness in the areas of Writing, Oral English, and Mathematics/Quantitative Reasoning. The requirements under each of these competencies were developed to aid students in mastering skills deemed necessary to function as constructive, concerned, and thoughtful persons. See Additional Guidelines at the end of this section. Students with transfer credit should pay particular attention to material presented in Section IV: General Education Program Requirements for Students with Transfer Credit.

A. Writing Competency (18-21 hours)

The Writing Competency requirement develops the ability to write clearly. Writing can be a tool for organizing and clarifying one’s thoughts. Effective written expression is often necessary to contribute to ongoing debates or discussions in personal, civic, and vocational spheres. Students prepare a variety of public texts by applying knowledge of composing processes, rhetorical strategies, and textual conventions. Students must satisfy the Freshman Composition, Intermediate Composition, and Writing Intensive requirements as detailed below.

1. Freshman Composition (3-6 hours)

Students learn how to use composition techniques, strategies for persuasive writing, and modern writing conventions and practices to prepare a variety of papers.

Timeline: Students should enroll in a Freshman Composition course in their first or second semester, and continue to enroll until successfully completed OR successfully complete one of the examinations listed in Item c by the end of the first semester.

Requirement: Students satisfy the requirement for freshman composition during their first year of study at CMU. Student ACT or SAT scores and high school GPA can help shape how a student chooses to meet the Freshman Composition requirement. Most students may satisfy the Freshman Composition requirement in one of three ways:

a. Earning a grade of C (2.0) or better in ENG 101 Freshman Composition. Students should enroll in ENG 101 Freshman Composition in either their first or second semester at CMU and continue to enroll in subsequent semesters until the requirement is satisfied.

b. Earning a grade of C (2.0) or better in ENG 103 First Year Writing and ENG 099 Writing Workshop. Students should enroll in ENG 103 in either their first or second semester at CMU and continue to enroll in subsequent semesters until the requirement is satisfied.

OR
c. Successful completion of a College Level Examination Program examination or an Advanced Placement Examination designated as meeting the Freshman Composition requirement by the end of their first semester at CMU or successful completion of the International Baccalaureate English Language Examination. Specific information on these examinations, as well as information on the minimum scores required for Freshman Composition credit, can be obtained from the Computer-Based Testing Center (https://www.cmich.edu/offices/academicaffairs/cbtc/pages/default.aspx) or call 989-774-1092.

Freshman Composition Requirement for Non-native Speakers of English: Students for whom English is not their native language may fulfill the Freshman Composition Requirement by earning a grade of C (2.0) or better in ELI 198 American Language for International Students: Written Component.

Freshman Composition Requirement for Students in the Honors Program: Honors students may fulfill the Freshman Composition Requirement by earning a grade of C (2.0) or better in ENG 101H.

Freshman Composition Courses:

- ELI 198 - American Language for International Students: Writing Component 3(3-0)
- ENG 099 - Writing Workshop 1(Spec)
- ENG 101 - Freshman Composition 3(3-0)
- ENG 103 - First Year Writing 3(3-0)
2. Intermediate Composition (3 hours)

Students acquire writing skills necessary for writing in upper-level major courses and beyond.

Timeline: ENG 201 may be taken only after meeting the Freshman Composition Requirement and must be taken before completing 56 hours of coursework.

Requirement: This requirement is met by earning a grade of C (2.0) or better in ENG 201 Intermediate Composition.

ENG 201 - Intermediate Composition 3(3-0)

3. Writing Intensive Requirement (WI) (12 hours)

Writing Intensive courses in the University Program help students to learn course content, increase writing fluency, and to help prepare for more formal writing assignments. The purpose of Writing Intensive courses outside of the University Program is to provide practice with the language conventions, writing styles, and formats within a specific discipline or profession.

Timeline: The Writing Intensive requirement must be met prior to graduation.

Requirement: Students are required to complete, with a grade of C (2.0) or better, four courses (12 credits) that have a Writing Intensive (WI) designation.

At least 6 hours of Writing Intensive coursework must be in the University Program, and 6 hours of Writing Intensive coursework may be fulfilled by courses outside of the University Program.

Writing Intensive Courses:

These courses have been approved as Writing Intensive (check the Course Search and Registration for course sections indicated with a “WI” next to the course number). Some of these courses are also approved as UP Courses and are listed at the end of each subgroup for cross reference purposes.

ANT 276 - Language and Culture 3(3-0)
ART 380 - Greek Art and Architecture 3(3-0)
BAC 211 - Introduction to Writing for Electronic Media 3(3-0)
BAC 311 - Electronic Media Copywriting 3(3-0)
BAC 318 - Electronic Media Newswriting 3(3-0)
BAC 411 - Long-Form Electronic Media Writing 3(3-0)
BAC 503 - Critiquing Mass Media 3(3-0)
BAC 506 - Series Script Writing For Visual Media 3(3-0)
BAC 508 - Screenwriting for Cinematic Narrative 3(3-0)
BAC 516 - Electronic Media Management 3(3-0)
BAC 540 - Recording Industry & Business 3(3-0)
BIS 101 - Essential Business Communications Skills 3(3-0)
BIS 260 - Global Business Communication 3(3-0)
BLR 202 - Legal Environment of Business 3(3-0)
BLR 222 - The Search for Racial Justice through Law 3(3-0)
BLR 235 - Business Law 3(3-0)
BLR 330 - Real Estate Law 3(3-0)
BLR 360 - Construction Law 3(3-0)
CGL 496 - Seminar in Cultural and Global Studies 3(3-0)
COM 301 - Survey of Research in Communication 3(3-0)
EGR 489 - Senior Design I 3(2-2)
EGR 499 - Senior Design II 3(1-4)
ENG 134 - Introduction to Literature 3(3-0)
ENG 141 - Comics, Graphic Novels, and Other Illustrated Texts 3(3-0)
ENG 142 - Literary Interpretation of Sport 3(3-0)
ENG 175 - The Nature of Language – 3(3-0)
ENG 234 - Introduction to Literary Analysis 3(3-0)
ENG 235 - English Literature: Beginning to Romantic Period 3(3-0)
ENG 236 - British Literature 3(3-0)
ENG 251 - American Literature: Colonial Through the Romantic Period 3(3-0)
ENG 252 - American Literature: Realistic Period to the Present 3(3-0)
ENG 256 - Masterpieces of Ancient Literature 3(3-0)
ENG 262 - European Literatures 3(3-0)
ENG 294 - Introduction to Creative Writing 3(3-0)
ENG 301 - Nonfiction Writing 3(3-0)
ENG 303 - Technical Writing 3(3-0)
ENG 315 - Teaching Writing in Elementary and Middle Schools 4(3-1)
ENG 323 - Fantasy and Science Fiction 3(3-0)
ENG 381 - Children's Literature 3(3-0)
ENG 391 - Creative Writing: Fiction 3(3-0)
ENG 402 - Argumentation and Expository Writing 3(3-0)
ENG 491 - Advanced Fiction Writing 3-6(3-0)
ENG 493 - Creative Nonfiction 3-6(3-0)
ENG 510 - Writing Center Practicum 3(3-0)
ENG 514 - Language and Media Discourse 3(3-0)
ENG 539 - Seminar in Major Nonfiction Writers 3-9(3-0)
FMD 250 - History of Western Dress 3(3-0)
FRN 321 - France Today 3(3-0)
FRN 333 - Francophone Literature and Culture 3(3-0)
FRN 353 - Youth Literature in French 3(3-0)
FRN 420 - Literature and Culture of Quebec 3(3-0)
FRN 423 - France at War in the 20th Century 3(3-0)
GEL 380 - Hydrogeology 3(2-3)
GEO 400 - Geographic Education 3(2-2)
GEO 531 - Integrated Land Use Planning 3(3-0)
GER 341 - German Cultural History I 3(3-0)
GER 342 - German Cultural History II 3(3-0)
GER 343 - Survey of German Literature I 3(3-0)
GER 344 - Survey of German Literature II 3(3-0)
GER 345 - Survey of German Literature III 3(3-0)
GER 347 - German Cultural History III 3(3-0)
GER 570 - Advanced Grammar and Composition 3(3-0)
HON 201 - Honors Studies in Human Events and Ideas: First Year Seminar 3(3-0)
HON 202 - Honors Studies in the Arts: First Year Seminar 3(3-0)
HON 203 - Honors Descriptive Science: First Year Seminar 3(3-0)
HON 204 - Honors Quantitative and Mathematical Science: First Year Seminar 3(3-0)
HON 205 - Honors Behavioral Sciences: First Year Seminar 3(3-0)
HON 206 - Honors Studies in Social Structures: First Year Seminar 3(3-0)
HON 207 - Honors Studies in Global Cultures: First Year Seminar 3(3-0)
HON 208 - Honors Studies in Racism and Diversity in the U.S.: First Year Seminar 3(3-0)
HST 101 - The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)
HST 102 - The Development of Western Civilization: From 1700 to the Present 3(3-0)
HST 106 - Twentieth Century: Western World Issues 3(3-0)
HST 110 - The American Experience 3(3-0)
HST 111 - The Quest for Liberty: The United States, 1865-Present 3(3-0)
HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)
HST 120 - Unlikely Princesses: Women of World History 3(3-0)
HST 163 - The Latin American Experience 3(3-0)
HST 168 - Modern East Asia 3(3-0)
HST 176 - The African Experience 3(3-0)
HST 200 - Medieval Civilization 3(3-0)
HST 210 - United States History through Michigan Eyes 3(3-0)
HST 211 - Growing Up in America 3(3-0)
HST 213 - Babylon and Beyond: Ancient Civilizations of the Near/Middle East 3(3-0)
HST 237 - Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)
HST 238 - Ancient Greece and Rome 3(3-0)
B. Mathematics and Quantitative Reasoning Competency (6 hours)

The Mathematics/Quantitative Reasoning requirement develops the ability to understand and solve quantitative problems that arise in a variety of contexts.

1. Mathematics Requirement (3 hours)

Students learn tools for understanding patterns that appear in the sciences, as well as in the humanities. Students apply algebra to solve quantitative problems.

Timeline: The Mathematics Requirement must be met before students have completed 56 hours of coursework.

Requirement: Student ACT or SAT scores, as well as past coursework in mathematics, can help students select the first course in mathematics. However, neither MTH 151 nor MTH 152 may be used to satisfy the Mathematics Requirement, and a single course may not be used to meet both the Mathematics and Quantitative Reasoning Requirements. A student may satisfy the Mathematics Requirement in one of two ways:

a. Earning a grade of C (2.0) or better in ANY mathematics (MTH) or statistics (STA) course numbered 105 or above (excluding MTH 151 or MTH 152), OR
b. Successfully completing the Mathematics Competency Examination or any CLEP or AP examination approved for credit in a mathematics (MTH) or statistics (STA) course numbered higher than MTH 105 (excluding MTH 151 or MTH 152).

Mathematics Competency Examination

Students seeking to satisfy the Mathematics Requirement by successfully completing the Mathematics Competency Examination must pass the exam by the time they have completed 56 hours of academic credit at CMU. Students who transfer more than 36 credit hours to CMU may take the competency examination only during their first semester at CMU.

The Mathematics Competency Examination consists of 40 questions. The Mathematics Requirement is satisfied by an overall score of at least 80% on the test. Students who fail to obtain an overall score of at least 80% are required to meet the Mathematics Requirement as previously described. The Mathematics Competency Examination is administered by the Computer Based Testing Center (https://www.cmich.edu/office_provostr/AcademicAffairs/CBTC/Pages/default.aspx) or call 989-774-1092.

Mathematics Competency Courses

Some of these courses are also approved for UP Subgroup II-B.

- MTH 105 - Intermediate Algebra 3(3-0)
- MTH 107 - College Algebra 3(3-0)
- MTH 109 - Plane Trigonometry 3(3-0)
- MTH 113 - Mathematics: A Modeling Approach 3(3-0)
- MTH 130 - Pre-Calculus Mathematics 4(4-0)
- MTH 132 - Calculus I 4(4-0)
- MTH 133 - Calculus II 4(4-0)
- MTH 175 - Discrete Mathematics 3(3-0)
- MTH 217 - Business Calculus 4(4-0)
- MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
- MTH 232 - Linear Algebra and Differential Equations 3(3-0)
- MTH 233 - Calculus III 4(4-0)
- MTH 256 - Algebraic Modeling and Measurement for K-8 Math Teachers 3(3-0)
- MTH 261 - Algebra for Secondary Teachers 3(3-0)
- MTH 278 - Mathematical Models 3(3-0)
- MTH 296 - Special Topics in Mathematics 3(3-0)
- MTH 322 - Introduction to Mathematical Proof 3(3-0)
- MTH 334 - Differential Equations 3(3-0)

(continued)
Quantitative Reasoning Requirement (3 hours)

Quantitative reasoning involves the application of mathematics in applied contexts. The overarching goal is to establish a foundation for effective quantitative reasoning and problem-solving strategies that are useful for completing a program of study and relevant to the life activities of most people.

Timeline: The Quantitative Reasoning requirement must be met prior to graduation.

Requirement: Students satisfy this requirement by completing an approved Quantitative Reasoning course with a grade of C (2.0) or better. All approved courses have a “QR” designation in the Bulletin. A single course may not be used to meet both the Quantitative Reasoning and Mathematics Requirements.

Quantitative Reasoning Courses:

- BCA 265QR - Understanding Media Measurement 3(3-0)
- BIO 105QR - Introductory Quantitative Biology 3(2-2)
- BIS 118QR - Introduction to Quantitative Reasoning for Business 3(2-1)
- BUS 300QR - Applied Business Statistics 3(3-0)
- CHM 211QR - Quantitative Analysis 4(3-5)
- CHM 265QR - Chemical Physical Science for Elementary Teachers 2(0-6)
- ECO 222QR - Behavioral Economics 3(3-0)
- EGR 190QR - Digital Circuits 3(3-0)
- ENV 201QR - Environmental Resource Use 3(3-0)
- GEL 130QR - Earth Processes 3(2-2)
- GEO 123QR - Environmental Geography 3(3-0)
- GEO 203QR - Introduction to Geographic Information Science 3(2-2)
- HFD 214QR - Consumer Economics 3(3-0)
- HSC 106QR - Healthy Lifestyles 3(2-1)
- IET 181QR - Alternative Energy Analysis 3(2-2)
- IET 223QR - Lean Six Sigma for Process Improvement 3(3-0)
- ITC 101QR - Reasoning Through Computer Visualization 3(2-2)
- JRN 203QR - Information Gathering for the Mass Media 3(3-0)
- MET 101QR - Our Changing Climate 3(3-0)
- MTH 103QR - Quantitative Reasoning for Informed Citizens 3(3-0)
- PHL 145QR - Reasoning and Probability 3(3-0)
- PHS 265QR - Quantitative Physical Science 2(1-3)
- PHY 105QR - Energy and Society: A Quantitative Perspective 3(3-0)
- PHY 130QR - College Physics I 4(4-0)
- PHY 145QR - University Physics I 4(4-0)
- PHY 247QR - Introduction to Modern Physics 3(3-0)
- PSC 180QR - Polis, Politics and Policy 3(3-0)
- PSY 211QR - Introduction to Psychological Statistics 3(3-0)
- RPL 508QR - Budgeting & Funding for Leisure Service Agencies 3(3-0)
- SOC 150QR/SOC 150QR - Public Opinion, Social Sciences, and Social Welfare 3(3-0)
- STA 103QR - Evidence-based Problem Solving in Modern Society 3(3-0)
- STA 282QR - Introduction to Statistics 3(3-0)
- STA 382QR - Elementary Statistical Analysis 3(3-0)
- STA 392 - Probability and Statistics for Engineers 3(3-0)
- STA 282QR - Introduction to Statistics 3(3-0)
- STA 382QR - Elementary Statistical Analysis 3(3-0)
- STA 392 - Probability and Statistics for Engineers 3(3-0)

C. Oral English Competency (3 hours)

The Oral English Competency develops the ability to interpret, compose, and present information in oral form to specific audiences.

Timeline: The Oral English Competency must be met before students complete 56 hours of coursework. Because of this timeline, students seeking to satisfy this requirement by successfully completing the Oral English Competency Examination must pass the exam by the time they have completed 56 hours of academic credit at CMU. Students who transfer 56 or more credit hours to CMU may take the Oral English Competency Examination prior to the conclusion of their first year of study at CMU.

Requirement:Past coursework in debate, speech, and oral communication can help to determine how students choose to meet the Oral English Competency. There are two ways students may satisfy the Oral English Competency:

1. Earning a grade of C (2.0) or better in one of the following courses: COM 101, 267, 269, 357, TAI 170, 302 (see course titles and descriptions below).

2. Earning a passing score on the Oral English Competency Examination. The Oral English Competency Examination requires the development and delivery of a ten-to-fifteen minute public speech accompanied by a properly typewritten and detailed outline. The student delivers the speech, which is evaluated by two faculty members assigned to oversee the examination. Students who receive unsatisfactory examination results will be allowed one retest. Students who fail twice are required to obtain a grade of C (2.0) or better in one of the Oral English Competency courses listed above.

For Main Campus Students, the Oral English Competency Examination is administered twice a year on the Friday prior to the beginning of the fall and spring semesters. Guidelines, registration materials, and other information can be obtained by contacting the Computer Based Testing Center (https://www.cmich.edu/offices_provos/AcademicAffairs/CTC/default.aspx) or call 989-774-1092.

For Global Campus students, the examination is administered five times a year. Information can be obtained by contacting the student’s Academic Advisor or CMU Online at 888-688-4268.

Oral English Competency Requirement for Non-native Speakers of English: Students for whom English is not their native language may fulfill the Oral English Competency Requirement by earning a grade of C (2.0) or better in ELI 199 American Language for International Students: Speech Component. (See description below)

Oral English Competency Courses: The following courses are approved for Oral English Competency. TAI 170 is also approved for UP Subgroup I-B.

- COM 101 - Introduction to Communication 3(3-0)
- COM 103 - Oral Communication in the Online Environment 3(3-0)
- COM 267 - Introduction to Debate 3(3-0)
Additional Guidelines for the Competencies

1. A student must meet the requirements in each of the competency areas described in the Undergraduate Bulletin under which the student graduates.

2. A student attempting to satisfy a specific competency requirement in a given academic year will use the method(s) and requirement(s) in their bulletin year.

3. A competency requirement in a specific area, once satisfied, remains valid until the student graduates.

4. If the chairperson of the department most directly concerned with a competency judges that a student has satisfied a competency requirement by means other than those described above, that chairperson will certify in writing to the Registrar that the student has satisfied the requirement. These competencies and departments include:
   - **Writing Competency** - Department of English Language and Literature.
   - **Oral English Competency** - Department of Communication and Dramatic Arts.
   - **Mathematics & Quantitative Reasoning Competency** - Department of Mathematics.

5. Students with disabilities who, by virtue of these disabilities, might be prevented from taking competency examinations or otherwise meeting competency requirements may have such requirements waived by the Director of Student Disability Services or by the appropriate department chairperson as listed above.

6. All other appeals should be sent to the General Education Committee, Office of the Academic Senate, Ronan Hall 280.

III. The University Program (27 hours)

Courses in the University Program introduce students to the major fields of human knowledge. A primary goal is to provide students with the conceptual tools necessary to provide order and meaning to the information acquired over the course of their lives. Courses included in the University Program were selected to aid students in developing a broad conceptual understanding that ultimately helps graduates function as concerned and thoughtful persons. Courses are identified by a three letter code, called a designator, as well as by a course number. Course designators refer to the areas of study. Each group is divided into two subgroups. Students are required to take at least one course from each subgroup plus an additional course from one of the subgroups as an elective, if needed, to total 27 hours. This typically results in taking nine courses with different designators, but students have the option of repeating a designator once. A passing grade must be obtained in each course and students must maintain an overall average of C (2.0) or better in the University Program courses. See Additional Guidelines at the end of this section. Students with transfer credit should pay particular attention to material presented in Section IV: General Education Program Requirements for Students with Transfer Credit.

Two of the University Program courses must be used to earn at least six Writing Intensive credits. Course sections approved for Writing Intensive will be designated as WI sections in the Course Search and Registration. Courses counted as Writing Intensive must have a grade of C or better.

A. Group I - Humanities (6 hours)

As a group, the humanities is defined as those areas of study that examine human experience and achievement in order for us to attain a deeper understanding of the essential characteristics of the human condition and human values. It emphasizes the importance of the study of our cultural and artistic heritage and the individuals, movements, and ideas that have shaped this heritage. Its basic methodolo-

gies analyze, critically evaluate, or interpret philosophical movements, historical events, works of art, religious practices and beliefs, and other important aspects of culture so we can understand them in their historical context and fully appreciate their significance. It encourages the recognition of different points of view about interpretations of human events, ideas, values, and artworks, and it debates the ultimate validity and significance of these. To satisfy the Humanities requirement, students must select one course from each of the two subgroups.

**Subgroup I-A: Human Events and Ideas (3 hours)**

Select from the following:

- ART 283 - Introduction to Western Art, Part I 3(3-0)
- ART 285 - Introduction to Western Art, Part II 3(3-0)
- ART 363 - History of Design: 1750-2010 3(3-0)
- BCA 101 - History and Appreciation of the Cinema 3(2-2)
- ENG 235 - English Literature: Beginning to Romantic Period 3(3-0)
- ENG 236 - British Literature 3(3-0)
- ENG 251 - American Literature: Colonial Through the Romantic Period 3(3-0)
- ENG 252 - American Literature: Realistic Period to the Present 3(3-0)
- ENG 261 - Masterpieces of Ancient Literature 3(3-0)
- ENG 323 - Fantasy and Science Fiction 3(3-0)
- ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)
- GER 325 - Modern German Literature in Translation 3(3-0)
- HON 201 - Honors Studies in Human Events and Ideas 3(3-0)
- HST 101 - The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)
- HST 102 - The Development of Western Civilization: From 1700 to the Present 3(3-0)
- HST 110 - The American Experience 3(3-0)
- HST 120 - Unlikely Princesses: Women of World History 3(3-0)
- HST 200 - Medieval Civilization 3(3-0)
- HST 238 - Ancient Greece and Rome 3(3-0)
- HST 326/WST 328 - Women in America 3(3-0)
- HST 340 - The High Middle Ages 3(3-0)
- HST 341 - Renaissance and Reformation 3(3-0)
- HUM 303 - Law and Society: Great Trials 3(3-0)
- HUM 320 - Introduction to Philosophy 3(3-0)
- HUM 325 - Philosophy of Mind 3(3-0)
- HUM 330 - Ethics 3(3-0)
- HUM 335 - Philosophy of Religion 3(3-0)
- HUM 336 - Philosophy of Mind 3(3-0)
- PSC 275 - Great Political Thinkers 3(3-0)
- PSC 371 - American Political Thought 3(3-0)
- PSC 378 - Modern Democratic Theory 3(3-0)
- PSC 381 - Slavery, Tyranny, Democracy: Classical Origins of Modern Ideas 3(3-0)
- PSC 382 - Modern Political Theory 3(3-0)
- REL 101 - World Religions: An Introduction to the Study of Religion 3(3-0)
- REL 130 - Religion in America 3(3-0)
- REL 207/WST 207 - Women in Religion 3(3-0)
- REL 235 - Religion and Social Issues 3(3-0)
- REL 250 - Creation, Conquest, and Chaos: Introduction to the Old Testament 3(3-0)
- REL 260 - From Gospel to Apocalypse: Introduction to the New Testament 3(3-0)
- REL 313 - Christianity 3(3-0)
- REL 315 - Judaism 3(3-0)
- REL 334 - Death and Dying 3(3-0)
- WST 207/REL 207 - Women in Religion 3(3-0)

**Subgroup I-B: History and Ideas (3 hours)**

Subgroup I-B: History and Ideas (3 hours)

**These I-A courses are approved for offering as WI:** ENG 235, 236, 251, 252, 261, 323; HON 201; HST 101, 102, 110, 120, 200, 238, 326, 340, 341; HUM 303; PHL 100, 118, 218, 230; PSC 381; REL 101, 130, 207, 235, 334; WST 207, 328.

(continued)
Subgroup I-B: The Arts (3 hours)
Select from the following:
- ART 126 - Introduction to the Visual Arts 3(3-0)
- BCA 300 - African and African American Film 3(3-0)
- ENG 134 - Introduction to Literature 3(3-0)
- ENG 141 - Comics, Graphic Novels, and Other Illustrated Texts 3(3-0)
- ENG 142 - Literary Interpretation of Sport 3(3-0)
- ENG 236 - The Literary Dimensions of Film 3(2-2)
- FMD 250 - History of Western Dress 3(3-0)
- HON 202 - Honors Studies in the Arts: First Year Seminar 3(3-0)
- HST 335 - History of the Rock and Roll Era 3(3-0)
- HST 346 - The World of Versailles: Power and the Politics of Splendor in 17th-Century France 3(3-0)
- MUS 110 - Music in Society 3(3-0)
- MUS 114 - Listening Experience 3(3-0)
- MUS 213 - Jazz: An American Art Form 3(3-0)
- MUS 310 - Music and the Mind 3(3-0)
- MUS 313 - Musics of the World 3(3-0)
- TAI 170 - Oral Interpretation of Literature 3(3-0)
- TAI 175 - Appreciation of the Theatre 3(3-0)

These II-B courses are approved for offering as WI: ENG 134, 141, 142; FMD 250; HON 202; MUS 114, 213, 310, 313.

Note: TAI 170 may also count for Oral Competency.

B. Group II - Natural Sciences (6 hours)
As a group the natural sciences explore and examine natural phenomena to establish basic principles concerning the material universe. Its approach includes, but is not limited to, the observation, identification, description, experimental investigation and theoretical explanation of natural phenomena. To these ends the scientific method is crucial, providing the rules for concept formation, conduct of observations and experiments, model-building, and validation of hypotheses by empirical means.

To satisfy the Natural Sciences requirement, students must select one course from each of the two subgroups. At least one of these courses must include a laboratory experience equivalent to at least one laboratory credit hour.

Subgroup II-A: Descriptive Sciences (3 hours)
Select from the following:
- ANT 110 - Meet Your Ancestors and Other Distant Relatives 3(3-0)
- ANT 171 - Human Origins: Introduction to Physical Anthropology 3(3-0)
- ANT 173 - Laboratory in Physical Anthropology 1(0-2)
- AST 111 - Astronomy 3(3-0)
- AST 112 - Introduction to Astronomical Observations 1(0-2)
- BIO 101 - General Biology 3(2-2)
- BIO 110 - Concepts of Biology 4(3-3)
- BIO 151 - Human Biology 3(3-0)
- BIO 165 - Life Science for Elementary Teachers 4(3-3)
- BIO 240 - Conservation of Natural Resources 3(3-0)
- FNS 370 - Nutrition 3(3-0)
- GEL 100 - Introduction to Earth Systems 3(2-2)
- GEL 101 - Physical Geology 3(3-0)
- GEL 102 - Physical Geology Laboratory 1(0-2)
- GEL 105 - Dangerous Planet 3(3-0)
- GEL 205/GE0 205 - Oceanography 3(3-0)
- GEL 230 - Prehistoric Life 3(3-0)
- GEO 105 - Physical Geography 3(2-2)
- GEO 120QR - Environmental Geography 3(3-0)
- GEO 205/GE0 205 - Oceanography 3(3-0)
- HON 203 - Honors Descriptive Science: First Year Seminar 3(3-0)
- MET 101QR - Our Changing Climate 3(3-0)

These II-A courses satisfying the Group II laboratory requirements: ANT 173, AST 112, BIO 101, BIO 110, BIO 165, GEL 100, GEL 102, GEO 105.

This II-A course is approved for offering as WI: HON 203.

Subgroup II-B: Quantitative and Mathematical Sciences (3 hours)
It is recommended that the Mathematics Competency be completed before enrolling in a Subgroup II-B course.
Select from the following:
- BIO 105QR - Introductory Quantitative Biology 3(2-2)
- CHM 101 - Armchair Chemistry 3(2-2)
- CHM 112 - Chemistry and Society Laboratory 1(0-3)
- CHM 120 - Survey of Chemistry 4(4-0)
- CHM 127 - Introductory Chemistry Laboratory 1(0-2)
- CHM 131 - General Chemistry I 4(3-3)
- CPS 180 - Principles of Computer Programming 3(3-0)
- GEL 130QR - Earth Processes 3(2-2)
- GEO 203QR - Introduction to Geographic Information Science 3(2-2)
- HON 204 - Honors Quantitative and Mathematical Science: First Year Seminar 3(3-0)
- MET 140 - Severe and Unusual Weather 3(3-0)
- MTH 113 - Mathematics: A Modeling Approach 3(3-0)
- MTH 132 - Calculus I 4(4-0)
- PHL 140 - Introduction to Logic 3(3-0)
- PHS 101 - Survey of Physical Science 3(3-0)
- PHS 151 - Introductory Physical Science 1(3-2-2)
- PHY 100 - Conceptual Physics 3(3-0)
- PHY 110 - Physics of Sports 3(3-0)
- PHY 127 - Table Top Physics 1(0-2)
- PHY 130QR - College Physics I 4(4-0)
- PHY 170 - College Physics Laboratory I 1(0-2)
- PHY 175 - University Physics Laboratory I 1(0-2)
- STA 382QR - Elementary Statistical Analysis 3(3-0)

These II-B courses satisfy the Group II laboratory requirements:
- BIO 105QR, CHM 101, CHM 112, CHM 127, CHM 131, GEL 130QR, PHS 151, PHY 127, PHY 170, PHY 175.

This II-B course is approved for offering as WI: HON 204.

Mathematics Competency: MTH or STA courses listed in Group II-B may also count for the Mathematics Competency Requirement if not counted for the QR requirement.

C. Group III - Social Sciences (6 hours)
The social sciences are defined as those fields of knowledge and study that explore and examine the social dimension and, where appropriate, the physical environment of human life. In these studies, an attempt is made to understand the behavior of individuals, groups, and institutions and, where possible, to establish scientifically-valid propositions. To satisfy the Social Sciences requirement, students must select one course from each of the two subgroups.

Subgroup III-A: Behavioral Sciences (3 hours)
Select from the following:
- CDO 130 - Normal Speech and Language Acquisition 3(3-0)
- ECO 222QR - Behavioral Economics 3(3-0)
- HDF 100 - Lifespan Development 3(3-0)
- HDF 247 - Introduction to Gerontology 3(3-0)
- HON 205 - Honors Behavioral Sciences: First Year Seminar 3(3-0)
- IND 332 - Human Shelter and Environment 3(3-0)
- PSC 101 - Political Behavior 3(3-0)
- PSY 100 - Introduction to Psychology 3(3-0)
- SOC 201 - Social Psychology 3(3-0)

This III-A course is approved for offering as WI: HON 205.

Subgroup III-B: Studies in Social Structures (3 hours)
Select from the following:
- ANT 120 - Ancient Insights into Current Crises 3(3-0)
- ANT 170 - Cultural Anthropology 3(3-0)
- ANT 200 - Education and Culture 3(3-0)
- ANT 205/SOC 205 - Social Justice in a Global Society 3(3-0)
- BCA 265QR - Understanding Media Measurement 3(3-0)
- BLR 202 - Legal Environment of Business 3(3-0)
ECO 150 - Current Economic Problems 3(3-0)
ECO 201 - Principles of Macroeconomics 3(3-0)
ECO 202 - Principles of Microeconomics 3(3-0)
ENG 175 - The Nature of Language 3(3-0)
FMD 252 - Dress and Culture 3(3-0)
GEO 121 - Cultures of the World 3(3-0)
GEO 317 - Economic Geography 3(3-0)
HDF 212 - Families in Cultural Perspective 3(3-0)
HON 206 - Honors Studies in Social Structures: First Year Seminar 3(3-0)
HST 106 - Twentieth Century: Western World Issues 3(3-0)
HST 111 - The Quest for Liberty: The United States 1865 3(3-0)
HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)
HST 210 - United States History through Michigan Eyes 3(3-0)
HST 221 - Growing Up in America 3(3-0)
HST 321 - United States Social History since 1865 3(3-0)
JRN 101 - Media and Society 3(3-0)
JRN 205 - Shaping the Media 3(3-0)
MGT 357 - Women in Management 3(3-0)
PSC 100 - Introduction to Political Science 3(3-0)
PSC 105 - Introduction to American Government and Politics 3(3-0)
PSC 150 - Introduction to International Relations 3(3-0)
PSC 151 - The U.S. and the World 3(3-0)
PSC 242 - Introduction to Comparative Politics 3(3-0)
PSC 261 - State and Local Government 3(3-0)
SOC 100 - Introductory Sociology 3(3-0)
SOC 205/ANT 205 - Social Justice in a Global Society 3(3-0)
SOC 221 - Social Problems 3(3-0)
WST 100 - How Gender Affects Our Lives 3(3-0)

Note: BLR 202, ECO 201, and ECO 202 may not be applied toward the University Program requirements if a student is earning the Bachelor of Science in Business Administration degree.

These III-B courses are approved for offering as Wi: BLR 202; ENG 175; HON 206, HST 106, 111, 112, 210, 221, 321; JRN 205; PSC 150.

D. Group IV - Studies in Culture and Diversity (6 hours)

This group focuses on the exploration of cultures and societies outside of the United States. It's designed to fulfill the requirement of Subgroup IV-B. Students planning to study abroad must apply through the Office of Study Abroad. For more information, please see the Bulletin in which you initially enrolled (or if you have questions about which Bulletin your course year is, please visit the General Education Program website at https://www.cmich.edu/office_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx).

Pre-Approved Courses:
BIS 342 - Intercultural Business Communication Abroad 1-9(Spec)
HDF 320 - HDF International Service Learning 3-6(Spec)

OR

Option 3: Complete three credits of applied coursework (e.g., internship, practicum, service-learning project) outside the United States. Students must apply through the Office of Study Abroad. For more information, please visit the General Education Program website at https://www.cmich.edu/office_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx).

OR

Option 4: Select from the following:
ANT 175 - Archaeology of the Americas 3(3-0)
ANT 321 - Cultures of Latin America 3(3-0)
ANT 322 - Cultures of Africa 3(3-0)
ANT 324 - Cultures of the South Pacific 3(3-0)
ARB 101 - Elementary Arabic I 4(4-0)
ARB 102 - Elementary Arabic II 4(4-0)
CGL 300 - Study Abroad Experience 1-6(Spec)
CHN 101 - Elementary Chinese I 4(4-0)
CHN 102 - Elementary Chinese II 4(4-0)
ECO 281 - Economic Development of the Pacific Rim 3(3-0)
ENG 262 - European Literatures 3(3-0)
ENG 328 - Native American Literature and Film 3(3-0)
FRN 101 - Elementary French I 4(4-0)
FRN 102 - Elementary French II 4(4-0)
FRN 201 - Intermediate French I 4(4-0)
FRN 202 - Intermediate French II 4(4-0)
GEO 373 - Latin America 3(3-0)
GER 101 - Elementary German I: Language and Culture 4(4-0)
GER 102 - Elementary German II: Language and Culture 4(4-0)
GER 201 - Intermediate German I 4(4-0)
GER 202 - Intermediate German II 4(4-0)
HON 207 - Honors Studies in Global Cultures: First Year Seminar 3(3-0)
HST 163 - The Latin American Experience 3(3-0)
HST 168 - Modern East Asia 3(3-0)
HST 176 - The Africa Experience 3(3-0)
HST 236 - Babylon and Beyond: Ancient Civilizations of the Near/Middle East 3(3-0)
HST 237 - Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)
JPN 101 - Elementary Japanese I 4(4-0)
JPN 102 - Elementary Japanese II 4(4-0)
JPN 201 - Intermediate Japanese I 4(4-0)
JPN 202 - Intermediate Japanese II 4(4-0)
JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)
LAT 101 - Elementary Latin I 4(4-0)

(continued)
Central Michigan University recognizes the potential of for applied experiences to impart an understanding of racism and cultural diversity within the United States.

Therefore, three options are available for meeting the requirement for Subgroup IV-C: Studies in Racism and Cultural Diversity in the United States:

Option 1: Complete at least three credits of study in a CMU faculty-led course that involves interacting with one or more of the major groups that experience both racism and invidious discrimination in the United States.

To have the course count for credit in Subgroup IV-C: Studies in Racism and Cultural Diversity within the United States, the faculty member leading the seminar must have approval from the General Education Committee prior to the experience. Information on completing the application can be found on the General Education website (https://www.cmich.edu/office_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx).

OR

Option 2: Complete three credits of applied coursework (e.g., internship, practicum, service-learning project) with one or more of the major groups that experience both racism and invidious discrimination in the United States.

Students must sign up with a faculty member who oversees the experience and, after completing the course, submit the proposal for credit in Subgroup IV-C: Studies in Racism and Cultural Diversity within the United States for evaluation by the General Education Committee.

Information on completing the application can be found on the General Education Program website (https://www.cmich.edu/office_provost/AcademicAffairs/gened/Pages/Applied-Experiences.aspx).

OR

Option 3: Select from the following:

- ANT 320 - North American Indian Cultures 3(3-0)
- ANT 365 - Current American Indian Issues 3(3-0)
- BLR 222 - The Search for Racial Justice through Law 3(3-0)
- ENG 329 - African American Literature 3(3-0)
- HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)
- HON 208 - Honors Studies in Racism and Diversity in the U.S.: First Year Seminar 3(3-0)
- HST 323 - History of Native Americans 3(3-0)
- HST 324 - African American History to 1877 3(3-0)
- HST 325 - African American History, 1877-Present 3(3-0)
- JRN 380 - Racial and Cultural Diversity: Mass Media's Role 3(3-0)
- LAR 145 - Racism and Discrimination in America through Dialogue 3(3-0)
- PHL 345/PSC 325/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)
- PSC 325/PHL 345/SOC 345 - The Civil Rights Movement 3(3-0)
- REL 240 - African-American Religion 3(3-0)
- REL 245 - Religions of the World and the Civil Rights Movement 3(3-0)
- REL 240 - African-American Religion 3(3-0)
- SOC 323 - Racism and Inequality 3(3-0)
- SOC 345/PSC 325/REL 345 - The Civil Rights Movement 3(3-0)

These IV-C courses are approved for offering as WI: BLR 222, HON 208; HST 323, 324, 325.

To complete 27 hours, select one additional course from any University Program subgroup.

Students may only repeat a designator once in fulfilling their University Program requirements.

E. Additional Guidelines for the University Program

1. Students who meet the Subgroup IV-B Studies in Global Cultures requirement by completing their first foreign language course numbered 102 or above may opt to meet the University Program requirements by taking 24 credits, as opposed to the typical 27 credits; that is, by taking one course from each of the seven remaining Subgroups.

2. Students who receive credit for either option 1, 2, or 3 for Subgroup IV-B Studies in Global Cultures may opt to meet the University Program requirements by taking 24 credits, as opposed to the typical 27 credits; that is, by taking one course from each of the seven remaining subgroups.

3. International students enrolled in an undergraduate degree program meet the University Program Subgroup IV-B Studies in Global Cultures requirement after successfully completing at least one semester of full-time study at Central Michigan University.

4. No more than two courses or seven hours of University Program credit may be taken as CR/NC.

5. Unless a degree or major specifically prohibits it, courses required for a specific major, minor, or other degree may also be used to satisfy University Program requirements, provided that the courses are also on the list of approved University Program courses.

6. CLEP General Examination credit, credit from a Prior Learning Assessment, or retroactive credit may not be used to satisfy any University Program requirements.

7. Students may only repeat a designator once in fulfilling their University Program requirements.

For more information, consult the General Education website at https://www.cmich.edu/office_provost/AcademicAffairs/gened
IV. General Education Program Requirements for Students with Transfer Credit

A. MACRAO/MTA Agreement

Students who present a transcript from a community college in Michigan documented as having satisfied the MACRAO or MTA Agreement will also have satisfied the University Program portion of the general education requirements at CMU, as well as the requirement for completing six credits of Writing Intensive coursework within the University Program.

B. University Program Transfer Block Option

Students not satisfying the MACRAO or MTA Agreement may satisfy the requirements for the University Program, as well as the requirement for completing six credits of Writing Intensive coursework within the University Program under this option. Students would be eligible to complete the UP through the Transfer Block option if they have completed 15 or more hours as designated below and have 12 or fewer hours remaining:

1. **Group I - Humanities**
   A minimum of six credit hours of coursework from at least two of the following disciplines: ENG (English, not including composition courses), ART (Art), BCA (Broadcasting), HST (History), MUS (Music), PHL (Philosophy), REL (Religion), TAI (Drama), HUM (General Humanities).

2. **Group II - Natural Sciences**
   A minimum of six credit hours of coursework from at least two of the following disciplines: AST (Astronomy), BIO (Biology), CHM (Chemistry), ESC (Earth Science), GEL (Geology), HSC (Health Promotion and Rehabilitation), MET (Meteorology), MTH (Mathematics), PHY (Physics), PHS (Physical Sciences), SCI (General or Natural Science), STA (Statistics). One course must include a laboratory section.

3. **Group III - Social Sciences**
   A minimum of six credit hours of coursework from at least two of the following disciplines: ANT (Anthropology), CDO (Communication Disorders), HEV (Human Environmental Studies: AMD/FMD, FNS, IND, HDF), PSC (Political Science), PSY (Psychology), SOC (Sociology), ECO (Economics), GEO (Geography), JRN (Journalism), SSC (Social Science).

4. **Group IV - Global Cultures and Diversity**
   Three credit hours of a specific course that applies to Subgroup IV-B: *Studies in Global Cultures* and 3 credit hours of a specific course that applies to Subgroup IV-C: *Studies in Racism and Diversity in the United States*.

C. Additional Guidelines for Students with Transfer Credit

1. Students who have no more than 12 credit hours remaining on the University Program Transfer Block Option with completed coursework as distributed above (and prior to their first full-time enrollment at CMU) may use the University Program Transfer Block Option. For purposes of this rule, “full-time” means at least 12 credit hours attempted in a single semester. Any additional courses needed to meet the distribution requirements outlined above and to reach a total of 24-27 credit hours must be chosen from the appropriate categories within the list of approved University Program courses. For example, any deficiency in transfer credit for Group I – Humanities must be remedied by completing a University Program course listed under Subgroup I-A: *Human Events and Ideas* or Subgroup I-B: *The Arts*. Any deficiency in transfer credit for Group II – Natural Sciences must be remedied by taking a course listed under Subgroup II-A: *Descriptive Sciences* or Subgroup II-B: *Quantitative and Mathematical Sciences*. In choosing University Program courses to complete 24-27 credit hours, students must also follow the rules that govern selection of more than one course with the same designator.

2. Students not eligible to follow the Transfer Block option as described above will be required to complete the entire University Program. Comparable coursework at another college or university may be transferred into the University Program on a course-by-course basis when it transfers as equivalent to a CMU course approved as a University Program course or has content deemed congruent with the goals of the University Program and courses approved on the University Program.

3. Competency requirements apply to all students regardless of transfer status, including completion of some competencies before 56 credit hours. Transfer students who enter the University with 44 or more credit hours must complete competencies by the end of the second semester at CMU. You must read carefully the General Education Program Competency section of this Bulletin.

4. Transfer students who have no comparable coursework at another college or university are required to meet the General Education Program requirements in the preceding sections.
A major is the field of study in which you specialize while earning your university degree. Often degree requirements include an appropriate minor study area to complement the major. Through its departments, CMU provides majors and minors in a wide variety of academic and professional disciplines. Interdepartmental and interdisciplinary majors and minors are also offered.

Requirements for majors and minors are listed in the individual departmental, interdepartmental, and interdisciplinary sections of this Bulletin. A major consists of at least thirty semester hours; a minor, at least twenty semester hours. The courses must be chosen subject to the approval of your advisor for that major or minor. Degree requirements detail which majors and minors are permitted on each degree. Central Michigan University credits included in majors and minors used to meet graduation requirements must average 2.0 or better. You should note, however, that some majors and minors have higher grade point requirements. Be sure to check the Admissions, Retention and Termination Standards for your major and/or minor.

When deciding on a major, you should contact the departmental office of that major to be assigned an advisor. (Example: history majors should contact the Department of History.) You and your major advisor will discuss your educational goals and you will complete a “Major Authorization Form.” This form originates in the department of your major and details course requirements for your major (and concentration in the major when applicable*). It is signed by you and the advisor for your major. If you are majoring in an interdisciplinary or interdepartmental area or special program, this form is obtained from the appropriate advisor. The Course Search & Registration lists departments and interdisciplinary and interdepartmental advisors for majors and minors. Students need to officially declare their major by the time they earn 56 hours. To be assigned a minor advisor, or to complete a “Minor Authorization Form,” you will follow the same procedures to those listed above.

* A concentration is a distinct and specialized program of study authorized within a student’s major. A minimum of twelve hours is required for an undergraduate concentration. All university-approved concentrations will be listed on the student’s transcript.

Policies Concerning Majors and Minors

The following policies concerning majors and minors may apply to your degree work at CMU.

B.S. in Ed. If you are following either the Elementary or Secondary Certification under the Bachelor of Science in Education degree, the major and minor presented for certification must be in different subjects.

Non-Teaching. Under a non-teaching degree the minor may not have the same name as the major.

Courses fulfilling more than one requirement. Hours which are counted toward departmental majors and minors may also be counted as partial fulfillment of other departmental, interdisciplinary and/or interdepartmental major or minor requirements, provided that: a) the student offers the required number of semester hours for graduation, and b) no course is counted toward both a major and a minor with the same name. This rule does not apply to majors and minors on the B.S. in Ed. degree.

Undergraduate Certificates. Students may not receive an Undergraduate Certificate with the same name as their major, minor, concentration or option OR due to the fact that the subset of courses is already on a student’s major, minor, concentration, or option.

Degree, major or minor from another Bulletin. Most students will complete requirements for graduation following the Bulletin in effect at the time of their initial registration. A Bulletin published after initial registration may be chosen by the student when it is to his or her advantage. However, no student may graduate under the requirements of a Bulletin published more than seven calendar years prior to the date of the student’s graduation. Students following a program which leads to teacher certification and should consult the section in this Bulletin titled “Standards Leading to Teacher Certification.” An undergraduate student completing graduation and degree requirements on a degree program appearing in any CMU Bulletin may elect either majors or minors on that same degree in a subsequent CMU Bulletin. This option is available when approved by an appropriate departmental advisor and noted on the student’s major or minor authorization form.

Additional major or minor. In satisfying major and minor requirements, you may request authorization of an additional major or minor listed in the Bulletin even if it is not listed as acceptable for your chosen degree. Upon completion of your degree and graduation requirements the additional major or minor, if successfully completed, will be recorded.

Undergraduate Subtitled Courses. Credit earned in undergraduate courses titled Studies, Topics, Issues, or Workshops (including Special, Advanced, or Selected) may not constitute more than 50 percent of an undergraduate major or minor. Graduate and undergraduate courses which are subject to limitation under the policy on unspecified content or variable credit are listed in each department.

Majors and Minors Chart

The following chart identifies available majors and minors at CMU and lists the degree program(s) to which the majors may be applied. The chart indicates teaching and non-teaching majors and minors based on the degree earned; e.g., if you want to teach, teaching certification is usually pursued on the B.S. in Ed. degree. There are, however, several degrees (B.A., B.S., or B.A.) that allow you to earn teaching certification for those majors and minors that indicate certification is available. Consult your departmental advisor.

Sometimes majors or minors are not listed under the titles for which you are searching. For example, there is a Physical Education major for students who want teaching certification and a Sport Studies major for those who want physical education studies without teaching certification. There is a Speech major for students who want communications studies with teaching certification, and a Communication major for those who want communications studies without teaching certification. Students of speech-language pathology need to look under communication disorders. Students pursuing studies in hotel and restaurant management want the Hospitality Services Administration major. The music department offers a variety of specialties, but each is studied under the Music major. If you can’t find a particular major or minor on this chart by name, use the index in this bulletin to see if there is a department that offers a program in which you are interested.

To find the degree and graduation requirements for any specific major or minor listed below, consult the department sections. Direct your questions concerning any major or minor to the appropriate department.

A listing of departmental, interdisciplinary, and interdepartmental advisors may be found by consulting a current Course Search & Registration on the Registrar’s website.
<table>
<thead>
<tr>
<th>Major or Minor</th>
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<td>(offers concentrations)</td>
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<th>Major or Minor</th>
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</tr>
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<tbody>
<tr>
<td>Major or Minor</td>
<td>(and applicable degrees)</td>
<td>May not be available on all degrees. Please check degree pages to find where minor is applicable and discuss your choice with your major advisor.</td>
</tr>
</tbody>
</table>

| Accounting | Yes (BSBA) | Yes |
| Actuarial Science | Yes (BA; BS) | No |
| Administration | Yes (BAA; BS) (Global Campus only) | No |
| Advertising | Yes (BA; BS) | Yes |
| American Sign Language | No | Yes |
| Anthropology | Yes (BA; BS) | Yes |
| Apparel Merchandising & Design | (See Fashion Merchandising and Design) | Yes |
| Applied Business Communication | No | Yes |
| Art * See also Visual Arts Education | Yes (BAA; BFA) | Yes |
| Art History | Yes (BA) | Yes |
| Athletic Coaching | No | Yes |
| Athletic Training | Yes (BSAT) | No |
| Biochemistry | Yes (BA; BS) | No |
| Biology | Yes (BSEd: Secondary or Secondary with Emotional/Cognitive Impairment Endorsement) |

| Biology/Biomedical Science | Yes (BA; BS) | No |
| Biology/General Option | Yes (BA; BS) | No |
| Biology/Microscopy Option | Yes (BA; BS) | No |
| Biology/Natural Resources Option | Yes (BA; BS) | No |
| Biology/Pregraduate, Preprofessional Option | Yes (BA; BS) | No |
| Broadcast & Cinematic Arts | Yes (BA; BAA; BFA; BS) | Yes |
| Business Administration | (See General Business and International Business) | Yes |
| Chemistry | Yes (BA; BS; BSEd: Secondary or Secondary with Emotional or Cognitive Impairment Endorsement) |

| Chemistry-Physics | Yes (BSEd: Secondary or Secondary with Emotional or Cognitive Impairment Endorsement) | No |
| Child Development | Yes (BA; BAA; BS) | Yes |
| Cinema Studies | No | Yes |
| Communication Disorders | Yes (BA; BAA; BS) | Yes |
| Community Development* | Yes (B.S.) (Global Campus only) | Yes |
| Community Health Education | Yes (BA, BAA, BS) | No |
| Community Health | No | Yes |
| Computer Engineering | Yes (BScmpE) | No |
| Computer Science | Yes (BA; BS) | Yes |
| Construction Management | Yes (BSET) | No |
| Cultural and Global Studies | Yes (BA; BS) | Yes |
| Dance | No | Yes |
| Dietetics | Yes (BA; BS) | No |
| Early Childhood Development and Learning | Yes (BSEd: Elementary; BA; BAA; BS) | Yes |
| Earth Science | Yes (BSEd: Secondary or Secondary with Emotional/Cognitive Impairment Endorsement) |

| Economics | Yes (BA; BS; BSBA) | Yes |
| Electrical Engineering | Yes (BSEE) | No |
| Electronic Media Sales | No | Yes |
| English | Yes (BSEd: Secondary or Secondary with Emotional/Cognitive Impairment Endorsement) |

| English as a Second Language | Yes (BA, BS) | No |
| English Literatures, Language, and Writing | Yes (BA, BS) | Yes |
| Entrepreneurship | Yes (BAA) | Yes |
| Environmental Health and Safety | Yes (BA, BS) | No |
| Environmental Studies* | Yes (BA; BS) | Yes |
| Ethics, Values, and Society | No | Yes |
| Event Management | No | Yes |
| Exercise Science | Yes (BA, BAA, BS) | No |
| Family Studies | Yes (BA; BAA; BS) | Yes |
| Fashion Merchandising and Design* | Yes (BA; BAA; BS) | Yes |
| Finance | Yes (BSBA) | Yes |

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<table>
<thead>
<tr>
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</tr>
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<td></td>
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</tr>
<tr>
<td>French *</td>
<td>Yes (BA; BS; BSEd: Secondary)</td>
<td>Yes</td>
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<tr>
<td>General Business Administration *</td>
<td>Yes (BSBA)</td>
<td>No</td>
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<tr>
<td>General Management</td>
<td>Yes (BSBA)</td>
<td>Yes</td>
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<tr>
<td>Geographic Information Sciences</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Geography *</td>
<td>Yes (BA; BS; BSEd: Secondary or Secondary with Emotional or Cognitive Impairment Endorsement)</td>
<td>Yes</td>
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<td>Geology *</td>
<td>Yes (BA; BS)</td>
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<td>German</td>
<td>Yes (BA; BS; BSEd: Secondary)</td>
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<td>Gerontology</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Health Administration</td>
<td>Yes (BAA; BS)</td>
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<td>Health Fitness</td>
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<td>History</td>
<td>Yes (BA; BS; BSEd: Secondary or Secondary with Emotional/Cognitive Impairment Endorsement)</td>
<td>Yes</td>
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<td>Hospitality Services Administration*</td>
<td>Yes (BSBA)</td>
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<tr>
<td>Human Resources Management</td>
<td>Yes (BSBA)</td>
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<tr>
<td>Hydrogeology/Environmental Geology</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Individualized Studies</td>
<td>Yes (BIS)</td>
<td>No</td>
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<tr>
<td>Industrial Engineering Technology</td>
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<td>Industrial Technology</td>
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<td>Yes</td>
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<tr>
<td>Information Systems</td>
<td>Yes (BSBA)</td>
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<td>Information Technology</td>
<td>Yes (BA; BS) (Also offered through Global Campus)</td>
<td>Yes</td>
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<td>Integrated Leadership Studies</td>
<td>Yes (B.S.) (Global Campus only)</td>
<td>No</td>
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<td>Integrated Science</td>
<td>Yes (BSEd: Elementary or Secondary) (Also Global Campus)</td>
<td>Yes</td>
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<tr>
<td>Integrative Public Relations</td>
<td>Yes (BA; BAA; BS)</td>
<td>No</td>
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<tr>
<td>Interior Design</td>
<td>Yes (BA; BAA; BS)</td>
<td>Yes</td>
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<tr>
<td>International Business</td>
<td>Yes (BSBA)</td>
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<tr>
<td>International Business and Sustainable Development</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Journalism* (see also Photojournalism)</td>
<td>Yes (BA; BS)</td>
<td>Yes</td>
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<tr>
<td>Language Arts</td>
<td>Yes (BSEd: Elementary)</td>
<td>Yes</td>
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<tr>
<td>Law and Economics</td>
<td>Yes (BA; BS; BSBA)</td>
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<td>Leadership</td>
<td>No</td>
<td>Yes</td>
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<td>Leadership in Student Affairs</td>
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<tr>
<td>Legal Studies</td>
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<td>Yes</td>
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<tr>
<td>Logistics Management</td>
<td>Yes (BSBA)</td>
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<tr>
<td>Management</td>
<td>(See General Mgt. or Human Resources Mgt.)</td>
<td>Yes</td>
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<tr>
<td>Marketing *</td>
<td>Yes (BSBA)</td>
<td>Yes</td>
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<tr>
<td>Mathematics*</td>
<td>Yes (BA; BS; BSEd: Elementary, Secondary or Secondary with Emotional or Cognitive Impairment Endorsement)</td>
<td>Yes</td>
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<tr>
<td>Mechanical Engineering</td>
<td>Yes (BSME)</td>
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<td>Mechanical Engineering Technology</td>
<td>Yes (BSET)</td>
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<tr>
<td>Media Design, Production and Technology</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Meteorology</td>
<td>Yes (BS)</td>
<td>No</td>
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<td>Middle Level Education</td>
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<td>Yes</td>
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<td>Military Science</td>
<td>No</td>
<td>Yes</td>
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<td>Museum Studies</td>
<td>No</td>
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<tr>
<td>Music *</td>
<td>Yes (BA; BS; BMus; BMusEd)</td>
<td>Yes</td>
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<td>Music Theatre</td>
<td>Yes (BFA)</td>
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<td>Neuroscience</td>
<td>Yes (BS)</td>
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<td>Nutrition</td>
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<td>Outdoor and Environmental Education</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Personal Financial Planning</td>
<td>Yes (BSBA)</td>
<td>No</td>
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<tr>
<td>Philosophy</td>
<td>Yes (BA; BS)</td>
<td>Yes</td>
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<td>Photojournalism</td>
<td>Yes (BA; BS)</td>
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<td>Physical Education</td>
<td>Yes (BSEd: Secondary or Secondary with Emotional or Cognitive Impairment Endorsement)</td>
<td>Yes</td>
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<td>Physics *</td>
<td>Yes (BA; BS; BSEd: Secondary)</td>
<td>Yes</td>
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<tr>
<td>Political Science *</td>
<td>Yes (BA; BS) (Also offered through Global Campus)</td>
<td>Yes</td>
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<tr>
<td>Major or Minor</td>
<td>Major (and applicable degrees)</td>
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<td><strong>Majors and Minors</strong></td>
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<td></td>
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<tr>
<td>Product Design Engineering Technology</td>
<td>Yes (BSET) (Also offered through Global Campus)</td>
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<td>Professional Sales</td>
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<td>Psychology</td>
<td>Yes (BA; BS) (Also offered through Global Campus)</td>
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<td>Public Administration</td>
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<td>Public Affairs</td>
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<td>Public History</td>
<td>Yes (BA, BS)</td>
<td>No</td>
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<tr>
<td>Purchasing &amp; Supply Management</td>
<td>Yes (BSBA)</td>
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<tr>
<td>Reading in Elementary Grades</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Real Estate: Development and Finance</td>
<td>Yes (BSBA)</td>
<td>Yes</td>
</tr>
<tr>
<td>Recreation *</td>
<td>Yes (BA; BAA; BS)</td>
<td>Yes</td>
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<tr>
<td>Religion</td>
<td>Yes (BA; BS)</td>
<td>Yes</td>
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<tr>
<td>Retailing</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>School Health Education</td>
<td>Yes (BSEd: Secondary, or Secondary with Emotional or Cognitive Impairment Endorsement)</td>
<td>Yes</td>
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<tr>
<td>Science (see also Integrated Science)</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Social Science</td>
<td>Yes (BA; BS)</td>
<td>No</td>
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<tr>
<td>Social Studies*</td>
<td>Yes (BSEd: Elementary, Secondary)</td>
<td>No</td>
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<td>Social Work</td>
<td>Yes (BSW)</td>
<td>No</td>
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<tr>
<td>Sociology *</td>
<td>Yes (BA; BS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Spanish*</td>
<td>Yes (BA; BS; BSEd: Secondary)</td>
<td>Yes</td>
</tr>
<tr>
<td>Special Education</td>
<td>(see Teachers of Students with Emotional or Cognitive Impairment Endorsement)</td>
<td>Yes</td>
</tr>
<tr>
<td>Speech</td>
<td>Yes (BSEd: Secondary)</td>
<td>Yes</td>
</tr>
<tr>
<td>Speech with BCA Emphasis</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Sport Management</td>
<td>Yes (BA; BAA; BS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Statistics</td>
<td>Yes (BA; BS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Substance Abuse Education: Prevention, Intervention, and Treatment</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Teachers of Students w/ Emotional Impairment</td>
<td>Yes (BSEd: Elementary or BSEd: Secondary with Emotional or Cognitive Impairment Endorsement)</td>
<td>No</td>
</tr>
<tr>
<td>Teachers of Students w/ Cognitive Impairment</td>
<td>Yes (BSEd: Elementary or BSEd: Secondary with Emotional or Cognitive Impairment Endorsement)</td>
<td>No</td>
</tr>
<tr>
<td>Theatre &amp; Interpretation*</td>
<td>Yes (BA; BS, BFA)</td>
<td>Yes</td>
</tr>
<tr>
<td>Visual Arts Education</td>
<td>Yes (BSEd: Secondary)</td>
<td>No</td>
</tr>
<tr>
<td>Women and Gender Studies</td>
<td>Yes (BA; BAA; BS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Youth Studies</td>
<td>No</td>
<td>Yes</td>
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</tbody>
</table>
A credit-bearing Undergraduate Certificate is awarded in recognition of a prescribed pattern of courses and/or experiences when taken together to produce an emphasis that gives a student a competence which is noted on the transcript.

Undergraduate Certificates are able to stand alone, or be part of another curriculum. Some credit-bearing certificate programs are restricted to degree-seeking students only.

Students cannot receive a certificate with the same name as their major, minor, concentration or option OR due to the fact that the subset of courses is already on the student's major, minor, concentration, or option.

Undergraduate certificates will be posted to the student's transcript upon their completion when all the following conditions have been met. Undergraduate certificates are only noted on the transcripts, no additional form of recognition will be distributed. Students do not participate in commencement ceremonies.

The candidate for an Undergraduate Certificate shall:

1. Matriculate as a regular undergraduate student or a Non-degree Special Admission student for on-campus enrollment.
2. Complete the undergraduate certificate as authorized in consultation with a departmental/unit advisor.
3. Six (6) hours must be at the 300-level or above for a 12- to 15- credit hour certificate and nine (9) hours for a 16- to 18-hour certificate must be earned from Central Michigan University.
4. Present a cumulative grade point average of 2.00 (C) or higher in the Undergraduate Certificate. All courses must be letter graded with the exception of those courses exclusively offered credit/no credit.
5. File the Undergraduate Certificate Application with the Registrar's Office, 212 Warriner, by the end of the third week of classes of the term in which the student will complete the certificate.

For Undergraduate Certificates offered by Global Campus, see the Global Campus Bulletin for information.
Interdisciplinary Majors, Minors, and Undergraduate Certificates

Discover how to become a future leader and innovator through interdisciplinary studies.

Interdisciplinary programs draw from two or more academic disciplines that work together to create a powerful learning experience emphasizing integrative learning, critical thinking, essential questioning and creative problem solving.

Benefits of Interdisciplinary study:
- Discover the value of integrating the study of various academic disciplines suited to your life-long learning interests.
- Embrace new ideas that you couldn't imagine while studying just one subject in isolation from others.
- Become an interdisciplinary thinker who analytically and creatively embraces new and futuristic ideas.
- Develop collaboration skills while working with others who have different perspectives on problems than yours.
- Prepare for graduate and professional study, and for careers in new and emerging fields.

This section lists majors and minors that are interdisciplinary. The majority of majors and minors are described within their appropriate departments. Consult the Index of this Bulletin under “Majors” or “Minors” for the name of the major or minor you want to find. Reminder: when choosing a teaching major or minor, you must have a 2.7 GPA to be approved for student teaching.

Cultural and Global Studies Major
B.A.; B.S. degrees

The Cultural and Global Studies Major is designed with three important purposes in mind. It will equip students with broad understanding of the contemporary global context and its implications for human experience and action. It will help students to gain deeper knowledge and understanding of at least one culture other than their own. It will also equip students with critical tools in analysis, criticism, and communication that they can use to assess and navigate cultural differences. The knowledge and competencies gained in this program will provide students with critical skills sought by 21st-century employers in a wide range of fields, including business, health professions, government, non-governmental organizations, and social service agencies. This program can also prepare students for graduate study in their field of interest.

The specific design of the major is as follows:

Required Courses I (6 hours)
ANT 170 - Cultural Anthropology 3(3-0)
CGL 496 - Seminar in Cultural and Global Studies 3(3-0)

Required Courses II (16-18 hours)
Study in Depth
Select one of the following Undergraduate Certificate Programs (See Undergraduate Certificates in the index for page number):
- African and African Diaspora Studies
- American Indian Studies
- Cultural Competency
- East Asian Studies
- European Studies
- Latin American and Latino Studies
- Middle East and Islamic Studies

Required Courses III (6-8 hours)
Select one of the following options:

Option 1 (6-8 hours)
Language Study in Area of Certification
Select in consultation with a Cultural and Global Studies program advisor.

Option 2 (6-7 hours)
Select from the following:
ANT 205/SOC 205 - Social Justice in a Global Society 3(3-0)
ENG 333 - Literatures of Non-Western Cultures 3(3-0)
HST 201 - World History to 1500 3(3-0)
HST 202 - World History since 1400 3(3-0)
PSC 150 - Introduction to International Relations 3(3-0)
PSC 242 - Introduction to Comparative Politics 3(3-0)
REL 101 - World Religions: An Introduction to the Study of Religion 3(3-0)

Note: Students may substitute appropriate courses, including a single 3-4 hour language course, with a global focus outside the area of certification in consultation with a CGL advisor.

Required Courses IV (3 hours)
Global Citizenship
The Global Citizenship requirement may be fulfilled in one of two ways:
- a. completion of a study abroad experience of at least 3 credit hours;
- b. completion of an internship or service learning course that furthers the learning goals of this major, chosen in consultation with and approved by a CGL advisor.

Total: 31-35 semester hours

Cultural and Global Studies Minor
B.A.; B.A.A.; B.S. degrees

The Cultural and Global Studies Minor is designed with three important purposes in mind. It will equip students with broad understanding of the contemporary global context and its implications for human experience and action. It will help students to gain deeper knowledge and understanding of at least one culture other than their own. It will also equip students with critical tools in analysis, criticism, and communication that they can use to assess and navigate cultural differences. The knowledge and competencies gained in this program will provide students with critical skills sought by 21st-century employers in a wide range of fields, including business, health professions, government, non-governmental organizations, and social service agencies. This program can also prepare students for graduate study in their field of interest.

Required Courses I (6 hours)
ANT 170 - Cultural Anthropology 3(3-0)
CGL 496 - Seminar in Cultural and Global Studies 3(3-0)

(continued)
Required Courses II
Study in Depth
Select one of the following Undergraduate Certificate programs (See Undergraduate Certificates in the index for page number):
- African and African Diaspora Studies
- American Indian Studies
- Cultural Competency
- East Asian Studies
- European Studies
- Latin American and Latino Studies
- Middle East and Islamic Studies

Total: 22-24 semester hours

Earth Science Major
B.S. in Ed. degree, Provisional Secondary Certification or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

This major offers a balanced interdisciplinary program of coursework in the earth and space sciences for students planning to teach middle and high school earth science. The required courses have been selected to prepare students to teach the earth and space science content in the Michigan Curriculum Framework including strong preparation in science inquiry through laboratory and field methods experiences. Students are encouraged to work closely with an advisor throughout their program. Courses, where appropriate, may be double counted with the University Program and the degree requirements on the Bachelor of Science in Education.

ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS

All courses must be taken for a grade, not for credit/no credit even if offered as an option. Grades in courses transferred to CMU will count in the calculation of the major GPA. A minimum 2.7 GPA (B-) must be earned in all teaching majors.

In addition to the courses listed below, each student must receive training in safe chemical use and storage and the care of living things from trained personnel prior to applying for student teaching. Students should check the Integrated Science website for the training workshop schedule. There is no enrollment charge to the students for the training and no credit hours earned. The training is generally offered once during the Fall semester and twice during the Spring semester. The Interdisciplinary Science Education Council oversees these training workshops.

This major is administered by the Interdisciplinary Science Education Council. Students are cautioned that they must have 36 semester hours on their Earth Science major that are not counted on any other major or minor for teaching certification.

Required Courses I (27 hours)
AST 111 - Astronomy 3(3-0)
AST 112 - Introduction to Astronomical Observations 1(0-2)
GEL 201 - Earth History 3(2-2)
GEL 290 - Introduction to Geologic Investigation 3(2-2)
GEL 320 - Earth Materials 3(3-3)
GEL 325 - Glacial Morphology and Landforms 3(3-0)
GEO 201 - Weather and Climate 4(4-0)
GEO/GEL 205 - Oceanography 3(3-0)
MET 301 - Climatology and Climate Change 3(3-0)
SCI 490 - Contemporary Issues in Earth Science 1(1-0)

Required Courses II (3 hours)
Select one of the following:
ESC 400 - Earth Science Education 3(2-2)
SCI 400 - Teaching Integrated Science in Secondary School 3(2-2)

Required Courses III (3 hours)
Select one of the following:
GEL 100 - Introduction to Earth Systems 3(2-2)
GEL 130QR - Earth Processes 3(2-2)

Required Courses IV (3 hours)
Select one of the following:
GEL 413 - Geomorphology 3(3-0)
GEO 210 - Landforms 3(2-2)

Required Courses V (3 hours)
Select one of the following:
GEO 304 - Earth Resources 3(3-0)
GEO 330 - Resource Perception and Utilization 3(3-0)

Other Requirements I (10 hours)
CHM 120 - Survey of Chemistry 4(4-0)
CHM 127 - Introductory Chemistry Laboratory I 1(0-2)
PHY 130QR - College Physics I 4(4-0)
PHY 170 - College Physics Laboratory I 1(0-2)

Other Requirements II (0-6 hours)
Select one of the following options in consultation with an advisor:
Option A (6 hours)
MTH 107 - College Algebra 3(3-0)
MTH 109 - Plane Trigonometry 3(3-0)
Option B (0 hours)
Mathematics placement equivalent to precalculus (MTH 130) or above.

Total: 49-55 semester hours
(39 hours of required Earth Science courses)

Earth Science Minor
B.S. in Ed. degree, Provisional Secondary Certification or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

This minor offers a balanced interdisciplinary program of coursework in the earth and space sciences for students planning to teach middle and high school earth science. The required courses have been selected to prepare students to teach the earth and space science content in the Michigan Curriculum Framework including strong preparation in science inquiry through laboratory and field methods experiences. Students are encouraged to work closely with an advisor throughout their program. Courses, where appropriate, may be double counted with the University Program and the degree requirements on the Bachelor of Science in Education.

ADMISSION REQUIREMENTS; RETENTION & TERMINATION STANDARDS

All courses must be taken for a grade, not for credit/no credit even if offered as an option. Grades in courses transferred to CMU will count in the calculation of the major GPA. A minimum 2.7 GPA (B-) must be earned in all teaching majors.

In addition to the courses listed below, each student must receive training in safe chemical use and storage and the care of living things from trained personnel prior to applying for student teaching. Students should check the Integrated Science website for the training workshop schedule. There is no enrollment charge to the students for the training and no credit hours earned. The training is generally offered once during the Fall semester and twice during the Spring semester. The Interdisciplinary Science Education Council oversees these training workshops.

This minor is administered by the Interdisciplinary Science Education Council. Students are cautioned that they must have 36 semester hours on their Earth Science minor that are not counted on any other major or minor for teaching certification.

Required Courses I (16 hours)
AST 111 - Astronomy 3(3-0)
AST 112 - Introduction to Astronomical Observations 1(0-2)
GEL 201 - Earth History 3(2-2)
GEL 320 - Earth Materials 3(2-3)
GEO 201 - Weather and Climate 4(4-0)
GEO/GEL 205 - Oceanography 3(3-0)

For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
Required Courses II (3 hours)
Select one of the following:
ESC 400 - Earth Science Education 3(2-2)
SCI 400 - Teaching Integrated Science in Secondary School 3(2-2)

Required Courses III (3 hours)
Select one of the following:
GEL 100 - Introduction to Earth Systems 3(2-2)
GEL 130QR - Earth Processes 3(2-2)

Required Courses IV (3 hours)
Select one of the following:
GEL 304 - Earth Resources 3(3-0)
GEO 330 - Resource Perception and Utilization 3(3-0)

Required Courses V (3 hours)
Select one of the following:
GEL 413 - Geomorphology 3(3-0)
GEO 210 - Landforms 3(2-2)

Total: 28 semester hours

Entrepreneurship Major
B.A.A. degree
This major is listed in the College of Business Administration section. See the index for the page number.

Entrepreneurship Minor
This major is listed in the College of Business Administration section. See the index for the page number.

Environmental Health & Safety Major
B.A., B.S.
Environmental Health & Safety is an interdisciplinary major that prepares students through academic coursework, laboratory, and internship experiences for a career in environmental health professions. The required courses have been selected to develop students' critical thinking, life-long learning, and problem solving skills. Graduates of the program will diagnose and investigate health problems and hazards in the community, enforce laws and regulations that protect health and ensure safety, monitor the health status of communities, and evaluate effectiveness and quality of environmental community services.

Admission Requirements, Retention & Termination Standards
EHAC Accreditation requires broad training in 23 programmatic areas of Environmental Health & Safety, which may include Air Quality Control, Food Protection, Hazardous Materials, and Water Quality, with in-depth training in four of these technical areas. CMU offers in-depth coursework in 10 of the 23 programmatic areas. Interested students should meet with an Environmental Health & Safety advisor as early as possible to assist with course scheduling in the four technical areas and to identify the appropriate prerequisite courses related to the student's choice of technical area.

All Environmental Health & Safety majors must:
1. Complete an Environmental Health & Safety internship (180 hrs),
2. Earn a minimum cumulative grade point average of 2.7.

Required Courses I (53 hours)
BIO 110 - Concepts of Biology 4(3-3)
BIO 208 - Microbiology 3(2-2)
BIO 435 - Environmental Toxicology 3(3-0)
BLR 521 - Environmental Law and Policy 3(3-0)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)
CHM 342 - Survey of Organic Chemistry 4(3-3)
ENV 101 - Introduction to Environmental Studies 3(3-0)
ENV 310 - Environmental Issues Management 3(3-0)
GEL 100 - Introduction to Earth Systems 3(2-2)
HSC 211 - Human Anatomy and Physiology 3(3-0)
HSC 352 - Environmental Health 3(3-0)
HSC 404 - Epidemiology 3(3-0)
IET 452 - Environmental Health & Safety Internship 3(Spec)
PHY 130QR - College Physics I 4(4-0)
STA 282QR - Introduction to Statistics 3(3-0)

Required Courses II (4 hours)
Select one of the following in consultation with an advisor as it relates to the Technical area:
MTH 130 - Pre-Calculus Mathematics 4(4-0)
MTH 132 - Calculus I 4(4-0)

Required Courses III (10-12 hours)
To complete training in four technical areas, select a minimum of 10 hours in consultation with an advisor.
BIO 334/GEO 334 - Soil Science 3(2-2)
BIO 365 - Environmental Contaminants 3(3-0)
FNS 363 - Food Safety and Sanitation 1(1-0)
GEL 380 - Hydrogeology 3(2-3)
GEO 203QR - Introduction to Geographic Information Science 3(2-2)
HSC 317 - Community Health 3(3-0)
HSC 452 - Environmental Health & Safety Internship 3(Spec)
HSC 505 - Work Injury Prevention 3(3-0)
HSC 552 - International Health Systems, Organizations and Policy 3(3-0)
IET 327 - Industrial Safety 3(3-0)
IET 525 - Hazardous Materials Technology 3(3-0)

Total: 67-69 semester hours

Environmental Studies Minor
B.A., B.A.A., B.S., B.S. in B.A. degrees
This minor offers an interdisciplinary minor in environmental studies for students earning degrees where completing a second major would not be feasible. Contact the College of Humanities and Social & Behavioral Sciences.

Required Courses I (3 hours)
Select one of the following:
BIO 240 - Conservation of Natural Resources 3(3-0)
GEO 330 - Resource Perception and Utilization 3(3-0)

Required Courses II (9 hours)
BIO 340 - Ecology 3(2-3)
ENV 101 - Introduction to Environmental Studies 3(3-0)
PSC 261 - State and Local Government 3(3-0)

Required Courses III (3 hours)
Select one of the following:
BLR 521 - Environmental Law and Policy 3(3-0)
ECO 301 - Environmental Economics 3(3-0)

Required Courses IV (4-8 hours)
Select one of the following options:
Option A (4 hours)
CHM 120 - Survey of Chemistry 4(4-0)

Option B (8 hours)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)

For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
Electives (6-7 hours)
Select hours from the following:
- ANT 370/SOC 370 - Global Environmental Issues 3(3-0)
- BIO 334/GEQ 334 - Soil Science 3(2-2)
- CHM 342 - Survey of Organic Chemistry 4(3-3)
- ENV 310 - Environmental Issues Management 3(3-0)
- GEL 100 - Introduction to Earth Systems 3(2-2)
- GEL 101 - Physical Geology 3(3-0)
- GEL 105 - Dangerous Planet 3(3-0)
- GEL 130QR - Earth Processes 3(2-2)
- GEO 201 - Weather and Climate 4(4-0)
- HSC 352 - Environmental Health 3(3-0)
- PSC 210 - Introduction to Public Administration 3(3-0)
- PSC 514 - American Public Policy Making 3(3-0)

Required Courses II (3-4 hours)
Select one of the following:
- GEO 105 - Physical Geography 3(2-2)
- GEO 201 - Weather and Climate 4(4-0)

Required Courses III (3 hours)
Select one of the following:
- BIO 351 - Biological Science for Elementary Teachers 3(Spec)
- ESC 400 - Earth Science Education 3(2-2)
- PHS 351 - Physical Science for the Elementary Grades 3(2-2)
- PHS 452 - Physical Science for the Middle Grades 3(2-2)
- SCI 410 - Teaching Integrated Science K-8 3(3-0)

Note: C+ or better is required for the selected course.

Total: 42-43 semester hours

Integrated Science Minor

B.S. in Ed., Elementary Provisional Certification

This minor offers a balanced, interdisciplinary program of coursework in the life, physical, and earth and space sciences for students planning to teach elementary or middle school. The required courses have been selected to prepare students to teach the science content in the Michigan Curriculum Framework including strong preparation in science inquiry through laboratory and field methods experiences. Students are encouraged to work closely with an advisor throughout their program. Courses, where appropriate, may be double counted with the University Program and the degree requirements on the Bachelor of Science in Education.

Admission Requirements, Retention & Termination Standards

A minimum grade of a C is required for all non-methods courses used in this major. Any course with a C- or lower will be included in the calculation of the major GPA until it is retaken and a grade of a C or better is earned. All courses must be taken for a grade, not for credit/no credit even if offered as an option. Grades in courses transferred to CMU will count in the calculation of the major GPA. A minimum 2.7 GPA (B-) must be earned in all teaching majors and must be evident to CMU. The Interdisciplinary Science Education Council oversees these training workshops. There is no enrollment charge to the students for the training and no credit hours are earned. The training is offered fall and spring semesters. The Interdisciplinary Science Education Council oversees these training workshops.

Total: 25-30 semester hours (plus 3-10 hours of prerequisites, depending on the electives chosen)

For additional information, see the list of advisors in the Course Search & Registration.

Integrated Science Education Council

For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
Note: You may only choose one of BIO 229 OR 240. Equivalent courses for CHM 120, CHM 127, and MTH 107 may be chosen in consultation with an advisor.

Required Courses II (3-4 hours)
Select one of the following:
- GEO 105 - Physical Geography 3(2-2)
- GEO 201 - Weather and Climate 4(4-0)

Electives (3 hours)
An additional 3 credit BIO or SCI course at the 200-level or higher selected in consultation with an advisor, excluding teaching methods courses.

Total: 35-36 semester hours
For additional information, see the list of advisors in the Course Search & Registration.

Integrated Science Major
B.S. in Ed., Secondary Provisional Certification

This major offers a balanced, interdisciplinary program of coursework in the life, physical, and earth and space sciences for students planning to teach secondary school science. The required courses have been selected to prepare students to teach the science content in the Michigan Curriculum Framework including strong preparation in science inquiry through laboratory and field methods experiences. Students are encouraged to work closely with an advisor throughout their program. Courses, where appropriate, may be double counted with the University Program and the degree requirements on the Bachelor of Science in Education.

This major may be reduced to 39 semester hours when combined with a minor in Biology, Chemistry, Earth Science, or Physics. If your minor is Biology, do not count the 16 hours of Life Science courses listed below. If your minor is Earth Science, do not count the 17 hours of Earth and Space Science courses listed below. If your minor is Chemistry, do not count the 8 hours of Chemistry (CHM) courses listed below. If your minor is Physics, do not count the 10 hours of Physics (PHY) listed below.

Additional credits at the 300-level or higher may need to be added if the remaining number of credits is below 39. Your advisor will help you choose the appropriate courses. Students are cautioned that they must have 36 semester hours on their Integrated Science major that are not counted on any other major or minor for teacher certification.

Admission Requirements, Retention & Termination Standards
All courses must be taken for a grade, not for credit/no credit even if offered as an option. Grades in courses transferred to CMU will count in the calculation of the major GPA. A minimum 2.7 GPA (B-) must be earned in all teaching majors.

In addition to the courses listed below, each student must receive training in safe chemical use and storage and the care of living things from trained personnel prior to applying for student teaching. This major is administered by the Integrated Science Education Council.

Required Courses I (16 hours)
Life Science
- BIO 110 - Concepts of Biology 4(3-3)
- BIO 203 - General Botany 3(2-3)
- BIO 208 - Microbiology 3(2-3)
- BIO 218 - General Zoology 3(2-3)

Plus any 300-level or higher biology course selected in consultation with an advisor.

Required Courses II (11 hours)
Earth and Space Science
- AST 111 - Astronomy 3(3-0)
- AST 112 - Introduction to Astronomical Observations 1(0-2)
- GEO 201 - Weather and Climate 4(4-0)

Plus any 300-level or higher geology, astronomy, or weather courses selected in consultation with an advisor.

Required Courses III (3 hours)
Earth and Space Science
Select one of the following:
- GEL 100 - Introduction to Earth Systems 3(2-2)
- GEL 130QR - Earth Processes 3(2-2)
Note: GEL 130QR is recommended.

Required Courses IV (3 hours)
Earth and Space Science
Select one of the following:
- GEL 201 - Earth History 3(2-2)
- GEL 230 - Prehistoric Life 3(3-0)

Required Courses V (18 hours)
Physical Science
- CHM 131 - General Chemistry I 4(3-3)
- CHM 132 - General Chemistry II 4(3-3)
- PHY 130QR - College Physics I 4(4-0)
- PHY 131 - College Physics II 4(4-0)
- PHY 170 - College Physics Laboratory I 1(0-2)
- PHY 171 - College Physics Laboratory II 1(0-2)

Required Courses VI (3 hours)
Teaching Science
- SCI 400 - Teaching Integrated Science in Secondary School 3(2-2)

Total: 39-54 semester hours

Integrated Public Relations Major
B.A.; B.A.A.; B.S. degrees

Integrated Public Relations is an interdisciplinary major grounded in the disciplines concerned with the practice of public relations. Students are strongly encouraged to work closely with their academic advisor throughout their academic careers.

Admission Requirements, Retention & Termination Standards
In order to sign a major in Integrative Public Relations, a student must first complete IPR 101 with a grade of C or higher.

Grade Point Average:
1. IPR majors are required to earn a minimum of a C in all required and elective courses in the major.
2. A minimum 2.5 GPA in the major is required.

Internship Requirements:
1. To complete the program, IPR majors must satisfactorily complete a 6 credit hour internship with a grade of C or higher.
2. Any student enrolling in internship hours must have completed all of the required courses except for 500-level courses, earned a C or higher in all courses taken in the major including electives and have attained junior/senior status.

Required Courses (41 hours)
- BCA 210 - Survey of the Mass Media 4(4-0)
- BCA 311 - Electronic Media Copywriting 3(3-0)
- BCA 512 - Electronic Media Promotion 3(3-0)
- COM 264 - Organizational Communication 3(3-0)
- COM 357 - Public Speaking 3(3-0)
- IPR 101 - Foundations of Integrative Public Relations 11(1-0)
- IPR 555 - Public Relations Internship 3-6(Spec)
- JRN 202 - Writing for the Mass Media 3(3-0)
- JRN 301 - Introduction to Graphics and Visual Communication 3(3-0)
- JRN 350 - Public Relations Principles and Practices 3(3-0)
- JRN 450 - Public Relations Writing 3(3-0)
- JRN 551 - Case Studies in Public Relations 3(3-0)
- JRN 556 - Public Relations Seminar 3(3-0)

Note: COM 357 fulfills the oral competency requirement.

Electives I (6 hours)
Select from the following:
- COM 195 - Intercultural Communication 3(3-0)
- COM 353 - Small Group Communication 3(3-0)
- COM 362/WST 362 - Gender Communication 3(3-0)
- COM 363 - Principles and Types of Interviewing 3(3-0)
- COM 365 - Persuasion and Social Influence 3(3-0)

For a list of advisors, see https://www.cmich.edu/offices/Provost/AcademicAffairs/Interdisciplinary/Pages/Advisors.aspx.
Interdisciplinary Majors, Minors, and Certificates

Language Arts Major

B.S. in Ed. degree, Provisional Elementary Certification

The purpose of the Language Arts major is to prepare prospective teachers to function effectively in this integral component of the elementary classroom. The goal of the program is to have the students possess the knowledge, skills, and understanding of the role of language arts in elementary education. The prospective teacher also should develop the ability to communicate and use this knowledge in all areas of the language arts classroom. This major may not be combined with a reading minor.

Language Arts is an interdisciplinary program that combines courses in the departments of Teacher Education and Professional Development, English, Communication and Dramatic Arts, and Communication Disorders, and may be authorized by faculty in those departments. A minimum 2.7 GPA (B-) must be earned in all teaching majors.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A minimum cumulative average of 3.0 must be earned in the Language Arts major (and minor).
2. Courses with a grade lower than a B- will not count toward the major (and minor).

Required Courses (22 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EDU 330</td>
<td>Reading in the Elementary School 3(3-0)</td>
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<tr>
<td>EDU 431</td>
<td>Corrective Reading in the Classroom 3(3-0)</td>
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<tr>
<td>EDU 538</td>
<td>Coordination of the Language Arts with Reading 3(3-0)</td>
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<tr>
<td>ENG 315</td>
<td>Teaching Writing in Elementary and Middle Schools 4(3-1)</td>
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<tr>
<td>ENG 371</td>
<td>Teaching Grammar 3(3-0)</td>
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<tr>
<td>ENG 381</td>
<td>Children's Literature 3(3-0)</td>
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<tr>
<td>TAI 373</td>
<td>Oral Interpretation for Children 3(3-0)</td>
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Other Requirements (3 hours)

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<td>ENG 481</td>
<td>International Language for Children and Young Adults 3(3-0)</td>
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</tr>
<tr>
<td>ENG 582</td>
<td>Cultural Pluralism in Young Adult and Children's Literature 3(3-0)</td>
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</tbody>
</table>

Total: 28 semester hours

Language Arts Minor

B.S. in Ed. degree, Provisional Elementary Certification or Provisional Elementary Certification with Emotional or Cognitive Impairment Endorsement

The purpose of the Language Arts minor is to prepare prospective teachers to function effectively in this integral component of the elementary classroom. The goal of the program is to have the students possess the knowledge, skills, and understanding of the role of language arts in elementary education. The prospective teacher also should develop the ability to communicate and use this knowledge in all areas of the language arts classroom.

Language Arts is an interdisciplinary program that combines courses in the departments of Teacher Education and Professional Development, English, Communication and Dramatic Arts, and Communication Disorders, and may be authorized by faculty in those departments. A minimum 2.7 GPA (B-) must be earned in all teaching minors.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. A minimum cumulative average of 3.0 must be earned in the Language Arts major (and minor).
2. Courses with a grade lower than a B- will not count toward the major (and minor).

Required Courses (22 hours)

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Other Requirements I (3 hours)

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Total: 28 semester hours

For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
Leadership Minor
B.A.; B.A.A.; B.F.A.; B.S.; and B.S. in B.A.

The Leadership minor is a 24-credit-hour interdisciplinary program that includes both theoretical and experiential components. The major objective of the program is to educate students for and about leadership and prepare them to acquire leadership positions in their community and profession. The minor complements a wide variety of academic programs such as: health professions, business, political science, recreation, parks and leisure services, military science, communication, and education.

Required Courses I (9-12 hours)
- COM 461 - Communication in Leadership 3(3-0)
- LDR 200 - Introduction to Leadership 3(2-2)
- LDR 402 - Applications of Leadership 3-6(Spec)

Required Courses II (3 hours)
Select one of the following:
- PHL 118 - Moral Problems 3(3-0)
- PHL 218 - Ethical Theories 3(3-0)
- PHL 318 - Business Ethics 3(3-0)

Electives (9-12 hours)
Choose one course from each of the three elective tracks listed below. The fourth course may be selected from any of the tracks, or LDR 402 can be taken for six credits, three of which count in the core requirements, the other three credits would count as elective credits. Elective tracks and courses to be selected in consultation with an advisor.

Track 1 - Understanding Human Behavior and Development
Courses in this track provide a study of the theories, frameworks, and research that assist in the understanding and prediction of human behavior. Each course addresses aspects of how behavior develops through normal maturation processes, the identification of traits and behavior to meet environmental demands or personal goals.
- EDU 280 - Education of Children 3(3-0)
- HFD 100 - Lifespan Development 3(3-0)
- MSL 102 - Introduction to Profession of Arms 2(Spec)
- PSC 101 - Political Behavior 3(3-0)
- PSY 100 - Introduction to Psychology 3(3-0)
- PSY 220 - Developmental Psychology 3(3-0)
- PSY 340 - Studies in Personality 3(3-0)

Note: You may count only one of EDU 280, HFD 100, or PSY 220.

Track 2 - Interpersonal and Group Interaction
Courses in this track address the major tenets of social interaction that may lead to group productivity and overall effectiveness. Each course provides an examination of how groups can develop into functioning units through the study of patterns of individual and group interaction (e.g., communication) within organizations and society in general.
- BLR 310 - Alternative Dispute Resolution in Business 3(3-0)
- COM 264 - Organizational Communication 3(3-0)
- COM 267 - Introduction to Debate 3(3-0)
- COM 353 - Small Group Communication 3(3-0)
- COM 361 - Interpersonal Communication 3(3-0)
- COM 367 - Nonverbal Communication 3(3-0)
- COM 560 - Communication and Social/Organizational Change 3(3-0)
- COM 561 - Communication in Conflict Management 3(3-0)
- ENG 402 - Argumentation and Expository Writing 3(3-0)
- MGT 348 - Dynamics of Organizational Behavior 3(3-0)
- MGT 355 - Communications: Managerial Applications 3(3-0)
- MSL 201 - Individual Leadership Studies 3(Spec)
- MSL 202 - Leadership and Teamwork 3(Spec)
- PES 300 - Wilderness Experience for Leadership Development 3(2-2)
- PSC 327 - Lobbying and Interest Group Behavior 3(3-0)
- PSY 330 - Social Psychology 3(3-0)
- PSY 336 - Industrial/Organizational Psychology 3(3-0)

PSY 531 - Group Dynamics 3(3-0)
PSY 535 - Organizational Psychology 3(3-0)
RPL 205 - Outdoor Leadership 3(2-2)
RPL 206 - Recreation Activities Leadership 3(3-0)
RPL 307 - Management Skills in Leisure Services 3(3-0)
RPL 435 - Leadership in Adventure Education Programming 3(3-0)
SOC 100 - Introductory Sociology 3(3-0)
SOC 201 - Social Psychology 3(3-0)

Track 3 - Leadership in a Social, Political, or Historical Context
Courses in this track put the analysis of effective leaders and leadership practices into a specific historical, political, and/or social context. Each course provides a broad perspective of leadership as it examines a set of complex environmental variables that affect leader development and effectiveness.

BCA 210 - Survey of the Mass Media 4(4-0)
HSC 203 - Leadership for the Health Professions 3(3-0)
HSC 520 - Health Services Administration 3(3-0)
HST 110 - The American Experience 3(3-0)
HST 238 - Ancient Greece and Rome 3(3-0)
HST 312 - African-American History, 1877-Present 3(3-0)
HST 325 - African-American History, 1877-Present 3(3-0)
LAR 145 - Racism and Discrimination in America through Dialogue 3(3-0)
MSL 301 - Adaptive Team Leadership 4(Spec)
MSL 402 - Mission Command II and the Army Grade Officer 4(Spec)
PSC 105 - Introduction to American Government and Politics 3(3-0)
PSC 125 - African-American Politics 3(3-0)
PSC 150 - Introduction to International Relations 3(3-0)
PSC 242 - Introduction to Comparative Politics 3(3-0)
PSC 261 - State and Local Government 3(3-0)
PSC 275 - Great Political Thinkers 3(3-0)
PSC 321 - The American Chief Executive 3(3-0)
PSC 371 - American Political Thought 3(3-0)
REL 345/PHL 345/PSC 325/SOC 345 - The Civil Rights Movement 3(3-0)
RPL 405 - Administration of Community Leisure Services 3(3-0)
SOC 221 - Social Problems 3(3-0)
SOC 402 - Analysis of Social Change 3(3-0)
SOC 403 - Political Sociology 3(3-0)
WST 326/PSC 326 - Women and Politics 3(3-0)

Total: 24 semester hours

Media Design, Production, and Technology Minor
B.S.; B.A.; B.A.A.

The Minor in Media Design, Production, and Technology consists of 25 semester hours which will be divided into a 13 hour core and 12 hours of electives. The specific design of the minor follows:

Required Courses (13 hours)
- ART 231 - Introduction to Graphic Design 3(0-6)
- BCA 223 - Video Production 3(1-4)
- CPS 282 - Introduction to Multimedia Design 3(3-0)
- JRN 220 - Basic Media Photography 3(3-0)
- MDP 495 - MDPT Capstone Experience 1(1-0)
- BCJ 520 - Survey of Broadcast Communication 3(3-0)
- BCJ 525 - Survey of Print Communication 3(3-0)

Electives (12 hours)
Select from the following in consultation with an advisor. No more than 3 credits of ART 342 or ART 441 may count as elective credits. Other electives may be substituted with consent of advisor.

ART 235 - Logo and Identity Design 3(0-6)
ART 241 - Introduction to Photography 3(0-6)
ART 258 - Everyday Web Design 3(0-6)

For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.

**Interdisciplinary Majors, Minors, and Certificates**

**Museum Studies Minor**

*B.A.; B.A.A.; B.F.A.; B.S.; and B.S. in B.A. degrees*

The goal of this interdisciplinary program is to introduce students to the role of museums in society and to the knowledge, skills and abilities required of successful professionals in museums or similar non-profit informal learning institutions. The program prepares students to contribute to the success of these organizations as knowledgeable, collaborative, ethical, and innovative professionals. Upon completion of the program, students should be prepared to enter the workforce or continue their formal education in an academic discipline, museum studies, public history or a related field.

This 24-credit minor is composed of:

- Four 3-credit core courses
- a 6-hour museum internship
- 6 credit hours of electives

**Admission Requirements, Retention & Termination Standards**

1. Students must have completed 36 credit hours with a cumulative GPA of at least 2.5 in order to enroll in MST 310.
2. Students must successfully complete MST 310 before signing the minor or enrolling in other MST courses.
3. Students are required to achieve a grade of at least a C (2.0) in each Museum Studies course.
4. Students are required to achieve at least a 2.7 GPA in the 18 credit hours of required Museum Studies courses.

**Required Courses (18 hours)**

- MST 310 - Introduction to Museums 3(3-0)
- MST 315 - Museums, Stakeholders and Communities 3(3-0)
- MST 320 - Collections Stewardship and Curatorial Work 3(3-0)
- MST 325 - Public Programming in Museums 3(3-0)
- MST 598 - Museum Internship 6(Spec)

**Electives (6 hours)**

Select from the following:
- ACC 201 - Concepts of Financial Accounting 3(3-0)
- ANT 170 - Cultural Anthropology 3(3-0)
- ANT 171 - Human Origins: Introduction to Physical Anthropology 3(3-0)
- ANT 175 - Archaeology of the Americas 3(3-0)
- ANT 320 - North American Indian Cultures 3(3-0)
- ANT 344 - Michigan Archaeology 3(3-0)
- ANT 365 - Current American Indian Issues 3(3-0)
- ART 231 - Introduction to Graphic Design 3(0-6)
- BIO 203 - General Botany 3(2-3)
- BIO 218 - General Zoology 3(2-3)
- BIO 229 - Nature Study 3(2-3)
- BIO 306 - Natural History of Vertebrates 3(2-3)
- COM 264 - Organizational Communication 3(3-0)
- FMD 252 - Dress and Culture 3(3-0)
- GEL 100 - Introduction to Earth Systems 3(2-2)
- GEL 101 - Physical Geology 3(3-0)
- GEL 102 - Physical Geology Laboratory 1(0-2)
- GEL 130QR - Earth Processes 3(2-2)
- GEL 201 - Earth History 3(2-2)
- GEL 230 - Prehistoric Life 3(3-0)
- GEL 320 - Earth Materials 3(2-3)
- GEO 120QR - Environmental Geography 3(3-0)
- GEO 121 - Cultures of the World 3(3-0)
- HST 101 - The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)
- HST 102 - The Development of Western Civilization: From 1700 to the Present 3(3-0)
- HST 111 - The Quest for Liberty: The United States 1865 3(3-0)
- HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)
- HST 292 - Global Perspectives on Non-Western History 3(3-0)
- HST 301 - The Craft of History 4(4-0)
- HST 323 - History of Native Americans 3(3-0)
- HST 333 - History of Michigan 3(3-0)
- IET 143 - Introduction to Graphic Arts 3(2-2)
- IND 238 - Design History and Precedent 3(2-2)
- IND 328 - Design History and Criticism 3(3-0)
- MGT 312 - Introduction to Management 3(3-0)
- MKT 300 - Introduction to Marketing 3(3-0)
- MST 575 - Independent Study in Museum Studies 3(3-0)
- PHS 151 - Introductory Physical Science I 3(2-2)
- PSC 210 - Introduction to Public Administration 3(3-0)
- RPL 405 - Administration of Community Leisure Services 3(3-0)
- RPL 552 - Environmental Interpretation 3(3-0)
- TAI 170 - Oral Interpretation of Literature 3(3-0)

**Note:** Courses required for a student’s major (e.g., HST 301 for students majoring in History or ANT 171 for those majoring in Anthropology) may not be used as an elective course for the Museum Studies Minor.

**Total: 24 semester hours**

**Music Theatre Major**

*B.F.A. degree*

Students wishing to develop the skills necessary to become a professional performer in theatrical genres that combine acting with music and dance, need a program that provides training and experience in those areas.

**Music Theatre at CMU.** Students interested in the B.F.A-Music Theatre program should contact the Office of the Dean, College of Communication and Fine Arts to discuss dates and criteria for the auditions.
Admission Requirements, Retention & Termination Standards

Admission. Admission to the program is by audition only. The auditions occur early in the spring semester each year. Auditions are attended by faculty from music, theatre, and dance. Criteria and information about the audition process may be found at https://www.cmich.edu/colleges/CCFA/CCFAMusicalTheatre/, or by contacting the Office of the Dean, College of Communication and Fine Arts, or by writing to the Director, BFA-Music Theatre Program, 129 Moore Hall, Central Michigan University, Mt. Pleasant, MI, 48859.

Retention. Each year, Music Theatre majors demonstrate their progress as singers/actors in performance examinations known as juries. Juries are held during the final examination time at the end of the spring semester. In a jury, the Music Theatre major performs for faculty and receives written comments. Students are allowed two attempts to satisfactorily complete each jury level. Only one attempt may be made each semester. Failure to pass to a higher level of study will result in dismissal from the Music Theatre program.

Additional criteria for continuing in the program include meeting the current university standard for grade point average (GPA). A student who has been awarded a Music Theatre Scholarship has additional criteria to fulfill. These criteria are listed on the Music Theatre Scholarship material each student receives at the end of each semester. Scholarship students are required to request renewal of the scholarship at the end of each semester.

Information for Transfer Students. The principle goal of the Music Theatre program is to provide comprehensive training in the complex area of music theatre that integrates various performance skills (music, theatre, dance) and production experiences into a high quality pre-professional major. All students wishing to become a BFA-Music Theatre major must audition. Information about audition dates and requirements may be found at https://www.cmich.edu/colleges/CCFA/CCFAMusicalTheatre/. Answers to many other questions may be found there as well.

Transfer students often have questions about what courses they should take to prepare for the Music Theatre program. Since each student's background is different, it is difficult to give answers that will apply to all situations. Generally, training in the following areas is recommended but not required to enter the CMU Music Theatre program:

A. Studies in music, particularly formal voice lessons
B. Studies in acting, particularly basic acting classes
C. Studies in dance, particularly basic dance technique classes

Required Courses I (48 hours)
DAN 133 - Modern I 2(1-2)
DAN 136 - Ballet Technique I 2(Spec)
DAN 137 - Tap I 2(1-2)
DAN 138 - Jazz I 2(Spec)
DAN 230 - Movement-Rhythmic Form and Structure 3(3-0)
MUS 101 - Theory I 3(3-0)
MUS 102 - Theory II 3(3-0)
MUS 103 - Sight Singing and Ear Training I 1(0-2)
MUS 104 - Sight Singing and Ear Training II 1(0-2)
MUS 147 - Piano Class I 1(0-2)
MUS 148 - Piano Class II 1(0-2)
TAI 175 - Appreciation of the Theatre 3(3-0)
TAI 182 - Acting I 3(3-0)
TAI 278 - Stage Makeup 3(2-2)
TAI 282 - Acting II 3(3-0)
TAI 352 - Music Theatre Scene Study 3(1-2)
TAI 380 - Musical Theatre History 3(3-0)
TAI 452 - Music Theatre Performance 3(2-2)
TAI 460 - BFA Capstone Project 3(0-6)
TAI 481 - Directing 3(3-0)

Note: Incoming students will be given a Theory Placement Exam. If recommended based on exam results, students should take MUS 206 (3 hours) prior to taking MUS 101.

For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
Core Courses II (3 hours)
Select one of the following:
BIO 500 - Biological Statistics 3(2-2)
HSC 544 - Biostatistics 3(2-1)
PSY 211QR - Introduction to Psychological Statistics 3(3-0)

Other Requirements I: General Chemistry (5-9 hours)
Select one of the following options:
Option A (5 hours)
CHM 120 - Survey of Chemistry 4(4-0)
CHM 127 - Introductory Chemistry Laboratory 1(0-2)
Option B (6 hours)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)
Option C (9 hours)
CHM 161 - Principles of Chemistry 5(4-4)
CHM 211QR - Quantitative Analysis 4(3-5)

Other Requirements II: Organic Chemistry (4-8 hours)
Select one of the following options:
Option A (4 hours)
CHM 342 - Survey of Organic Chemistry 4(3-3)
Option B (6 hours)
CHM 345 - Organic Chemistry I 3(3-0)
CHM 346 - Organic Chemistry II 3(3-0)
CHM 349 - Organic Chemistry Laboratory 2(0-6)

Other Requirements III: Biochemistry (3-6 hours)
Select one of the following options:
Option A (3 hours)
CHM 421 - Survey of Biochemistry 3(3-0)
Option B (3 hours)
CHM 425 - Introductory Biochemistry 3(3-0)
Option C (6 hours)
CHM 521 - Fundamentals of Biochemistry 3(3-0)
CHM 522 - Intermediate Biochemistry 3(3-0)

Neuroscience Tracks
Select one of the following tracks:
Track A - General (6 hours)
The General Track is for students who desire more flexibility in the choice of electives.
Required Courses
BIO 591 - Neurophysiology 3(3-0)
PSY 588 - Functional Neuroanatomy 3(3-0)
Track B - Graduate Preparation (11 hours)
The Graduate Preparation Track is for students who plan to attend a professional graduate school upon graduation that will necessitate both a solid background and research experience.
Required Courses I (8 hours)
NSC 501 - Principles of Neuroscience I 4(4-0)
NSC 502 - Principles of Neuroscience II 4(4-0)
Required Courses II (3 hours)
Select one of the following:
BIO 403 - Undergraduate Research 3-4(Spec)
NSC 496 - Neuroscience Directed Research 1-6(Spec)
PSY 496 - Directed Research 1-6(Spec)
Electives (10-15 hours)
If selecting Track A – General (above): Select at least two courses from each of the Elective groups below, plus one more from either group, in consultation with and the approval of your advisor, for a total of 15 hours.
If selecting Track B – Graduate Preparation (above): Select at least one course from each of the Elective Groups below, plus one more from either group, in consultation with and the approval of your advisor, for a total of 10 hours.
Electives I
BIO 208 - Microbiology 3(2-3)
BIO 324 - Cell Biology 3(3-0)
BIO 326 - Genetics 4(3-3)

For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
For admission, retention, and termination standards, see the Course Search & Registration for advisors.

**Admission Requirements, Retention & Termination Standards**

In order to be recommended for student teaching, a student must:

1. Count no course with a grade lower than C- toward the major.
2. Have a minimum of 15 credit hours on the major taken at CMU with a cumulative average of at least 2.70.
3. Complete a departmental application form.
4. Have a grade of C+ or higher in the teaching methods course.
5. Have no more than six hours taken as CR/NC, including PSC 305.
6. Have a minimum of 14 credit hours at the 300 level or higher.

**Required Courses I (6 hours)**

**American Government**
- PSC 105 - Introduction to American Government and Politics 3(3-0)
- PSC 261 - State and Local Government 3(3-0)

**Required Courses II (3 hours)**

**American Government**
- Select one of the following:
  - PSC 320 - The American Legislative Process 3(3-0)
  - PSC 321 - The American Chief Executive 3(3-0)
  - PSC 322 - Judicial Process and Politics 3(3-0)

**Required Courses III (6 hours)**

**World Geography**
- GEO 121 - Cultures of the World 3(3-0)
- GEO 203QR - Introduction to Geographic Information Science 3(2-2)

**Required Courses IV (3 hours)**

**World Geography**
- Select one of the following:
  - GEO 317 - Economic Geography 3(3-0)
  - GEO 320 - Population Geography 3(3-0)
  - GEO 340 - Urban Geography 3(3-0)
  - GEO 342 - Historical Geography 3(3-0)
  - GEO 345 - Political Geography 3(3-0)

**Required Courses V (6 hours)**

**Economics**
- ECO 201 - Principles of Macroeconomics 3(3-0)
- ECO 202 - Principles of Microeconomics 3(3-0)

**Required Courses VI (3 hours)**

**Economics**
- Select one of the following:
  - ECO 281 - Economic Development of the Pacific Rim 3(3-0)
  - ECO 301 - Environmental Economics 3(3-0)

**Required Courses VII (6 hours)**

**Economics**
- ECO 310 - American Economic Development 3(3-0)
- ECO 350/BLR 350 - Law and Economics 3(3-0)
- ECO 372 - International Economics 3(3-0)
- ECO 381 - Patterns of Economic Development 3(3-0)

**Required Courses VIII (3 hours)**

**Geography Concentration**
- Select one of the following:
  - GEO 312 - Geography of Contemporary Global Issues 3(3-0)
  - GEO 346 - Geography of the Developing World 3(3-0)
  - GEO 365 - Europe 3(3-0)
  - GEO 373 - Latin America 3(3-0)
  - GEO 385 - China: Environment and People 3(3-0)

**Electives (2-3 hours)**

**Geography Concentration**
- Select one of the following:
  - GEO 105 - Physical Geography 3(2-2)
  - GEO 120QR - Environmental Geography 3(3-0)
  - GEO 330 - Resource Perception and Utilization 3(3-0)

**Total: 39 semester hours**

**Social Studies Major: Political Science Concentration 6-12**

**B.S. in Ed. degree, Provisional Secondary Certification**

The Social Studies major requires an accompanying minor in History. Double counting between the major and minor is not allowed. See the Course Search & Registration for advisors.

**Admission Requirements, Retention & Termination Standards**

In order to be recommended for student teaching, a student must:

1. Count no course with a grade lower than C- toward the major.
2. Have a minimum of 15 credit hours on the major taken at CMU with a cumulative average of at least 2.70.
3. Complete a departmental application form.
4. Have a grade of C+ or higher in the teaching methods course.
5. Have no more than six hours taken as CR/NC, including PSC 305.
6. Have a minimum of 14 credit hours at the 300 level or higher.

**Required Courses I (6 hours)**

**American Government**
- PSC 105 - Introduction to American Government and Politics 3(3-0)
- PSC 261 - State and Local Government 3(3-0)

**Required Courses II (3 hours)**

**American Government**
- Select one of the following:
  - PSC 320 - The American Legislative Process 3(3-0)
  - PSC 321 - The American Chief Executive 3(3-0)
  - PSC 322 - Judicial Process and Politics 3(3-0)

**Required Courses III (6 hours)**

**World Geography**
- GEO 121 - Cultures of the World 3(3-0)
- GEO 203QR - Introduction to Geographic Information Science 3(2-2)

**Required Courses IV (3 hours)**

**World Geography**
- Select one of the following:
  - GEO 317 - Economic Geography 3(3-0)
  - GEO 320 - Population Geography 3(3-0)
  - GEO 340 - Urban Geography 3(3-0)
  - GEO 342 - Historical Geography 3(3-0)
  - GEO 345 - Political Geography 3(3-0)

**Required Courses V (6 hours)**

**Economics**
- ECO 201 - Principles of Macroeconomics 3(3-0)
- ECO 202 - Principles of Microeconomics 3(3-0)

**Required Courses VI (3 hours)**

**Economics**
- Select one of the following:
  - ECO 281 - Economic Development of the Pacific Rim 3(3-0)
  - ECO 301 - Environmental Economics 3(3-0)

**Required Courses VII (6 hours)**

**Economics**
- ECO 310 - American Economic Development 3(3-0)
- ECO 350/BLR 350 - Law and Economics 3(3-0)
- ECO 372 - International Economics 3(3-0)
- ECO 381 - Patterns of Economic Development 3(3-0)

**Required Courses VIII (3 hours)**

**Geography Concentration**
- Select one of the following:
  - GEO 312 - Geography of Contemporary Global Issues 3(3-0)
  - GEO 346 - Geography of the Developing World 3(3-0)
  - GEO 365 - Europe 3(3-0)
  - GEO 373 - Latin America 3(3-0)
  - GEO 385 - China: Environment and People 3(3-0)

**Electives (2-3 hours)**

**Geography Concentration**
- Select one of the following:
  - GEO 105 - Physical Geography 3(2-2)
  - GEO 120QR - Environmental Geography 3(3-0)
  - GEO 330 - Resource Perception and Utilization 3(3-0)

**Total: 39 semester hours**

For a list of advisors, see [https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx](https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx).
Required Courses V (6 hours)
Economics
ECO 201 - Principles of Macroeconomics 3(3-0)
ECO 202 - Principles of Microeconomics 3(3-0)
Required Courses VI (3 hours)
Economics
Select one of the following:
ECO 281 - Economic Development of the Pacific Rim 3(3-0)
ECO 301 - Environmental Economics 3(3-0)
ECO 310 - American Economic Development 3(3-0)
ECO 350/BLR 350 - Law and Economics 3(3-0)
ECO 372 - International Economics 3(3-0)
ECO 381 - Patterns of Economic Development 3(3-0)
Required Courses VII (3-5 hours)
Political Science Concentration
PSC 305 - Midtier Teaching in Political Science 2(1-2)
PSC 405 - Methods for Teaching Political Science 3(3-0)
Note: Social Studies majors with a Political Science Concentration who have completed a midtier course for a second major in History (HST 300) may have the requirement of PSC 305 waived on their program.
Required Courses VIII (3 hours)
Political Science Concentration
Select one of the following:
PSC 150 - Introduction to International Relations 3(3-0)
PSC 151 - The U.S. and the World 3(3-0)
Required Courses IX (6 hours)
Political Science Concentration
Select two of the following:
PSC 320 - The American Legislative Process 3(3-0)
PSC 321 - The American Chief Executive 3(3-0)
PSC 322 - Judicial Process and Politics 3(3-0)
PSC 323 - American Parties and Politics 3(3-0)
PSC 327 - Lobbying and Interest Group Behavior 3(3-0)
PSC 421 - Constitutional Law: Powers of Government 3(3-0)
PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)
Total: 39-41 semester hours

Social Studies Major:
History Concentration K-8
B.S. in Ed. degree, Provisional Elementary Certification
Consult the Course Search & Registration for advisors.

Admission Requirements, Retention & Termination Standards
In order to be recommended for student teaching, a student must:
1. Count no course with a grade lower than C- toward the major.
2. Have a minimum of 15 credit hours on the major at CMU with a cumulative average of at least 2.70.
3. Have a minimum of 12 credit hours on the major at 300 level or higher.
4. Complete a departmental application form.
5. Have a grade of C+ or higher in the teaching methods course.
Required Courses I (6 hours)
History
HST 101 - The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)
HST 111 - The Quest for Liberty: The United States 1865 3(3-0)
Note: Another HST course in World History may be substituted for HST 101.
Required Courses II (3 hours)
History
Select one of the following:
HST 233 - History of Native Americans 3(3-0)
HST 234 - African-American History to 1877 3(3-0)

For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
Interdisciplinary Undergraduate Certificates

See Undergraduate Certificates in the Index for more information on policies and procedures, other (non-interdisciplinary) Undergraduate Certificates listed in department sections, and for the Cultural and Global Studies major and minor.

Undergraduate Certificate - African and African Diaspora Studies

College of Humanities and Social & Behavioral Sciences

This 18 credit-hour certificate is designed for regular undergraduate students who desire to gain greater competency in their understanding of the peoples and cultures of Africa and the African Diaspora along with increased knowledge of historical contemporary issues relevant to Africa and the African Diaspora. This certificate is granted upon completion of 18 hours from the courses outlined below.

Required Courses (12 hours)
Select from the following:
- ANT 322 - Cultures of Africa 3(3-0)
- ENG 329 - African American Literature 3(3-0)
- HST 176 - The African Experience 3(3-0)
- HST 324 - African American History to 1877 3(3-0)
- PSC 125 - African-American Politics 3(3-0)

Electives (6 hours)
Select from the following:
- ANT 322 - Cultures of Africa 3(3-0)
- BCA 300 - African and African American Film 3(3-0)
- ENG 329 - African American Literature 3(3-0)
- ENG 333 - Literatures of Non-Western Cultures 3(3-0)
- HST 176 - The African Experience 3(3-0)
- HST 324 - African American History to 1877 3(3-0)
- HST 376 - East/Central Africa: Issues 3(3-0)
- HST 377 - West Africa 3(3-0)
- HST 379/HUM 340 - Race, Class and Power: South Africa in the 20th Century 3(3-0)
- HST 518 - African Americans and the Law: From Slavery to Civil Rights 3(3-0)
- HST 562 - The Atlantic World in the Age of Empire 3(3-0)
- HST 576 - Colonialism in Africa, 1880s-1960s 3(3-0)
- HST 645 - African Political Systems and Processes 3(3-0)
- PSC 125 - African-American Politics 3(3-0)
- PSC 340 - African Political Systems and Processes 3(3-0)
- REL 240 - African-American Religion 3(3-0)
- REL 342 - From Spirituals to Gospel 3(3-0)
- REL 347 - African American Reflections on Racism 3(3-0)

Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor. Courses selected for the certificate program must include a minimum of 9 hours at the 300-599 level.

Total: 18 semester hours

Undergraduate Certificate - Cultural Competency

College of Humanities and Social & Behavioral Sciences

This 16-18 credit hour certificate is designed for undergraduate students who desire to gain greater competency in their understanding of cultures and people and whose social identities are different from the students' own. This certificate will also help students to understand and articulate the benefits of diversity for everyone and to interact effectively with people from diverse cultures and social groups.

Cultural Competency
16-18 hours from the following:

Required Courses I (6 hours)
- LAR 145 - Racism and Discrimination in America through Dialogue 3(3-0)
- SOC 323 - Racism and Inequality 3(3-0)
- Required Courses II (3 hours)
Select one of the following:
- ANT 506/SOC 506 - Comparative Cultural Systems 3(3-0)
- COM 195 - Intercultural Communication 3(3-0)
- HSC 532 - Diversity Issues in the Health Professions 3(3-0)
- JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)
- MGT 365 - International Business 3(3-0)
- MKT 560 - International Marketing 3(3-0)
- PSY 533 - Psychology of Racism 3(3-0)
- SPE 550 - Teaching Culturally Diverse Students 3(3-0)

Another course focusing on diversity in a career-related field may be substituted with a Cultural and Global Studies advisor's approval.

Electives
Select one of the following options:

Elective Courses Option A (7 hours)

- Cultural Competency with Language Elective
  1. Courses within the United States (3 hours) - Select 3 hours from courses in U.P. Group IV-C. One 3-hour non-UP course on cultures within the United States may be substituted with permission of advisor.
  2. Global Cultures outside the United States (4 hours) - Select one language course.

Elective Courses Option B (9 hours)

- Cultural Competency without Language Elective
  1. Courses within the United States (3-6 hours) - Select 3-6 hours from courses in U.P. Group IV-C. One 3-hour non-UP course on cultures within the United States may be substituted with permission of advisor.
  2. Global Cultures outside the United States (3-6 hours) - Select 3-6 hours from courses in U.P. Group IV-B focusing on regions and topics outside the United States except language courses, which may not be included in Option B of the certificate program. One 3-hour non-UP course on global cultures may be substituted with permission of advisor.

For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor.

**Total: 16-18 hours**

**Undergraduate Certificate - East Asian Studies**

*College of Humanities and Social & Behavioral Sciences*

This 16 credit hour certificate is designed for undergraduate students who desire to gain greater competency in their understanding of the peoples and cultures of East Asia along with increased knowledge of historical and contemporary issues relevant to East Asia. 16 hours chosen from the following:

**Required Courses I (4 hours)**
- Select one of the following:
  - CHN 101 - Elementary Chinese I (4-4-0)
  - CHN 102 - Elementary Chinese II (4-4-0)
  - JPN 101 - Elementary Japanese I (4-4-0)
  - JPN 102 - Elementary Japanese II (4-4-0)

**Required Courses II (3 hours)**
- Select one of the following:
  - HST 168 - Modern East Asia (3-0)
  - REL 220 - Religious Traditions of China (3-3-0)
  - REL 221 - Religious Traditions of Japan (3-3-0)

**Required Courses III (3 hours)**
- PSC 344 - East Asian Political Systems and Processes (3-0)

**Electives (6 hours)**
- Select from the following:
  - GEO 385 - China: Environment and People (3-0)
  - HST 369 - Traditional China (3-0)
  - HST 370 - Modern China (3-0)
  - JPN 310 - Study Abroad 1-12(Spec)
  - JPN 410 - Study Abroad 1-12(Spec)

**Note:** You may choose only one of JPN 310 or 410, for 3 hours.

Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor. Courses selected for the certificate program must include a minimum of 9 hours at the 300-599 level.

**Total: 16 semester hours**

**Undergraduate Certificate - European Studies**

*College of Humanities and Social & Behavioral Sciences*

This 18 credit hour certificate is designed for undergraduate students who desire to gain greater competency in their understanding of the peoples, cultures, and history of Europe, along with increased knowledge of European and contemporary issues, political affairs, and international relations.

**Required Courses (6 hours)**
- Select HST 356 and one PSC course:
  - HST 356 - Europe Since 1945 (3-3-0)
  - PSC 341 - Comparative Politics: Eastern Europe (3-3-0)
  - PSC 347 - Comparative Politics: Western Europe (3-3-0)

**Electives (12 hours)**
- Select from the following:
  - ANT 348 - Stone Age Europe: Peoples and Cultures of the Distant Past (3-3-0)
  - ANT 506/SOC 506 - Comparative Cultural Systems (3-3-0)
  - ENG 262 - European Literatures (3-0)
  - ENG 330 - Gods, Monsters, and Immortality: Mythic Literature (3-3-0)
  - ENG 561 - European Romanticism (3-3-0)
  - FRN 321 - France Today (3-0)
  - GER 341 - German Cultural History I (3-3-0)
  - GER 342 - German Cultural History II (3-3-0)
  - GER 347 - German Cultural History III (3-3-0)
  - HST 280 - Nazi Germany and the Holocaust (3-3-0)
  - HST 347 - The French Revolution and Napoleonic Period (3-3-0)
  - HST 542 - The Enlightenment in Europe (3-3-0)
  - HST 558 - Europe, 1914-1945 (3-3-0)
  - PHL 302 - History of Philosophy: Modern Period (3-3-0)
  - PSC 375 - Socialism, Fascism, and Liberalism (3-3-0)
  - PSC 515 - Comparative Public Policy (3-3-0)
  - REL 313 - Christianity (3-3-0)
  - SPN 376 - Culture and Civilization of Spain (3-3-0)

Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor. Courses selected for the certificate program must include a minimum of 9 hours at the 300-599 level.

**Total: 18 semester hours**

**Undergraduate Certificate - Fermentation Science**

*College of Science and Technology*

This 16-credit-hour Undergraduate Certificate is designed for degree-seeking students of any major and non-degree-seeking students who want to understand the science and technology involved in brewing craft beer. It is designed to prepare students for entry or advancement in the brewing industry or advanced studies in fermentation science or food science.

**Admission Requirements, Retention & Termination Standards**

- Admission to the Fermentation Science Certificate program is competitive. In order to apply for admission to the certificate program applicants must do the following:
  1. Be 21 years of age or older by the start of classes.
  2. Completion of BIO 110 and CHM 120 or 132. Equivalent introductory biology and chemistry courses from other colleges and universities will be considered. Evidence that the required prerequisite courses will be completed prior to beginning the certificate program will be considered. In lieu of these prerequisites, relevant life experience may satisfy this requirement with permission of the program director and written explanation in the essay portion.
  3. Be admitted to Central Michigan University as a degree-seeking or non-degree-seeking student.
  4. Submit a short personal statement (1 page or less) describing a) brewing experience/interest, b) science experience (including coursework) or reason for exemption from prerequisite, and c) your goals in pursuing the Fermentation Science Certificate.
  5. Complete an application (available on the College of Science and Technology website, http://www.cmich.edu/colleges/cst/Pages/default.aspx) and turn in application along with a copy of a transcript or academic history.

Application Submissions should be dropped off in the College of Science and Technology Dean's Office, 200 ET or sent to:

- Fermentation Science Certificate Application
- 200 ET
- Central Michigan University
- Mount Pleasant, MI 48859

Once admitted to the program students must achieve a grade of C (2.0) or better in each certificate course to earn the certificate.

**Required Courses (16 hours)**
- SCI 320 - Fundamentals of Fermentation Science (3-3-0)
- SCI 321 - Fermentation Analyses (3-1-4)
- SCI 322 - Applied Fermentation Science (3-1-5)
- SCI 323 - Brewery Facilities and Operations (3-3-0)
- SCI 420 - Internship in Fermentation Science (4 Spec)

**Total: 16 semester hours**

For a list of advisors, see [https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx](https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx).
Interdisciplinary Majors, Minors, and Certificates

Undergraduate Certificate -
Latin American and Latino Studies
College of Humanities and Social & Behavioral Sciences

This 16-18 credit hour certificate is designed for undergraduate students who desire to gain greater competency in their understanding of the peoples and cultures of Latin America and Latino culture in the U.S. along with increased knowledge of historical contemporary issues relevant to Latin America and the Latino community in the U.S.

16-18 hours chosen from the following:

**Required Courses (12 hours)**
- ANT 321 - Cultures of Latin America 3(3-0)
- GEO 373 - Latin America 3(3-0)
- HST 163 - The Latin American Experience 3(3-0)
- PSC 348 - Latin American Political Systems 3(3-0)

**Electives (4-6 hours)**
Select from the following:
- ANT 175 - Archaeology of the Americas 3(3-0)
- ANT 340 - South American Archaeology 3(3-0)
- ENG 333 - Literatures of Non-Western Cultures 3(3-0)
- HST 261 - Indigenous Peoples of Latin America: Precontact to 1821 3(3-0)
- HST 361/REL 361 - Religion in Colonial Latin America 3(3-0)
- PSC 352 - US - Latin American Relations 3(3-0)
- SPN 377 - Culture and Civilization of Latin America 3(3-0)

**Notes:**
- 6-8 credit hours of SPN at the 100- and 200-level may be included. Retroactive credit WILL NOT be accepted.
- An additional course dealing with US Latino and/or Chicano Culture and Literature (in English or Spanish) may be included with the permission of the advisor of the program.
- Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor.
- Courses selected for the certificate program must include a minimum of 9 hours at the 300-599 level.

**Total: 16-18 semester hours**

Undergraduate Certificate -
Middle East and Islamic Studies

This 16 credit hour certificate is designed for regularly admitted undergraduate students who desire to gain greater competency in their understanding of the peoples and cultures of the Middle East and the religion of Islam, along with increased knowledge of historical and contemporary issues relevant to the Middle East, including peoples of Middle Eastern descent now living in communities within the United States.

16 hours chosen from the following:

**Required Courses (13 hours)**
- ARB 101 - Elementary Arabic I 4(4-0)
- ARB 102 - Elementary Arabic II 4(4-0)
- HST 237 - The Middle East since Muhammad 3(3-0)
- PSC 345 - Middle Eastern Political Systems 3(3-0)
- REL 314 - Islam 3(3-0)

**Note:** Choose only one of ARB 101 or 102, not both.

**Electives (3 hours)**
Select from the following:
- HST 336 - Iran and Iraq in History 3(3-0)
- HST 382/REL 382 - History of Israel 3(3-0)
- HST 535 - The Middle East in the Modern Era 3(3-0)
- PSC 340 - African Political Systems and Processes 3(3-0)
- PSC 346 - The Politics of Islam 3(3-0)
- REL 375 - Terrorism, Jihad, and Islamism 3(3-0)
- REL 376 - Women in Muslim Cultures 3(3-0)
- REL 377 - Sufism: Mystical Islam 3(3-0)

Students pursuing this certificate may also complete 3 hours of independent readings or research in an appropriate discipline as an elective option with the approval of the advisor.

Courses selected for the certificate program must include a minimum of 9 hours at the 300-599 level.

**Total: 16 semester hours**

For a list of advisors, see https://www.cmich.edu/office_provost/AcademicAffairs/InterDisciplinary/Pages/Advisors.aspx.
This section lists majors and minors that are interdepartmental. The majority of majors and minors are described within their appropriate departments. Consult the Index of this Bulletin under “Majors” or “Minors.” Reminder: when choosing a teaching major or minor, you must have a 2.7 GPA to be approved for student teaching.

Advertising Minor

B.A.; B.A.A.; B.S.; and B.S. in B.A. degrees

The Advertising Minor is offered by the Department of Journalism and the Department of Marketing and Hospitality Services Administration. The minor brings together courses designed to provide skills for the student with a career interest in advertising. It also provides a working knowledge of advertising for those in careers closely related to advertising.

Required Courses I (6 hours)
JRN 360 - Advertising Principles 3(3-0)
MKT 300 - Introduction to Marketing 3(3-0)

Electives (18 hours)
Select six of the following:
JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)
JRN 350 - Public Relations Principles and Practices 3(3-0)
JRN 361 - Writing for Advertising 3(3-0)
JRN 365 - Advertising Media 3(3-0)
JRN 366 - Advertising Account Management 3(3-0)
JRN 369 - Research Methods 3(3-0)
JRN 402 - Advanced Media Graphics and Visual Communication 3(3-0)
JRN 465 - Advertising Copy and Design 3(3-0)
JRN 466 - Advertising Campaigns 3(3-0)
JRN 467 - Advertising Account Planning 3(3-0)
MKT 305 - Buyer Behavior 3(3-0)
MKT 315 - Advertising Media 3(3-0)
MKT 410 - Advertising Management 3(3-0)
PSY 337 - Psychology of Advertising 3(3-0)

Total: 24 semester hours

Chemistry-Physics Major

B.S. in Ed. degree, Provisional Secondary Certification or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

The Chemistry-Physics Major, offered by the Department of Chemistry and Biochemistry and the Department of Physics, is designed to prepare prospective high school teachers of chemistry and physics.

Admission Requirements, Retention & Termination Standards

A minimum 2.7 GPA (B-) must be earned in all teaching majors. The following mathematics courses or equivalent skills are prerequisites for some of the required courses on this major: MTH 132; MTH 133, MTH 223, MTH 233, MTH 334. Consequently, a minimum of 18 hours of MTH courses will normally be required to complete this major in addition to the 46 or 49 hours specified above. Students with incomplete high school preparation may find it necessary to complete additional MTH courses.

Required Courses I (5-8 hours)
Select one of the following options:
Option A (8 hours)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)
Option B (5 hours)
CHM 161 - Principles of Chemistry 5(4-4)

Required Courses II (42 hours)
CHM 211QR - Quantitative Analysis 4(3-5)
CHM 331 - Inorganic Chemistry 3(2-4)
CHM 345 - Organic Chemistry I 3(3-0)
CHM 346 - Organic Chemistry II 3(3-0)
CHM 349 - Organic Chemistry Laboratory 2(0-6)
CHM 505/PHY 505 - Teaching Chemistry and Physics in Secondary Schools 3(3-0)
CHM 507/PHY 507 - Field Experience in Teaching Chemistry/Physics I(Spec)
PHT 563 - Physical Science Practicum 2(Spec)
PHY 145QR - University Physics I 4(4-0)
PHY 146 - University Physics II 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)
PHY 176 - University Physics Laboratory II 1(0-2)
PHY 247 - Introduction to Modern Physics 3(3-0)
PHY 252 - Modern Concepts in Nuclear and Particle Physics 1(1-0)
PHY 277 - University Physics Laboratory III 1(0-3)
PHY 322 - Intermediate Mechanics 3(3-0)
PHY 332 - Electricity and Magnetism 3(3-0)

Cognate Courses (0-15 hours)

Mathematics Prerequisites
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 233 - Calculus III 4(4-0)
MTH 334 - Differential Equations 3(3-0)

(continued)
Other Requirements

1. The student must have completed the specified chemistry courses for the Chemistry-Physics major, in addition to CHM/PHY 505 (3) and 507(1), before approval for student teaching can be given. The student must have a minimum grade point average of 2.70 in those 24-27 hours of courses. Transfer chemistry credit will be accepted from regionally accredited institutions, but at least six of the hours must be CMU classes with a minimum grade point average of 2.70. At least 12 of the required chemistry credit hours must have been received within 10 years of application for student teaching.

2. In order for a student to be approved for student teaching in chemistry, two CMU chemistry faculty must, at the student's request, provide completed department student evaluation forms. Students must also furnish transcripts showing all chemistry course credits.

3. Each student must demonstrate competence in chemistry by passing an American Chemical Society standardized chemistry examination at a specified level in order to be approved for student teaching.

For students seeking the Physics Department's recommendation for student teaching in physics, the following requirements must be met:

1. At least 20 hours of physics (including CHM/PHY 505) must be completed with a grade point average of 2.7.

2. At least 6 hours of physics (excluding CHM/PHY 505) must be completed at CMU.

Total: 47-65 semester hours

Electronic Media Sales Minor

This is an interdepartmental minor. Contact the School of Broadcast and Cinematic Arts or the Department of Marketing and Hospitality Services Administration for more information or to sign the minor.

Required Courses (21 hours)
BCA 265QR - Understanding Media Measurement 3(3-0)
BCA 451 - Practicum in Electronic Media Sales 3(1-4)
BCA 511 - Electronic Media Sales 3(3-0)
MKT 340 - Personal Selling 3(3-0)
MKT 420 - Advanced Selling and Negotiation 3(3-0)
MKT 440 - Sales Management 3(3-0)
MKT 460 - Organizational Selling 3(3-0)

Total: 21 semester hours

Public Affairs Minor

B.A.; B.S.; B.A.A. degrees

The Public Affairs Minor is offered by the Department of Journalism and the Department of Political Science and Public Administration.

The minor brings together courses designed to provide skills and knowledge for the student with a career interest in public affairs communication.

Only JRN 202 (3) can be double-counted by Journalism majors and minors. Only PSC 105 (3) can be double-counted by Political Science majors and minors. Credits from only one internship, either Journalism or Political Science can be counted toward the Public Affairs Minor. Internship hours are limited to 3.

Required Courses (12 hours)
JRN 202 - Writing for the Mass Media 3(3-0)
JRN 350 - Public Relations Principles and Practices 3(3-0)
PSC 105 - Introduction to American Government and Politics 3(3-0)
PSC 261 - State and Local Government 3(3-0)

Electives (12 hours)
JRN 360 - Advertising Principles 3(3-0)
JRN 450 - Public Relations Writing 3(3-0)
JRN 551 - Case Studies in Public Relations 3(3-0)
JRN 556 - Public Relations Seminar 3(3-0)
JRN 559 - Public Relations Internship 1-4(Spec)
PSC 210 - Introduction to Public Administration 3(3-0)
PSC 313 - Public Budgeting Processes 3(3-0)
PSC 320 - The American Legislative Process 3(3-0)
PSC 327 - Lobbying and Interest Group Behavior 3(3-0)
PSC 395 - Internship in Government and Politics 1-2(Spec)

Total: 24 semester hours

Interdepartmental and Interdisciplinary majors and minors in the College of Business Administration

See Index for page number:

- Business Administration Minor,
- Entrepreneurship Major and Minor,
- General Business Administration Major with Applied Business Communication Concentration
- International Business Major,
- Law and Economics Major,
- Purchasing and Supply Management Major.
College of Business Administration

Charles Crespy, Ph.D., Dean
Daniel Vetter, Ph.D., Senior Associate Dean
250 Applied Business Studies Complex; 989-774-3337

College Mission

Our mission is to prepare students for professional success by providing an innovative, high quality, business-connected education that inspires students to excel in diverse global environments. Our degree programs reflect our dedication to provide active student learning that develops the knowledge and skills necessary for student success. The college encourages this environment beyond the classroom through active professional student organizations and strong student support services. Business students are encouraged to seek meaningful experiences in the business community and to willingly adapt to the rapidly changing business environment.

The College of Business Administration offers undergraduate and graduate degree programs which are professionally accredited by the Association to Advance Collegiate Schools of Business (AACSB International). The accreditation assures quality business programs and the ability to attract excellent faculty with extensive professional teaching experience. AACSB International is the premier accrediting agency for bachelor’s and master’s degree programs in business administration and accounting.

Areas of Study

The College of Business Administration offers the B.S. in Business Administration degree. Some programs are available on other degrees, such as: an Entrepreneurship major on the B.A.A. degree; an Economics major on the B.S. or B.A. degree offered by the Department of Economics, and a Law and Economics Major on the B.S. or B.A. degree offered by the Department of Economics and the Department of Finance and Law. The Master of Business Administration graduate degree is available within the College of Business Administration. The Master of Science in Information Systems is offered by the Department of Business Information Systems. A Master of Arts in Economics is available in the Department of Economics. Requirements for these degrees are described in the Bulletin, College of Graduate Studies. The College operates the Isabella Bank Institute for Entrepreneurship, which include opportunities for students to provide consulting services for small businesses under the direction of a faculty coordinator.

The student interested in majoring or minoring in the College of Business Administration should contact Business Student Services in Grawn 105 during their first semester at Central Michigan University. This office offers academic advising relating to admission to Professional Business Studies (PBS), degree requirements and career planning.

Your education in the College of Business Administration not only provides the skills you need for your first job, but also is committed to instilling in you the desire to remain current in your field for the rest of your career. Our graduates have successfully advanced to become business, government, and community leaders.

ADMISSION, RETENTION & TERMINATION STANDARDS

Application to Professional Business Studies

A Pre-Business Professional Program application should be completed during orientation and given to Business Student Services. This application will be reviewed each semester to monitor each student’s progress toward admission to Professional Business Studies.

Eight Semester Sequence of Courses

Students earning the B.S. in B.A. degree follow a structured eight semester sequence of degree requirements. Contact Business Student Services at 989-774-3124 for additional information.

Admission to Professional Business Studies is a two-tier process.

Students follow a specific eight semester sequence of courses. Please contact the office of Business Student Services for more information.

1. Tier 1 Continuing Admission to Professional Business Studies will be granted to all students who have earned a 2.0 cumulative grade point average (GPA) in the following courses:
   - BUS 100 (3) Essential Business Skills
   - BIS 101 (3) Essential Business Communication Skills
   - ECO 203 (3) Microeconomic Principles of Business
   - BLR 235 (3) Business Law
   - STA 282QR (3) Introduction to Statistics
   - STA 382QR (3) Elementary Statistical Analysis

2. Tier 2 Full Admission to Professional Business Studies will be awarded to students who satisfy the following requirements:
   A. Completion of at least 42 semester credits with a minimum cumulative GPA of 2.50*
   B. Completion of the following courses:
      - ECO 204 (3) Principles of Macro- and Global Economics
      - ACC 250 (3) Introduction to Financial Accounting
      - BLR 235 (3) Business Law
      - MTH 217 (4) Business Calculus
      - OR MTH 132 (4) Calculus I
      - STA 282QR (3) Introduction to Statistics
      - OR STA 382QR (3) Elementary Statistical Analysis
   C. A 2.0 minimum cumulative GPA in the following courses: BUS 100, BIS 101, ECO 203, ECO 204, ACC 250, BLR 235, and STA 282QR or STA 382QR.

* Tier 2 is a competitive selection process. Specific cumulative grade point requirement will be dependent upon the pool of applicants, with a minimum acceptable cumulative GPA of 2.50.

Immediately following Tier 2 Admission, students should contact a departmental advisor in the department of their major to plan a program of study.

Maintaining Tier 2 Full Admission

Each student’s B.S. in Business Administration degree program of study will include the following components:

1. Each student will complete a common set of required business courses. (See page 108)
2. Students must maintain a minimum cumulative GPA of 2.00 in the following BSBA degree courses:

(continued)
ACC 255 (3) Managerial Accounting & Decision Making
BIS 255 (3) Information Systems
MGT 258 (3) Effective Management of Human Resources in Organizations
BUS 300QR (3) Applied Business Statistics
BUS 301 (3) Integrated Business Experience
FIN 302 (3) Integrated Financial Analysis
MGT 303/MKT 303 (3) Integrated Supply Chain Management
MKT 304 (3) Integrated Marketing Management
MGT 499 (3) Integrated Capstone - Strategic Management

3. Students must earn a minimum of 124-126 hours semester hours, at least 40 of which must be in courses numbered 300 or above.
4. A minimum of 35 semester hours must be taken on campus from the College of Business Administration and must include the Integrated Core (BUS 301, FIN 302, MGT/MKT 303, MKT 304) and MGT 499 Integrated Capstone - Strategic Management.
5. Each student must complete one of the following business majors (no minor is required on the business degree):
   - Accounting Major
   - Economics Major
   - Finance Major
   - General Business Administration Major: Applied Business Communication Concentration
   - General Management Major
   - Hospitality Services Administration Major
   - Human Resource Management Major
   - Information Systems Major
   - International Business Major
   - Law and Economics Major
   - Logistics Management Major
   - Marketing Major
   - Marketing Major: Professional Sales Concentration
   - Personal Financial Planning Major
   - Purchasing and Supply Management Major
   - Real Estate: Development and Finance Major

Other Degree Programs:
Some business programs are available on other CMU degrees. They include: Economics Major on the B.A. or B.S. degrees and the Entrepreneurship Major on the B.A.A. degree, and the Law and Economics major on the B.A. or B.S. degrees.

Additional Information:
Students must be admitted to Professional Business Studies to enroll in most courses on their major. When admission is listed as a prerequisite for a course, having a course listed on a signed major or minor does not waive the admission prerequisite for BSBA Students.

- To sign a major in General Business Administration with a concentration in Health Services Administration: See an advisor in the Department of Business Information Systems.
- To sign a major in International Business: See an advisor in the Department of Management.
- To sign a major in Entrepreneurship: See an advisor in the Department of Entrepreneurship. A student is required to earn a C (2.0) or better in ENT 101 or BIS 100 or BUS 100 and ENT 201 prior to signing the major. No more than 8 hours of electives taken from the same department as the student's major will count toward graduation requirements.
- To sign a minor in Business Administration: See an advisor in Business Student Services and bring a copy of your signed major. This minor is NOT available to students seeking the Bachelor of Science in Business Administration degree. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation.
- To sign a minor in Entrepreneurship: See an advisor in the Department of Entrepreneurship.

Honors Admission to Professional Business Studies
Students who wish to pursue a Bachelor of Science in Business Administration (BSBA) and meet the following requirements will be granted Tier 1 admission to Professional Business Studies
1. ACT composite score of 25 or higher;
2. High School GPA of 3.5 or higher; and
3. Completion of BUS 100 (3) Essential Business Skills with a 3.0 (B) or higher.
Interdepartmental and Interdisciplinary Majors and Minors

General Business Administration Major: Applied Business Communication Concentration
B.S. in B.A. degree

Admission Requirements, Retention & Termination Standards

1. To sign the major, please the Department of Business Information Systems, Grawn 305, 989-774-3554.
2. To register for most of the courses on this major, students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.

Additional Common Body of Knowledge in Business Administration Courses (9 hours)
- BUS 100 - Essential Business Skills 3(3-0)
- BUS 300QR - Applied Business Statistics 3(3-0)
- MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

Required Courses I (18 hours)
- BIS 260 - Global Business Communication Practices 3(3-0)
- BIS 308 - Visual Business Communication and Digital Media 3(3-0)
- BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)
- BIS 470 - Business Practices, Communication, and Collaboration 3(3-0)
- BIS 495 - Integrated Capstone: Applied Business Practices 3(3-0)
- MGT 348 - Dynamics of Organizational Behavior 3(3-0)

Required Courses II (3 hours)
Select one of the following:
- FIN 201 - Personal Finance 3(3-0)
- FIN 442 - Intermediate Financial Management 3(3-0)

Required Courses III (3 hours)
Select one of the following:
- BIS 360 - Applied Business Communication 3(3-0)
- MKT 310 - Marketing Communications 3(3-0)

Electives (3 hours)
Select one of the following:
- ART 114 - Understanding Digital Photography 3(3-0)
- ART 231 - Introduction to Graphic Design 3(0-6)
- BIS 327 - Web Site Development 3(3-0)
- BUS 492/ACC 492/MGT 492/MKT 492 - Practicum in Small Business 3(Spec)
- COM 225 - Introduction to Communication in Virtual Environments 3(3-0)
- COM 251 - Foundations of Communication Theory 3(3-0)
- COM 352 - Communication and Social Influence 3(3-0)
- COM 361 - Interpersonal Communication 3(3-0)
- ENT 201/MGT 201 - Entrepreneurship Launch Pad 3(3-0)
- JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)
- MKT 340 - Personal Selling 3(3-0)

Total: 36 semester hours

International Business Major
B.S. in B.A. degree

Advisor: Assigned by the Department of Management (989-774-3193)

Admission Requirements, Retention & Termination Standards

To sign a major in International Business: See an advisor in the Department of Management.
1. To register for most of the courses on the major, students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.
2. Courses taken on a Credit/No Credit basis are not accepted on management department majors.
3. At least fifteen (15) credit hours of the required elective coursework of the major must be taken in the accredited AACSB Program at the CMU campus (Mt. Pleasant and Midland).

Additional Common Body of Knowledge in Business Administration Courses (9 hours)
- BUS 100 - Essential Business Skills 3(3-0)
- BUS 300QR - Applied Business Statistics 3(3-0)
- MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

Required Courses (15 hours)
- ECO 372 - International Economics 3(3-0)
- FIN 573 - International Finance 3(3-0)
- MGT 365 - International Business 3(3-0)
- MGT 371 - Seminar in International Business 3(3-0)
- MKT 560 - International Marketing 3(3-0)

Foreign Language Requirement (6 hours)
Select hours at the 300 level or higher in a foreign language taught at CMU. Foreign students with native language different from English may substitute MGT courses subject to the approval of the major advisor.

Electives (6 hours)
You must earn at least 3 credits in study-abroad, with international emphasis, international work experience, or completion of a comprehensive research project with international emphasis. If only 3 credit hours are earned abroad, select one of the following:
- ANT/SOC 370 - Global Environmental Issues 3(3-0)
- ANT/SOC 457 - Globalization and Society 3(3-0)
- ECO 380 - Comparative Economic Systems 3(3-0)
- ECO 381 - Patterns of Economic Development 3(3-0)
- FRN 335 - French for Business 3(3-0)
- GEO 121 - Cultures of the World 3(3-0)
- GEO 346 - Geography of the Developing World 3(3-0)
- GER 335 - The Culture of the German Economy 2(2-0)
- PSC 351 - International Relations 3(3-0)
- PSC 555 - International Law I 3(3-0)
- SPN 335 - Spanish for Business 3(3-0)

Total: 36 semester hours
The Law and Economics major combines the elements of both disciplines - the analytical and decision-making framework provided by economic theory as well as the reasoning and argumentation skills of business law. The modern manager faces legal implications of decision-making in daily operations and in formulating business strategy. Business law courses provide the student with insight into legal institutions, the nature of legal language, the regulatory environment and the legal principles pertaining to property rights, contracts, business organization and commercial relationships. The economic content features the use of problem-solving techniques to develop analytical decision-making skills. Students will gain an appreciation of the preservation of individual rights and methods to evaluate the efficiency of the legal system.

The major is intended for students preparing for a career in the legal profession or those seeking a legal emphasis within their business or liberal arts studies. A student planning to attend law school will receive valuable information on the use of economics in legal applications. A working knowledge of these basic issues also benefits others, e.g. expert witnesses routinely use economic concepts in testimonies.

Contact either the Finance and Law Department or the Economics Department for the names of advisors.

**Admission Requirements, Retention & Termination Standards**

1. Up to 6 hours may be taken as Credit/No Credit and counted towards the major.
2. Students are strongly advised to select elective courses in consultation with an Economics or Finance & Law Department advisor.
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

**Required Courses (18 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLR 202</td>
<td>Legal Environment of Business 3(3-0)</td>
<td></td>
</tr>
<tr>
<td>BLR 302</td>
<td>Law of Agreements 3(3-0)</td>
<td></td>
</tr>
<tr>
<td>BLR 350/ECO 350</td>
<td>Law and Economics 3(3-0)</td>
<td></td>
</tr>
<tr>
<td>ECO 201</td>
<td>Principles of Macroeconomics 3(3-0)</td>
<td></td>
</tr>
<tr>
<td>ECO 202</td>
<td>Principles of Microeconomics 3(3-0)</td>
<td></td>
</tr>
<tr>
<td>ECO 365</td>
<td>Intermediate Microeconomic Theory 3(3-0)</td>
<td></td>
</tr>
</tbody>
</table>

**Electives (15 hours)**

**Note:** BLR 410 may be given credit as a 300-level or above Economics elective, or as a 300-level or above BLR elective, but not both.

**Electives I (9 hours)**

- 9 hours of electives in Economics at the 300-level or above; 6 hours of which must be from the following courses:
  - BLR 410 - Regulatory Law 3(3-0)
  - ECO 301 - Environmental Economics 3(3-0)
  - ECO 315 - Economics of Immigration 3(3-0)
  - ECO 360 - Public Economics 3(3-0)
  - ECO 410 - Government and Business 3(3-0)
  - ECO 425 - The Economics of Industrial Organization 3(3-0)
  - ECO 515 - Collective Bargaining and Labor Law 3(3-0)

**Electives II (6 hours)**

- 6 hours of electives from any BLR course 300-level or above, excluding BLR 365.

**Total:** 33 semester hours
Purchasing and Supply Management Major
B.S. in B.A. degree

This major is only available to students admitted to the College of Business Administration. This major can be signed by a designated faculty in either the Management or the Marketing and Hospitality Services Administration departments.

**Admission Requirements, Retention & Termination Standards**

1. To register for most of the courses on the major students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.
2. Courses taken on a credit/no credit basis are not accepted on the Purchasing and Supply Management Major.
3. At least fifteen (15) credit hours of the required and elective course work of the major must be taken in the accredited AACSB Program at the CMU campus (Mt. Pleasant and Midland).

Additional Common Body of Knowledge in Business Administration Courses (9 hours)
BUS 100 - Essential Business Skills 3(3-0)
BUS 300QR - Applied Business Statistics 3(3-0)
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

**Required Courses (18 hours)**
MGT 333 - Purchasing Management 3(3-0)
MGT 533 - Purchasing Strategy 3(3-0)
MGT 542 - Inventory and Materials Management 3(3-0)
MKT 330 - Marketing Channels 3(3-0)
MKT 340 - Personal Selling 3(3-0)
MKT 431 - Logistics Operations 3(3-0)

**Electives (6 hours)**
ACC 321 - Managerial Cost Accounting 3(3-0)
MGT 365 - International Business 3(3-0)
MGT 442 - Computer Applications for Production Operations Management 3(3-0)
MGT 490 - Internship in Management 1-6(Spec)
MGT 543 - Management and Control of Quality 3(3-0)
MKT 305 - Buyer Behavior 3(3-0)
MKT 490 - Internship In Marketing/Logistics 3-6(Spec)
MKT 555 - Market and Sales Forecasting 3(3-0)
MKT 560 - International Marketing 3(3-0)

**Total: 33 semester hours**

At least fifteen (15) credit hours of the required and elective course work of the major must be scheduled through the College of Business Administration on the CMU campus.

Minors

The Business Administration Minor is available to students pursuing nonteaching degrees outside the College of Business Administration. To graduate with this minor, no more than 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation. This minor is NOT available to students seeking the Bachelor of Science in Business Administration degree.

The College of Business Administration also offers specialized minors in certain departments. See the individual departmental sections for the requirements for these specialized minors.

Business Administration Minor
B.A.; B.A.A.; B.F.A.; B.S. degrees

The Business Administration minor is available to students pursuing non-teaching degrees outside the College of Business Administration. The minor provides a broad background in business for students from other disciplines.

**Admission Requirements, Retention & Termination Standards**

To sign a minor in Business Administration: See an advisor in Business Student Services, Grawn 105, 989-774-3124 and bring a copy of your signed major.

This minor is NOT available to students seeking the Bachelor of Science in Business Administration degree.

No more than a total of 27 hours of credit earned in business courses may be counted toward graduation. These hours include all business transfer credits from other colleges and/or universities and credits earned at Central Michigan University. To determine your qualifications, contact Business Student Services.

**Required Courses (24 hours)**
ACC 321 - Managerial Cost Accounting 3(3-0)
ACC 202 - Concepts of Managerial Accounting 3(3-0)
BIS 221 - Computers In Business I 3(3-0)
BLR 202 - Legal Environment of Business 3(3-0)
ECO 201 - Principles of Macroeconomics 3(3-0)
FIN 332 - Managerial Finance 3(3-0)
MKT 300 - Introduction to Marketing 3(3-0)
MKT 312 - Introduction to Management 3(3-0)
MKT 555 - Market and Sales Forecasting 3(3-0)

**Total: 24 semester hours**
Accounting Major
B.S. in B.A. degree

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
1. To sign a major in Accounting, see an advisor in the School of Accounting. To register for most of the courses on the major students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.
2. To graduate with a major in accounting, the student must complete a minimum of 124 hours.
3. At least 18 hours of accounting coursework must be taken at CMU for a major in accounting.
4. Introductory courses in accounting transferred to CMU are accepted for not more than six semester hours of credit (equivalent to the hours of ACC 250 and ACC 255 at CMU).
5. No minor is required for accounting majors.
6. The only course available on a Credit/No Credit basis that can be counted toward the accounting major is ACC 489.
7. A maximum of three semester hours of credit in accounting courses numbered with the ending digits 80-99 can be counted toward the accounting major.

8. For CPA, CMA, and CIA information, visit the following websites:
   A. For CPA licensing: www.michigan.gov/accountancy
   B. For the CMA certificate: www.imanet.org/cma_certification.aspx
   C. For the CIA certificate: www.TheIIA.org

Additional Common Body of Knowledge in Business Administration Courses (9 hours)
BUS 100 - Essential Business Skills 3(3-0)
BUS 300QR - Applied Business Statistics 3(3-0)
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

Accounting Core (21 hours)
ACC 301 - Intermediate Accounting I 3(3-0)
ACC 302 - Intermediate Accounting II 3(3-0)
ACC 311 - Federal Income Taxation I 3(3-0)
ACC 321 - Managerial Cost Accounting 3(3-0)
ACC 370 - Accounting Systems and Controls 3(3-0)
ACC 501 - Advanced Accounting 3(3-0)
ACC 531 - Auditing and Assurance Services 3(3-0)

Note: ACC 311, 321, 370, 501, and 531 are required to take the CPA exam.
Electives I (6-9 hours)
Select 2 or 3 courses from the following:
- ACC 511 - Federal Income Tax II 3(3-0)
- ACC 512 - Tax Research and Administration 3(3-0)
- ACC 517 - Federal Estate and Gift Taxation 3(3-0)
- ACC 521 - Managerial Cost Control Analysis 3(3-0)
- ACC 524 - Budgeting: Planning and Control 3(3-0)
- ACC 533 - Auditing Procedures and Statistical Sampling 3(3-0)
- ACC 535 - EDP Auditing and Control 3(3-0)
- ACC 536 - Forensic Accounting 3(3-0)
- ACC 543 - Fund Accounting 3(3-0)
- ACC 550 - Internal Auditing 3(3-0)
- ACC 570 - Strategic Accounting System Development and Implementation 3(3-0)

Electives II (0-3 hours)
If only 2 courses are selected from group I above, select one course from the following list:
- ACC 489 - Accounting Internship/Co-Op 1-3(Spec)
- ACC 491 - Independent Studies 1-3(Spec)
- ACC 492 - Practicum In Small Business 3(Spec)
- ACC 597 - Special Topics In Accounting 1-3(Spec)
- BIS 420 - Systems Analysis and Design 3(3-0)
- BLR 302 - Law of Agreements 3(3-0)
- BLR 390 - Law of Enterprise Organization 3(3-0)
- FIN 442 - Intermediate Financial Management 3(3-0)
- MGT 335 - Introduction to Management Science 3(3-0)

Note: Accounting and business electives depend on the student’s career objectives and should be chosen in consultation with the student's advisor.

Total: 39 semester hours

Accounting Minor
B.A.; B.A.A.; B.F.A.; B.S. in B.A. degrees

Required Courses I (3 hours)
Select one of the following:
- ACC 201 - Concepts of Financial Accounting 3(3-0)
- ACC 250 - Introduction to Financial Accounting 3(3-0)

Required Courses II (3 hours)
Select one of the following:
- ACC 202 - Concepts of Managerial Accounting 3(3-0)
- ACC 255 - Managerial Accounting & Decision Making 3(3-0)

Required Courses III (12 hours)
- ACC 301 - Intermediate Accounting I 3(3-0)
- ACC 302 - Intermediate Accounting II 3(3-0)
- ACC 311 - Federal Income Taxation I 3(3-0)
- ACC 321 - Managerial Cost Accounting 3(3-0)

Electives (3 hours)
Select one of the following:
- ACC 501 - Advanced Accounting 3(3-0)
- ACC 511 - Federal Income Tax II 3(3-0)
- ACC 512 - Tax Research and Administration 3(3-0)
- ACC 517 - Federal Estate and Gift Taxation 3(3-0)
- ACC 521 - Managerial Cost Control Analysis 3(3-0)
- ACC 524 - Budgeting: Planning and Control 3(3-0)
- ACC 531 - Auditing and Assurance Services 3(3-0)
- ACC 533 - Auditing Procedures and Statistical Sampling 3(3-0)
- ACC 535 - EDP Auditing and Control 3(3-0)
- ACC 536 - Forensic Accounting 3(3-0)
- ACC 543 - Fund Accounting 3(3-0)
- ACC 550 - Internal Auditing 3(3-0)
- ACC 570 - Strategic Accounting System Development and Implementation 3(3-0)
- ACC 597 - Special Topics In Accounting 1-3(Spec)

Total: 21 semester hours

Other pertinent information on the accounting minor includes the following:
1. At least nine hours of accounting coursework must be taken at CMU for a minor in accounting.
2. Introductory courses in accounting transferred to CMU are accepted for not more than six semester hours of credit (equivalent to the hours of ACC 201/250 and ACC 202/255).
3. No more than a total of 27 hours may be taken in the College of Business Administration and counted toward graduation unless the student is majoring in the College of Business Administration.
What is Information Systems?

Information Systems (IS) is the study of how organizations use people, processes, and technology to effectively manage information. IS majors learn business management and problem-solving skills that are highly valued by employers in a variety of industries.

Why Major in Information Systems (IS)?

IS graduates perform a wide variety of functions within an organization. For example, they analyze business processes, manage projects, and provide technical training. IS graduates provide a critical link between an organization’s business functions and its technical support staff. As such, IS graduates work in almost every type of organization, small and large, public and private. Specific reasons to major in IS at CMU include the following:

- One hundred percent of Information Systems graduates received employment offers before or immediately following graduation.
- First-year salaries were among the highest received by College of Business Administration graduates.
- Internship opportunities with organizations such as Dow Chemical, Dow Corning Corporation, Eli Lilly, State Farm Insurance, Auto Owners Insurance, and Howmet Corporation.
- Modern lab facilities in the College of Business Administration with up-to-date software.
- SAP®, the world’s leading Enterprise Resource Planning (ERP) software.

Why Minor in Applied Business Practices (ABP)?

The Applied Business Practices (ABP) minor prepares students with the critical abilities employers value most: communication, collaboration, creativity, and critical thinking. The ABP minor focuses on the following areas to help students become “job ready”:

- Effective communication in a global business setting
- Social media in business
- Visual communication and digital media
- Client projects and real-world problem solving
- Professional portfolios, with evidence of student learning, proficiencies, and accomplishments

Students from any major can benefit from the critical skills developed with the ABP minor: applying technology to solve actual problems, using social media in the workplace, and developing effective communication and professional literacy skills.

Business Information Systems at CMU

The goals of the department are (1) to provide a quality undergraduate programs to prepare students for business careers in business and information systems and (2) to provide excellence in a graduate program leading to a Master of Science in Information Systems as well as graduate coursework in information systems for the Master in Business Administration and a Graduate Certificate in SAP.

The technology-intensive courses support all degree programs within the College of Business Administration and provide opportunities for all Central Michigan University students to acquire information systems expertise. The information systems programs follow the Association of Information Technology Professional’s model curriculum.

Notes:

- With the exception of BIS 490, the department does not accept Credit/No Credit courses on undergraduate majors.
- Graduate course offerings lead to the Master of Science in Information Systems and the Graduate Certificate in SAP.

An Undergraduate Certificate in Cybersecurity is offered through Global Campus.

The Faculty

Frank J. Andera, James Cappel, Roger Hayen, Nancy Hicks, Monica Holmes, Zhenyu Huang, Mark Hwang, Anil Kumar, James Melton, Robert Miller, James Scott, Karl Smart

Information Systems Major

B.S. in B.A. degree

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To sign a major in Information Systems, see an advisor in the Business Information Systems Department. To register for most of the courses on the major students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.

With the exception of BIS 490, the department does not accept Credit/No Credit courses on undergraduate majors.

Additional Common Body of Knowledge in Business Administration Courses (9 hours)

BUS 100 - Essential Business Skills 3(3-0)
BUS 300QR - Applied Business Statistics 3(3-0)
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

Required Courses I (15 hours)

BIS 228 - Applications Development 3(3-0)
BIS 380 - Enterprise Architecture 3(3-0)
BIS 420 - Systems Analysis and Design 3(3-0)
BIS 422 - Database Management Systems 3(3-0)
BIS 425 - Information Systems Development Project 3(3-0)

Required Courses II (9 hours)

Select one of the following options:

Option A - Enterprise Software (9 hours)

Select three of the following:

BIS 347 - Enterprise Software in Business Using SAP Software 3(3-0)
BIS 357 - ABAP Programming Fundamentals 3(3-0)
BIS 458 - Configuration and Implementation using SAP Software 3(3-0)
BIS 598 - Integration of Business Processes Using SAP Software 4(Spec)
Information Systems Minor


The IS minor is primarily designed for students who plan a career closely allied with information systems (IS), but do not intend to make IS their primary focus. Examples of such careers include accounting, finance, marketing, human resources, logistics, or a related business area. The IS minor provides students with experience in the development, implementation, and support of IS, as well as the use of these systems in business.

Admission Requirements, Retention & Termination Standards

To sign a minor in Information Systems:

See an advisor in the Business Information Systems Department and bring a copy of your signed major.

No more than a total of 27 hours of credit in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

Required Courses I (3 hours)

Select one of the following:

BIS 221 - Computers In Business I 3(3-0)
BUS 255 - Information Systems 3(3-0)

Required Courses II (3 hours)

Select one of the following:

ACC 201 - Concepts of Financial Accounting 3(3-0)
ACC 250 - Introduction to Financial Accounting 3(3-0)

Required Courses III (3 hours)

Select one of the following:

BIS 222 - Computers In Business II 3(3-0)
BIS 256 - Information Systems 3(3-0)

Required Courses IV (3 hours)

Select one of the following:

BIS 347 - Enterprise Software in Business Using SAP Software 3(3-0)
BUS 301 - Integrated Business Experience 3(2-1)

Required Courses V (3 hours)

BIS 420 - Systems Analysis and Design 3(3-0)

Electives (6 hours)

Select from the following courses:

BIS 228 - Applications Development 3(3-0)
BIS 300/ENT 300 - Digital Entrepreneurship 3(3-0)
BIS 308 - Visual Business Communication and Digital Media 3(3-0)
BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)
BIS 324 - Seminar in Applications Development 3(3-0)
BIS 327 - Web Site Development 3(3-0)
BIS 328 - Web Applications Development 3(3-0)
BIS 357 - ABAP Programming Fundamentals 3(3-0)
BIS 380 - Enterprise Architecture 3(3-0)
BIS 422 - Database Management Systems 3(3-0)
BIS 423 - Decision Support Systems & Business Intelligence 3(3-0)
BIS 458 - Configuration and Implementation using SAP Software 3(3-0)
BIS 598 - Integration of Business Processes Using SAP Software 4(Spec)

Total: 21 semester hours

Applied Business Communication Minor


This minor is for CMU students who want to develop the knowledge and skills that will make them job ready for the business world upon graduation. Students will develop pathways to success by making connections and building relationships through effective business communication, collaborative technologies, and social media in professional settings. Students will apply what they learn in real-world settings, including managing client projects in the community, through a structured series of courses that build upon one another. Students will document their work in an electronic portfolio and upon completion of the program will have a polished set of documents and other media that will provide a snapshot of acquired knowledge and skills to prospective employers and graduate schools.

Admission Requirements, Retention & Termination Standards

To sign a minor in Applied Business Communication: See an advisor in the Department of Business Information Systems and bring a copy of your signed major.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

Required Courses I (3 hours)

Select one of the following:

BIS 100 - Introduction to Business 3(3-0)
BUS 100 - Essential Business Skills 3(3-0)

Required Courses II (18 hours)

BIS 260 - Global Business Communication Practices 3(3-0)
BIS 308 - Visual Business Communication and Digital Media 3(3-0)
BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)
BIS 360 - Applied Business Communication 3(3-0)
BIS 470 - Business Practices, Communication, and Collaboration 3(3-0)
BIS 495 - Integrated Capstone: Applied Business Practices 3(3-0)

Total: 21 semester hours

Undergraduate Certificate in Cybersecurity

Note: This program is offered online through Global Campus only. For this standalone certificate, students will take BIS 510 as their first course, followed by BIS 521, BIS 523, and BIS 525 (which can be taken in any order). The culminating course is BIS 530.

Admission Requirements, Retention & Termination Standards

The Undergraduate Certificate in Cybersecurity is designed for regularly admitted undergraduate student who desire to acquire advanced knowledge and skills in cybersecurity.

To be considered for regular admissions, an applicant must:

1. Matriculate as a regular undergraduate student or a Non-degree Special Admission student.
2. Present a cumulative grade point average of 2.0 (C) or higher in the certificate. All courses are letter graded.
3. Demonstrate computer network literacy by prerequisite coursework or professional certifications in computer networking or cybersecurity.
4. File a certificate authorization form by the end of the third week of the term in which the student will complete the certificate.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the students is majoring in the College of Business Administration.

Required Courses (15 hours)

BIS 510 - Network & Systems Security Fundamentals 3(3-0)
BIS 521 - Governance, Risk, & Compliance in Cybersecurity 3(3-0)
BIS 523 - Cybercrime Forensics 3(3-0)
BIS 525 - Managing Security & Privacy in the Cloud 3(3-0)
BIS 530 - Cybersecurity, Systems, and Network Certification 3(3-0)

Total: 15 semester hours
Why Study Economics?
Economics is the study of how societies satisfy their many material wants and needs. An understanding of economic topics such as supply and demand, consumption of goods and services, inflation and recession, is important to individuals and groups of people who are responsible for making decisions about resources. For example, individuals are concerned with maximizing the purchasing power of their income; businesses strive to efficiently use raw materials and labor in order to remain competitive in the global marketplace; governments want to know how political decisions will affect the economic actions of its residents. The study of economics is an excellent foundation for further study and/or a career in law, business, international affairs, public administration or education.

Economics at CMU
Our diversity of course offerings and majors reflect the broad range of topics in the discipline and wide range of interests of the faculty. Students can earn an economics major on three degree programs: the Bachelor of Arts (B.A.), Bachelor of Science (B.S.), and the Bachelor of Science in Business Administration (B.S. in B.A.).

All economics students gain a set of quantitative and analytical skills that will serve them well in their careers and personal lives. Economics seeks to measure and predict human behavior so it is the most quantitative of the social sciences. Each major must acquire a proficiency in mathematics and statistics to be adequately prepared for the analytical work required in the discipline: problem-solving and decision-making. Every student will be challenged to identify problems, create alternative solutions and decide which option will best serve the goals of the decision-maker. Since an economics student acquires general training in decision-making skills, there are a wide variety of employment opportunities upon graduation and beyond. These general skills allow graduates to successfully compete in a constantly changing labor market during this information age.

Students with a liberal arts perspective may be attracted to economics because it is a major that is flexible in terms of topics and employment options. Some courses concentrate on decision-making within the firm and the impact of those decisions on the firm’s performance. Other courses take a broader social perspective. These may address the decision-making process in governmental organizations, the role of governments in society, or the impacts of government policies on individual citizens and private business. Economics also has much to add to public debates on social issues such as the role of women in the economy or pollution control.

Economics majors earning a degree in business administration would complete the same core requirements as other majors in the college. These requirements are designed to provide a specific set of technical and personal skills used in business and to provide an appreciation of the wider social environment in which businesses operate. Economics majors have a more restricted set of elective courses in this degree program. These courses provide technical skills (e.g., statistical methods and forecasting), greater depth in broader business issues (e.g., environmental policies and international institutions), or narrower applications of economics to business topics (e.g., government regulation and management decision-making).

The department is also committed to general education, and we offer a variety of courses in Groups III and IV of the University Program. Social institutions are created by people through a deliberate decision-making process. The structure of these institutions influence individual behavior by offering opportunities and imposing constraints. Individual behavior, in turn, may support or undermine these social structures or actively seek to change the institutions. This interplay between individuals and social institutions provides the essential material for these general education courses: economic dimensions of social issues (ECO 150), detailed analysis of how markets influence economic performance (ECO 201 and 202), comparisons of different economic systems in East Asia (ECO 281), and the influence of information on individual economic behavior in markets (ECO 222QR).

The Faculty
Vikesh Amin, Christopher A. Bailey, Bharati Basu, Meenakshi Beri, Lawrence P. Brunner, A. Aydin Cecen, Debashish Chakraborty, Gregory Falls, J. Richard Hill, James Irwin, Aparna Lhila, Catherine McDevitt, Paul A. Natke, Gary M. Pecquet, Elena Quercioli, Samuel Raisanen, Dimitrios Staikos, Golnaz Taghvatalab, Jason E. Taylor, Darshana Udayanganie, Linlan Xiao
**Majors**

**Economics Major**

*B.A.; B.S. degrees*

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Up to six (6) hours may be taken as Credit/No Credit and counted toward the major.

Students are strongly advised to select elective courses in consultation with an Economic Department advisor.

Students majoring or minoring in Economics may take up to six (6) hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

**Required Economic Courses (15 hours)**

ECO 201 - Principles of Macroeconomics 3(3-0)
ECO 202 - Principles of Microeconomics 3(3-0)
ECO 306 - Money and Banking 3(3-0)
ECO 365 - Intermediate Microeconomic Theory 3(3-0)
ECO 370 - Intermediate Macroeconomic Theory 3(3-0)

**Required Mathematics Courses (4 hours)**

Select one of the following courses:

MTH 132 - Calculus I 4(4-0)
MTH 217 - Business Calculus 4(4-0)

**Required Statistics Courses (3 hours)**

Select one of the following:

ECO 285 - Statistical Methods in Economics 3(3-0)
STA 282QR - Introduction to Statistics 3(3-0)
STA 382QR - Elementary Statistical Analysis 3(3-0)

**Electives (15 hours)**

Select 15 hours of ECO courses; 6 hours of ECO courses must be numbered 300 or above, and a maximum of 3 hours of ECO courses at the 100 level.

**Total: 37 semester hours**

*Note:* MTH 130 is a prerequisite for STA 382QR.

**Law and Economics Major**

*B.A.; B.S. degrees*

This major is listed in the College of Business Administration section. See the index for the page number.

**Interdepartmental**

**Law and Economics Major**

*B.S. in B.A. degree*

This major is listed in the College of Business Administration section. See the index for the page number.

**Minors**

**Economics Minor**

*B.A.; B.A.A.; B.S. degrees*

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

A student must first be admitted to Tier 2 Full Admission to Professional Business Studies (see the index under Business Administration, College of, for page number).

Up to six (6) hours may be taken as Credit/No Credit and counted toward the major.

Students are strongly advised to select elective courses in consultation with an Economic Department advisor.

Students majoring or minoring in Economics may take up to six hours of credit/credit work in Economics.

**Required Courses (6 hours)**

ECO 301 - Environmental Economics 3(3-0)
ECO 360 - Public Economics 3(3-0)
ECO 372 - International Economics 3(3-0)

**Electives (15 hours)**

Select 15 hours of ECO courses; 9 hours of ECO courses must be numbered 300 or above. Total: 21 semester hours

**Economics Minor**

*B.S. in B.A. degree*

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

To sign a minor in Economics: See an advisor in the Department of Economics and bring along a copy of your signed major.

Up to six (6) hours may be taken as Credit/No Credit and counted toward the minor.

Students are strongly advised to select elective courses in consultation with an Economic Department advisor.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

**Required Courses (6 hours)**

ECO 301 - Environmental Economics 3(3-0)
ECO 360 - Public Economics 3(3-0)

**Electives (15 hours)**

Select 15 hours of ECO courses; 9 hours of ECO courses must be numbered 300 or above. Total: 21 semester hours
Entrepreneurship (ENT)
For information, please contact the chairperson, 989-774-3270, 164 Grawn Hall;
www.cmich.edu/colleges/cba/academic_programs/Departments/ent

Entrepreneurship is the engine that powers economic growth and transports people from poverty to prosperity. It is also a mindset. An entrepreneur is someone who is able and willing to exert considerable initiative and tolerate considerable risk to organize and manage any enterprise. An entrepreneur combines assets and resources, business insight and skill, and the entrepreneurial spirit (which is characterized by innovation, flexibility, and a tolerance for risk and failure) to create value, jobs, and wealth. Entrepreneurship is an essential part of a nation’s ability to succeed in a rapidly changing and increasingly competitive global economy.

Why Study Entrepreneurship?
In an information economy, the person with the broadest developed skillset, the quickest business reflexes, and the greatest ability to identify opportunity and adapt will be the one best positioned for success. The study of entrepreneurship provides students with a comprehensive, hands-on business education that prepares them with the right skills, training, and mindset to start a new business, take over a family business, or bring innovation and agility to an existing business.

Entrepreneurship at CMU
CMU’s entrepreneurship program shapes budding entrepreneurs through our strong academic curriculum and practical experiences in the start-up and small business world.

The Department of Entrepreneurship at CMU offers a major in entrepreneurship, in pursuit of the Bachelor of Applied Arts degree, as well as a minor in entrepreneurship.

The entrepreneurship major offers a broad cross-disciplinary foundation of business education as it relates to both entrepreneurship (the launching of a new business venture) and intrapreneurship (the development and promotion of innovative products and services within an existing company). Students discover their own aptitude for entrepreneurship, find and evaluate business opportunities, secure funding, organize and manage new businesses, identify and manage risk, and create plans to grow new and existing ventures, including social ventures. The curriculum focuses on academic rigor and experiential learning targeted to develop the business acumen needed to start a business, to acquire and lead a business, or to work effectively within a business. The faculty and staff are committed to teaching practical skills, inspiring innovative thinking, and connecting students with resources that include mentors, experts, angel investors, venture capitalists, and professionals within the entrepreneurial ecosystem.

The minor offers a unique learning experience to non-business students who aspire to start a business of their own or secure employment in a non-business career that is related to or dependent on innovation and entrepreneurial skills. This minor is not available to students seeking the Bachelor of Science in Business Administration Degree.

The Faculty
Bob Berry, Charles Crespy, Judy DeWitt, Jim Foulds, Jeffrey Hoyle, Willie Kelly, Anil Kumar, Teresa O’Brien, Jason Ratledge, Robby Roberts, Spenser Robinson, Kenneth J. Sanney, Babu Subbaraman, Golnaz Taghvatalab, Michael Vuillemot, Erin Zimmer
Entrepreneurship Major
B.A.A. degree

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
To sign a major in Entrepreneurship: See an advisor in the Department of Entrepreneurship. A student is required to earn a C (2.0) or better in ENT 101 or BIS 100 or BUS 100 and ENT 201 prior to signing the major. No more than 8 hours of electives taken from the same department as the student’s major will count toward graduation requirements.

Required Course I (3 hours)
Select one of the following:
- BIS 100 - Introduction to Business 3(3-0)
- BUS 100 - Essential Business Skills 3(3-0)
- ENT 101 - Discovering the Entrepreneur Within 3(3-0)

Required Courses II (33-36 hours)
- ENT 201/MGT 201 - Entrepreneurship Launch Pad 3(3-0)
- ENT 210/ACC 210 - Accounting Information for Entrepreneurial Decision Making 3(3-0)
- ENT 213/ECO 213 - Economics for Entrepreneurs 3(3-0)
- ENT 320/FIN 320 - Financial Management of the Entrepreneurial Venture 3(3-0)
- ENT 419/MGT 419 - Running and Growing an Entrepreneurial Venture in a Global Economy 3(3-0)
- ENT 420/BLR 420 - Legal Aspects of New Ventures 3(3-0)
- ENT 444 - Internship in Entrepreneurship 3-6(Spec)
- STA 282QR - Introduction to Statistics 3(3-0)

Note: Prerequisites for STA 282QR must be met.

Electives (3 hours)
Select one of the following:
- BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)
- ENT 300/BIS 300 - Digital Entrepreneurship 3(3-0)
- ENT 320/FIN 320 - Financial Management of the Entrepreneurial Venture 3(3-0)
- ENT 419/MGT 419 - Running and Growing an Entrepreneurial Venture in a Global Economy 3(3-0)
- ENT 420/BLR 420 - Legal Aspects of New Ventures 3(3-0)
- ENT 497 - Special Topics in Entrepreneurship 3-12(Spec)
- MKT 340 - Personal Selling 3(3-0)

Total: 39-42 semester hours

The Entrepreneurship major must follow the standards of AACSBo and must complete at least 50% of credits for graduation outside the College of Business Administration. The 27-hour rule does not apply to the Entrepreneurship Major. No more than 8 hours of electives taken from the same department as the student’s major will count toward graduation requirements.

Entrepreneurship Minor

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
To sign a minor in Entrepreneurship: See an advisor in the Department of Entrepreneurship and bring a copy of your signed major. A student is required to earn a C (2.0) or better in ENT 101 or BIS 100 or BUS 100 and ENT/MGT 201 prior to signing the minor.

Required Course I (3 hours)
Select one of the following:
- BIS 100 - Introduction to Business 3(3-0)
- BUS 100 - Essential Business Skills 3(3-0)
- ENT 101 - Discovering the Entrepreneur Within 3(3-0)

Required Courses II (12 hours)
- ENT 201/MGT 201 - Entrepreneurship Launch Pad 3(3-0)
- ENT 210/ACC 210 - Accounting Information for Entrepreneurial Decision Making 3(3-0)
- ENT 213/ECO 213 - Economics for Entrepreneurs 3(3-0)
- ENT 221/MKT 221 - Marketing Strategies for Entrepreneurs 3(3-0)
- ENT 300/BIS 300 - Digital Entrepreneurship 3(3-0)
- ENT 320/FIN 320 - Financial Management of the Entrepreneurial Venture 3(3-0)
- ENT 416/MGT 416 - Entrepreneurship in the Global Economy 3(3-0)
- ENT 419/MGT 419 - Running and Growing an Entrepreneurial Venture in a Global Economy 3(3-0)
- ENT 420/BLR 420 - Legal Aspects of New Ventures 3(3-0)
- MKT 340 - Personal Selling 3(3-0)

Electives (6 hours)
Select 6 hours from the following:
- BIS 315 - Social Media and Emerging Technologies in Business 3(3-0)
- ENT 300/BIS 300 - Digital Entrepreneurship 3(3-0)
- ENT 320/FIN 320 - Financial Management of the Entrepreneurial Venture 3(3-0)
- ENT 416/MGT 416 - Entrepreneurship in the Global Economy 3(3-0)
- ENT 419/MGT 419 - Running and Growing an Entrepreneurial Venture in a Global Economy 3(3-0)
- ENT 420/BLR 420 - Legal Aspects of New Ventures 3(3-0)
- ENT 497 - Special Topics in Entrepreneurship 3-12(Spec)
- MKT 340 - Personal Selling 3(3-0)

Total: 21 semester hours
Majors

Finance Major

B.S. in B.A. degree

The Finance Major prepares students for careers in banking, corporate finance, and investments.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

To sign a major in Finance:

See an advisor in the Department of Finance and Law. To register for most of the courses on the major students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites. At least eighteen hours of Finance coursework must be taken at CMU. FIN 499, on the Finance major, must be taken at CMU. Only FIN 490 may be taken as Credit/No Credit and counted toward the major.

Additional Common Body of Knowledge in Business Administration Courses (9 hours)

BUS 100 - Essential Business Skills 3(3-0)
BUS 300QR - Applied Business Statistics 3(3-0)
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

Required Courses (21 hours)

FIN 315 - Principles of Investments 3(3-0)
FIN 425 - Options and Futures 3(3-0)
FIN 442 - Intermediate Financial Management 3(3-0)
FIN 448 - Fundamental Financial Analysis 3(3-0)
FIN 472 - Money and Capital Markets 3(3-0)
FIN 499 - Advanced Financial Management 3(3-0)
FIN 573 - International Finance 3(3-0)

Electives (6 hours)

Select hours from the following:

ACC 301 - Intermediate Accounting I 3(3-0)
ACC 302 - Intermediate Accounting II 3(3-0)
ACC 311 - Federal Income Taxation I 3(3-0)
ACC 321 - Managerial Cost Accounting 3(3-0)

Any 300 level or above FIN course with the exception of FIN 303, 320, 332.

Total: 36 semester hours
### Personal Financial Planning Major

B.S. in B.A. degree

The Personal Financial Planning major prepares students for a career in personal financial planning and personal financial consulting.

**Admission Requirements, Retention & Termination Standards**

To sign a major in Personal Financial Planning, see an advisor in the Department of Finance and Law. To register for most of the courses on the major, students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.

At least eighteen hours of Finance coursework must be taken at CMU. Only FIN 490 may be taken as Credit/No Credit and counted toward the major.

**Additional Common Body of Knowledge in Business Administration Courses (9 hours)**

- BUS 100 - Essential Business Skills 3(3-0)
- BUS 300QR - Applied Business Statistics 3(3-0)
- MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

**Required Courses (24 hours)**

1.ACC 311 - Federal Income Taxation I 3(3-0)
2.FIN 307 - Fundamentals of Personal Financial Planning 3(3-0)
3.FIN 315 - Principles of Investments 3(3-0)
4.FIN 317 - Insurance Planning 3(3-0)
5.FIN 347 - Retirement Planning 3(3-0)
6.FIN 445/BLR 445 - Personal Estate Planning 3(3-0)
7.FIN 447 - Cases in Personal Financial Planning 3(3-0)
8.MKT 340 - Personal Selling 3(3-0)

**Electives (3 hours)**

Select one course from the following:

- FIN 335 - Real Estate Principles 3(3-0)
- FIN 425 - Options and Futures 3(3-0)
- FIN 455 - Portfolio Management 3(3-0)
- FIN 472 - Money and Capital Markets 3(3-0)
- FIN 490 - Internship in Finance 1-3(Spec)
- FIN 573 - International Finance 3(3-0)

**Total: 36 semester hours**

### Real Estate: Development & Finance Major

B.S. in B.A. degree

**Admission Requirements, Retention & Termination Standards**

To sign a major in Real Estate: Development and Finance, see the Real Estate program advisor. To register for most of the courses on the major, students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.

At least eighteen hours of Finance coursework must be taken at CMU. Only FIN 490 may be taken as Credit/No Credit and counted toward the major.

**Additional Common Body of Knowledge in Business Administration Courses (9 hours)**

- BUS 100 - Essential Business Skills 3(3-0)
- BUS 300QR - Applied Business Statistics 3(3-0)
- MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

**Required Courses (21 hours)**

1.BLR 330 - Real Estate Law 3(3-0)
2.ECO 375 - Economics of Cities and Regions 3(3-0)
3.FIN 335 - Real Estate Principles 3(3-0)
4.FIN 336 - Real Estate Finance & Investments 3(3-0)
5.FIN 337 - Real Estate Valuation & Appraisal 3(3-0)
6.FIN 438 - Real Estate Development 3(3-0)
7.FIN 490 - Internship in Finance 1-3(Spec)

**Electives (6 hours)**

Select the courses below for 6 hours, or select one course below plus another 300 or 400 level course in Finance & Law or Accounting for 6 hours.

- FIN 315 - Principles of Investments 3(3-0)
- FIN 472 - Money and Capital Markets 3(3-0)

**Total: 36 semester hours**

### Interdepartmental

### Law and Economics Major

B.A.; B.S. degrees

This major is listed in the College of Business Administration section. See the index for the page number.

**Admission Requirements, Retention & Termination Standards**

To sign a minor in Finance: See an advisor in the Department of Finance and Law and bring along a copy of your signed major.

1. At least fifteen hours of finance coursework must be taken at CMU.
2. Credit/No Credit coursework will not count.
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

**Required Courses I (3 hours)**

Select one of the following:

- ACC 201 - Concepts of Financial Accounting 3(3-0)
- ACC 250 - Introduction to Financial Accounting 3(3-0)

**Required Courses II (3 hours)**

Select one of the following:

- ACC 202 - Concepts of Managerial Accounting 3(3-0)
- ACC 255 - Managerial Accounting & Decision Making 3(3-0)

**Required Courses III (3 hours)**

Select one of the following:

- ECO 201 - Principles of Macroeconomics 3(3-0)
- ECO 204 - Principles of Micro- and Global Economics 3(3-0)

**Required Courses IV (3 hours)**

Select one of the following:

- FIN 302 - Integrated Financial Analysis 3(3-0)
- FIN 332 - Managerial Finance 3(3-0)

**Electives (12 hours)**

Select 12 hours from the following:

- FIN 307 - Fundamentals of Personal Financial Planning 3(3-0)
- FIN 315 - Principles of Investments 3(3-0)
- FIN 317 - Insurance Planning 3(3-0)
- FIN 335 - Real Estate Principles 3(3-0)
- FIN 337 - Real Estate Valuation/Appraisal 3(3-0)
- FIN 397 - Special Topics 3-6(Spec)
- FIN 425 - Options and Futures 3(3-0)
- FIN 442 - Intermediate Financial Management 3(3-0)
- FIN 448 - Fundamental Financial Analysis 3(3-0)
- FIN 472 - Money and Capital Markets 3(3-0)
- FIN 573 - International Finance 3(3-0)
- FIN 597 - Special Topics 1-3(Spec)

**Note:** FIN 315 is a prerequisite to FIN 425.

**Total: 24 semester hours**
Legal Studies Minor
B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees

The Legal Studies minor is designed for the student who will work in a business regulated by government or in a governmental unit which regulates business behavior. It will be of particular interest to students in business, history, economics, and political science.

Admission Requirements, Retention & Termination Standards
To sign a minor in Legal Studies: See an advisor in the Department of Finance and Law and bring along a copy of your signed major.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

Required Courses I (3 hours)
Select one of the following:
BLR 202 - Legal Environment of Business 3(3-0)
BLR 235 - Business Law 3(3-0)

Required Courses II (3 hours)
Select one of the following:
BLR 302 - Law of Agreements 3(3-0)
BLR 360 - Construction Law 3(3-0)

Required Courses III (3 hours)
Select one of the following:
HST 228 - American Business: A History 3(3-0)
HUM 303 - Law and Society: Great Trials 3(3-0)
PHL 118 - Moral Problems 3(3-0)
PHL 140 - Introduction to Logic 3(3-0)
PHL 318 - Business Ethics 3(3-0)

Required Courses IV (3 hours)
Select one of the following:
BLR 222 - The Search for Racial Justice Through Law 3(3-0)
BLR 325 - Women and the Law 3(3-0)
BLR 365 - Native American Justice Through Law 3(3-0)

Required Courses V (3 hours)
Select one of the following:
BLR 310 - Alternative Dispute Resolution in Business 3(3-0)
BLR 410 - Regulatory Law 3(3-0)
ECO 410 - Government and Business 3(3-0)
PSC 320 - The American Legislative Process 3(3-0)
PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

Electives (6 hours)
Select one of the following:
Any two additional BLR courses of 300 or above
OR
Any one additional BLR course of 300 or above and the following: ECO 350/BLR 350 - Law and Economics 3(3-0)

Total: 21 semester hours

Real Estate: Development and Finance Minor

The Real Estate Development & Finance minor is designed to provide students in various fields with a combination of skills and knowledge needed to be successful in a career related to real estate. The skills and knowledge derived from this program will enhance a student's employability and marketability in many areas. It will be of particular interest to students in business, construction management, environmental and land use planning, and entrepreneurship.

Admission Requirements, Retention & Termination Standards
To sign a minor in Real Estate: Development & Finance see the Real Estate program advisor and bring along a copy of your signed major.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

Required Courses I (3 hours)
Select one of the following:
ACC 201 - Concepts of Financial Accounting 3(3-0)
ACC 250 - Introduction to Financial Accounting 3(3-0)

Required Courses II (3 hours)
Select one of the following:
ACC 202 - Concepts of Managerial Accounting 3(3-0)
ACC 255 - Managerial Accounting & Decision Making 3(3-0)

Required Courses III (3 hours)
Select one of the following:
ECO 202 - Principles of Microeconomics 3(3-0)
ECO 203 - Microeconomic Principles for Business 3(3-0)

Required Courses IV (3 hours)
Select one of the following:
FIN 302 - Integrated Financial Analysis 3(3-0)
FIN 332 - Managerial Finance 3(3-0)

Required Courses V (6 hours)
Select one of the following:
FIN 335 - Real Estate Principles 3(3-0)
FIN 336 - Real Estate Finance & Investments 3(3-0)

Electives I (3 hours)
Select one of the following:
BLR 222 - The Search for Racial Justice Through Law 3(3-0)
BLR 325 - Women and the Law 3(3-0)
PSC 320 - The American Legislative Process 3(3-0)
PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

Electives II (3 hours)
Chosen in consultation with Real Estate program advisor.

Total: 24 semester hours
Management (MGT)

Management is decision making with respect to the allocation of an organization's physical and human resources toward the achievement of specific objectives. Although management as a field of study is most often associated with business administration, its subject matter can be applied in a broad range of settings from the management of one's own personal resources to those of social, governmental, educational, health care, and religious organizations.

Why Study Management?
Management study is recommended for those individuals who desire the knowledge and skill to influence others and develop business processes that can positively influence organizational productivity. The principles of management can be effectively applied in a broad range of group, organizational, and societal settings. Students of management are trained to be decision makers, problem solvers, and leaders.

Management at CMU
A program of study in management can be pursued through completion of one of the five majors or through a minor which can be individually designed to complement the student’s interests. All programs emphasize development of analytical tools that assist in effective decision making and problem solving. A General Management major is available to those students who desire a broad base of knowledge and combines coursework in each management discipline. The Human Resource Management major provides the student with the knowledge and skills necessary to create, develop, and maintain a productive work force. The International Business major was developed in response to today’s rapidly expanding global business community. A foreign language requirement and international experience are included in this program. The Purchasing and Supply Management major prepares students to identify global sources for supply, establish logistics and support systems, design vendor evaluation systems, and more. A Management minor is available for students who are pursuing a degree other than business administration yet wish to obtain a foundation in management principles and practices.

The Faculty

Majors

General Management Major
B.S. in B.A. degree

Admission Requirements, Retention & Termination Standards
To sign a major in General Management:

See an advisor in the Department of Management. To register for most of the courses on the major students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.

Courses taken on a Credit/No Credit basis are not accepted on management department majors.

At least fifteen (15) credit hours of the required and elective coursework of the major must be taken in the accredited AACSB Program at the CMU campus (Mt. Pleasant and Midland)

Students cannot major in both Management and Human Resources Management.

Additional Common Body of Knowledge in Business Administration Courses (9 hours)
BUS 100 - Essential Business Skills 3(3-0)
BUS 300QR - Applied Business Statistics 3(3-0)
MGT 499 - Integrated Capstone - Strategic Management 3(3-0)

Required Courses (21 hours)
FIN 442 - Intermediate Financial Management 3(3-0)
MGT 320 - Human Resource Management 3(3-0)
MGT 348 - Dynamics of Organizational Behavior 3(3-0)
MGT 355 - Communications: Managerial Applications 3(3-0)
MGT 365 - International Business 3(3-0)
MGT 490 - Internship in Management 1-6(Spec)
MKT 310 - Marketing Communications 3(3-0)

Electives (3 hours)
Any College of Business Administration course, 300 level or higher.

Total: 33 semester hours

Human Resource Management Major
B.S. in B.A. degree

Admission Requirements, Retention & Termination Standards

To sign a major in Human Resource Management, see an advisor in the Department of Management. To register for most of the courses on the major students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.

Courses taken on a Credit/No Credit basis are not accepted on management department majors.

At least fifteen (15) credit hours of the required and elective coursework of the major must be taken in the accredited AACSB Program at the CMU campus (Mt. Pleasant and Midland)

Students cannot major in both Management and Human Resources Management.

Additional Common Body of Knowledge in Business Administration Courses (9 hours)
BUS 100 - Essential Business Skills 3(3-0)
BUS 300QR - Applied Business Statistics 3(3-0)
MGT 499 - Integrated Capstone - Strategic Management 3(3-0)

Required Courses (18 hours)
MGT 320 - Human Resource Management 3(3-0)
MGT 348 - Dynamics of Organizational Behavior 3(3-0)
MGT 445 - Compensation Administration 3(3-0)
MGT 446 - Industrial Relations 3(3-0)
MGT 447 - Personnel Selection and Evaluation 3(3-0)
MGT 484 - Human Resource Training and Development 3(3-0)

Electives (3 hours)
Any College of Business Administration course, 300 level or higher.

Total: 30 semester hours
Minors

Management Minor
B.S. in B.A. degree
This minor is designed for students in the College of Business Administration who wish to complement their majors (e.g., Accounting, Finance, etc.) with deeper understanding of managerial knowledge and skills.

Admission Requirements, Retention & Termination Standards
To sign a minor in management:
1. See an advisor in the Department of Management.
2. A minimum cumulative GPA of 2.5 based on completion of at least 56 credit hours is required.
3. At least 15 hours beyond their major requirements are required for business majors.
4. The Management Minor for B.S. in B.A. degree may NOT be taken by students who are completing a major in the Department of Management (i.e., General Management, Human Resources Management, International Business, Operations Management, or Purchasing and Supply Management).

Required Courses (12 hours)
MGT 258 - Effective Management of Human Resources in Organizations 3(3-0)
MGT 303/MKT 303 - Integrated Supply Chain Management 3(3-0)
MGT 320 - Human Resource Management 3(3-0)
MGT 365 - International Business 3(3-0)

Electives I (6 hours)
Select six hours from the Department of Management at the 300-level or higher.

Electives II (3 hours)
Select three hours from the College of Business Administration at the 300-level or higher. Required courses on the BSBA degree cannot be counted.

Total: 21 semester hours

Management Minor
B.A.; B.A.A.; B.F.A.; B.S. degrees
This minor is designed to provide sufficient flexibility to accommodate students with varying backgrounds and career objectives.

Admission Requirements, Retention & Termination Standards
To sign a minor in Management:
1. A minimum cumulative GPA of 2.5 based on completion of at least 56 credit hours is required.
2. The minor is available only to students pursuing majors outside the College of Business Administration. If you are pursuing a teaching degree you may not choose this minor.
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.
4. Courses taken Credit/No Credit basis are not accepted on the management department minor.

Required Courses (9 hours)
MGT 312 - Introduction to Management 3(3-0)
MGT 320 - Human Resource Management 3(3-0)
MGT 348 - Dynamics of Organizational Behavior 3(3-0)

Elective Courses (12 hours)
1. Six hours from the Department of Management.
2. Six hours from the College of Business Administration.

Total: 21 semester hours

International Business and Sustainable Development Minor
This minor is for those CMU students who wish to complement their major course(s) of study with a knowledge base and skill set that will let them become involved, either in graduate school or career employment, with the planning and implementation of sustainability projects. The MIBSD course of study outlined below provides the student with a broad understanding of sustainable development, which is viewed as encompassing three dimensions – ecological, social, and economic. By including all three dimensions in the sustainability concept, the likelihood of achieving a sustainable earth, as specified in the Brundtland Report (1987), becomes feasible.

Admission Requirements, Retention & Termination Standards
To sign a minor in International Business and Sustainable Development: See an advisor in the Department of Management and bring a copy of your signed major.

No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

Required Courses I (12 hours)
ECO 301 - Environmental Economics 3(3-0)
MGT 365 - International Business 3(3-0)
MGT 400 - Global Concepts for Sustainable Development 3(Spec)
MGT 487 - Project Course for Sustainable Development 3(Spec)

Required Courses II (3 hours)
Select one of the following:
BIO 340 - Ecology 3(2-3)
ENV 101 - Introduction to Environmental Studies 3(3-0)

Electives I (3 hours)
Select one of the following:
BIO 240 - Conservation of Natural Resources 3(3-0)
GEL 105 - Dangerous Planet 3(3-0)
GEO 105QR - Environmental Geography 3(3-0)

Electives II (3 hours)
Select one of the following:
ANT 370/SOC 370 - Global Environmental Issues 3(3-0)
ENV 310 - Environmental Issues Management 3(3-0)
MGT 457 - Seminar in International Business 3(Spec)
PSC 516 - Environmental Politics and Policy 3(3-0)

Total: 21 semester hours

Purchasing and Supply Management Major
B.S. in B.A. degree
This is an interdepartmental major. Please check the index for the page number.

International Business Major
B.S. in B.A. degree
Advisor: Assigned by the Department of Management (989-774-3193)
This is an interdepartmental major. Please check the index for the page number.
Marketing and Hospitality Services Administration (MKT, HSA, HOA)

For information, please contact the chairperson, 989-774-3701, 100 Smith Hall; www.cmich.edu/colleges/cba/academic_programs/departments/marketing_hospitality

Why Study Marketing and Hospitality Services Administration?

The study of marketing prepares you for a diverse number of career areas including marketing manager, marketing researcher, sales executive, retail manager, promotion manager, advertising executive or logistics manager. The field offers study of global and domestic markets and the customers who impact those markets.

The largest industry and one of the world's fastest growing is that of travel and tourism. The hospitality services administration program prepares students for business management careers in the many segments of this industry, such as lodging, food service, and travel/tourism.

Marketing and Hospitality Services Administration at CMU

The objective of the department is to provide undergraduate and graduate students with the quality education needed for success in professional and management positions. The department also offers required or elective courses for students specializing in other major areas who desire some related background in marketing or hospitality services. Students are prepared for business careers through coursework, internships, and student organizations. Behavioral and communication skills development, problem solving and analytical abilities, knowledge of organizational planning, directing, controlling, and advances in business trends, such as electronic commerce, are emphasized.

The undergraduate marketing program is designed to prepare the student to manage the marketing process within the firm and in the social, political, and economic environment. Opportunity is provided to obtain knowledge of specialized fields through career preparation for positions in areas such as advertising and promotion, marketing management, marketing research, logistics, retailing and distribution, sales and sales management, and other positions leading to careers in management.

The multifaceted hospitality industry includes lodging, food services, and tourist-related businesses. The HSA program goal is to provide undergraduate students with a sound business background and a specific orientation toward the management of lodging operations, restaurants, clubs, and tourism. Coursework includes accounting, finance, management, marketing, and facility operations as they relate to the hospitality industries. Students also gain practical experience via required internships.

The Faculty

Concha Allen, Kenneth Cherry, Steven Dahlquist, Rebecca Dingus, Richard Divine, Gary Gagnon, Michael Garver, Sean Goffnett, Deborah Gray, Keith Helferich, Jeffrey Hoyle, Obinna Obilo, Yae Sock Roh, Samuel Spralls III, Crina Tarasi, Zachary Williams

Majors

Majors in this department are available only to students pursuing the Bachelor of Science in Business Administration degree. Courses taken on a Credit/No Credit basis are not accepted on the Marketing major or minor.

Hospitality Services Administration Major:

Hospitality Services Concentration

B.S. in B.A. degree

Students may elect to study the Hospitality Services concentration.

Admission Requirements, Retention & Termination Standards

To sign a major in Hospitality Services Administration:

See an advisor in the Department of Marketing and Hospitality Services Administration. To register for most of the courses on the major students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.

Credit/No Credit coursework will not count on any major within the Department of Marketing and Hospitality Services Administration.

Additional Common Body of Knowledge in Business Administration Courses (9 hours)

BUS 100 - Essential Business Skills 3(3-0)
BUS 300QR - Applied Business Statistics 3(3-0)
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

Core Courses (12 hours)

HSA 240 - Introduction to Hospitality Services Administration 3(3-0)
HSA 350 - Lodging Operations 3(3-0)
HSA 447 - Financial Management in the Hospitality Service Sector 3(3-0)
HSA 546 - Management in the Hospitality Service Sector 3(3-0)

Required Courses (6 hours)

FNS 160 - Introduction to Foods 3(2-2)
HSA 490 - Hospitality Internship 3(Spec)

Electives (9-10 hours)

Select from the following with advisor approval:

FNS 363 - Food Safety and Sanitation 1(1-0)
FNS 365 - Quantity Food Production 2(2-0)
FNS 366 - Quantity Food Production Laboratory 2(0-4)
HSA 210/MGT 210 - Effective Supervision: Principles and Practices 3(3-0)
HSA 341/MKT 341 - Services Marketing 3(3-0)
HSA 343/RPL 343 - Tourism 3(3-0)
HSA 344 - Legal Aspects of Hospitality Services 3(3-0)
HSA 348 - Franchising 3(3-0)
HSA 390 - Field Studies in Hospitality Services Administration 3(3-0)
HSA 397 - Special Topics 1-6(Spec)
HSA 445 - Advanced Food and Beverage Systems Management 3(3-0)
HSA 597 - Special Topics 1-6(Spec)

Total: 36-37 semester hours
Logistics Management Major
B.S. in B.A. degree

The Logistics Management major is designed to prepare CMU College of Business Administration students for a career in the field of logistics. Logistics Management is concerned with the effective and efficient movement and storage of products from raw material source through production to the consumer. Attention is focused on the integration and management of several areas including: transportation, inventory, warehousing, packaging and materials handling, logistics information and customer service. As managers of logistics, graduates will be responsible for providing customers with the right product at the right place at the right time at an acceptable price. Students who complete this major will find a growing number of job opportunities in the areas listed above.

Admission Requirements, Retention & Termination Standards
To sign a major in Logistics Management:
See an advisor in the Department of Marketing and Hospitality Services Administration. To register for most of the courses on the major, students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.

Credit/No Credit coursework will not count on any major within the Department of Marketing and Hospitality Services Administration.

Additional Common Body of Knowledge in Business Administration Courses (9 hours)
BUS 100 - Essential Business Skills 3(3-0)
BUS 300QR - Applied Business Statistics 3(3-0)
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

Required Courses (21 hours)
MGT 333 - Purchasing Management 3(3-0)
MKT 305 - Buyer Behavior 3(3-0)
MKT 330 - Marketing Channels 3(3-0)
MKT 431 - Logistics Operations 3(3-0)
MKT 432 - Logistics Strategy 3(3-0)
MKT 450 - Marketing Research 3(3-0)
MKT 465 - Supply Chain Management 3(3-0)

Electives (6 hours)
Select two of the following:
ACC 300 - Corporate Financial Reporting and Reporting Analysis 3(3-0)
ACC 321 - Managerial Cost Accounting 3(3-0)
BIS 423 - Decision Support Systems & Business Intelligence 3(3-0)
FIN 442 - Intermediate Financial Management 3(3-0)
FIN 482 - Working Capital Management 3(3-0)
GEO 317 - Economic Geography 3(3-0)
GEO 320 - Population Geography 3(3-0)
MGT 446 - Industrial Relations 3(3-0)
MKT 310 - Marketing Communications 3(3-0)
MKT 320 - Retail Management 3(3-0)
MKT 340 - Personal Selling 3(3-0)
MKT 490 - Internship In Marketing/Logistics 3-6(Spec)
MKT 555 - Market and Sales Forecasting 3(3-0)
MKT 560 - International Marketing 3(3-0)

Total: 36 semester hours

Marketing Major
B.S. in B.A. degree

Admission Requirements, Retention & Termination Standards
To sign a major in Marketing:
See an advisor in the Department of Marketing and Hospitality Services Administration. To register for most of the courses on the major, students must be admitted to Professional Business Studies. Please see the bulletin for course prerequisites.

Credit/No Credit coursework will not count on any major within the Department of Marketing and Hospitality Services Administration.

Additional Common Body of Knowledge in Business Administration Courses (9 hours)
BUS 100 - Essential Business Skills 3(3-0)
BUS 300QR - Applied Business Statistics 3(3-0)
MGT 499 - Integrated Capstone-Strategic Management 3(3-0)

Core Courses (18 hours)
MKT 305 - Buyer Behavior 3(3-0)
MKT 310 - Marketing Communications 3(3-0)
MKT 330 - Marketing Channels 3(3-0)
MKT 450 - Marketing Research 3(3-0)
MKT 490 - Internship In Marketing/Logistics 3-6(Spec)
MKT 499 - Strategic Marketing Problems 3(3-0)

Planned Program Courses (6 hours)
Select two of the following:
MKT 315 - Advertising Media 3(3-0)
MKT 320 - Retail Management 3(3-0)
MKT 325 - Merchandising Management 3(3-0)
MKT 340 - Personal Selling 3(3-0)
MKT 341 - Services Marketing 3(3-0)
MKT 360 - Electronic Commerce and Marketing Strategy 3(3-0)
MKT 425 - Retail Strategy 3(3-0)
MKT 431 - Logistics Operations 3(3-0)
MKT 432 - Logistics Strategy 3(3-0)
MKT 440 - Sales Management 3(3-0)
MKT 555 - Market and Sales Forecasting 3(3-0)
MKT 560 - International Marketing 3(3-0)

Total: 33 semester hours

Students must complete the Planned Program (6 hours) approved by the MHSA faculty advisor OR must complete the following concentration:

Concentration (12 hours):
A concentration in the areas of marketing designated below and approved by the MHSA faculty advisor:

Professional Sales (12 hours):
MKT 340 - Personal Selling 3(3-0)
MKT 420 - Advanced Selling and Negotiation 3(3-0)
MKT 440 - Sales Management 3(3-0)
MKT 460 - Organizational Selling 3(3-0)

Total: 39 semester hours

Purchasing and Supply Management Major
B.S. in B.A. degree

This is an interdepartmental major. Please check the index for the page number.
Minors

Courses taken on a Credit/No Credit basis are not accepted on Marketing/Hospitality department minors. No more than a total of 27 hours may be taken in the College of Business Administration and counted toward graduation unless the student is majoring in the College of Business Administration.

Hospitality Services Administration Minor
B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees

The HSA minor is designed primarily for students who will work in a field closely allied with the hospitality services industry. Two such fields are commercial recreation and food service administration. This minor is not designed to prepare students for a career in hospitality services, but is designed to introduce the student to the field in a rigorous fashion. The student will also acquire an understanding of how hospitality services administration interacts with the students' major field of study. Students should not expect the HSA minor to make them competitive with students whose majors are in hospitality services administration for managerial positions in the hospitality services industry.

Admission Requirements, Retention & Termination Standards

To sign a minor in Hospitality Services Administration:
See an advisor in the Department of Marketing and Hospitality Services Administration and bring along a copy of your signed major.

1. At least fifteen hours beyond their major requirements are required for business majors.
2. Transfer students must have completed one semester at CMU.
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

Required Courses I (3 hours)
Select one of the following:
ECO 201 - Principles of Macroeconomics 3(3-0)
ECO 204 - Principles of Macro- and Global Economics 3(3-0)

Required Courses II (3 hours)
Select one of the following:
MGT 258 - Effective Management of Human Resources in Organizations 3(3-0)
MGT 312 - Introduction to Management 3(3-0)

Required Courses III (3 hours)
Select one of the following:
MKT 300 - Introduction to Marketing 3(3-0)
MKT 304 - Integrated Marketing Management 3(3-0)

Electives I (9 hours)
Select three of the following:
HSA 120 - Introduction to the Gaming Industry 3(3-0)
HSA 210/MGT 210 - Effective Supervision: Principles and Practices 3(3-0)
HSA 331 - Hospitality Industry Information Systems 3(3-0)
HSA 341/MKT 341 - Services Marketing 3(3-0)
HSA 343/RPL 343 - Tourism 3(3-0)
HSA 344 - Legal Aspects of Hospitality Services 3(3-0)
HSA 348 - Franchising 3(3-0)
HSA 350 - Lodging Operations 3(3-0)
HSA 445 - Advanced Food and Beverage Systems Management 3(3-0)
HSA 447 - Financial Management in the Hospitality Service Sector 3(3-0)
HSA 546 - Management in the Hospitality Service Sector 3(3-0)

Electives II (6 hours)
Select from the following (these electives may be used to fulfill prerequisites for HSA courses selected in consultation with an advisor):
ACC 201 - Concepts of Financial Accounting 3(3-0)
ACC 202 - Concepts of Managerial Accounting 3(3-0)
ACC 250 - Introduction to Financial Accounting 3(3-0)
ACC 255 - Managerial Accounting & Decision Making 3(3-0)
BIS 221 - Computers In Business I 3(3-0)
BIS 255 - Information Systems 3(3-0)
BLR 202 - Legal Environment of Business 3(3-0)
BLR 235 - Business Law 3(3-0)
FNS 160 - Introduction to Foods 3(2-2)
FNS 365 - Quantity Food Production 2(2-0)
FNS 366 - Quantity Food Production Laboratory 2(0-4)

Note: You may count either ACC 201 or 250, not both; you may count either ACC 202 or 255, not both; you may count either BIS 221 or 255, not both; you may count either BLR 202 or 235, not both.

Total: 24 semester hours

Marketing Minor
B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees

The minor in Marketing is designed for students who plan a career closely allied to marketing, but do not intend to work in marketing itself. Examples of such careers include broadcasting, commercial art, journalism, human environmental studies, or a related business area. The marketing minor provides an overview of the marketing process but does not deal with all of the analytical and managerial skills necessary for success in marketing. The student will be exposed to both the process of stimulating and satisfying demand through the marketing process. Students should not expect that the marketing minor will make them competitive with marketing majors for marketing positions in industry.

Admission Requirements, Retention & Termination Standards

To sign a minor in Marketing:
See an advisor in the Department of Marketing and Hospitality Services Administration and bring along a copy of your signed major.

1. At least fifteen hours beyond their major requirements are required for business majors.
2. At least 56 credit hours earned is required.
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

Required Courses I (3 hours)
MKT 305 - Buyer Behavior 3(3-0)

Required Courses II (3 hours)
Select one of the following:
ECO 202 - Principles of Microeconomics 3(3-0)
ECO 203 - Microeconomic Principles for Business 3(3-0)

Required Courses III (3 hours)
Select one of the following:
MKT 300 - Introduction to Marketing 3(3-0)
MKT 304 - Integrated Marketing Management 3(3-0)

(continued)
Electives (12 hours)
Select four of the following:
- MKT 310 - Marketing Communications 3(3-0)
- MKT 320 - Retail Management 3(3-0)
- MKT 325 - Merchandising Management 3(3-0)
- MKT 330 - Marketing Channels 3(3-0)
- MKT 340 - Personal Selling 3(3-0)
- MKT 341/HSA 341 - Services Marketing 3(3-0)
- MKT 350 - Marketing Analysis 3(3-0)
- MKT 360 - Electronic Commerce and Marketing Strategy 3(3-0)
- MKT 410 - Advertising Management 3(3-0)
- MKT 431 - Logistics Operations 3(3-0)
- MKT 435 - Transportation 3(3-0)
- MKT 440 - Sales Management 3(3-0)
- MKT 560 - International Marketing 3(3-0)

Total: 21 semester hours

Professional Sales Minor
B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

The Professional Sales minor will prepare students for careers in business-to-business sales.

**Admission Requirements, Retention & Termination Standards**
To sign a minor in Professional Sales:
See an advisor in the Department of Marketing and Hospitality Services Administration and bring along a copy of your signed major.

1. At least fifteen hours beyond their major requirements are required for business majors.
2. Transfer students must have completed one semester at CMU.
3. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.
4. Students with a signed major in Marketing (regardless of concentration) are not allowed to sign a minor in Professional Sales.

Required Courses I (3 hours)
Select one of the following:
- BIS 100 - Introduction to Business 3(3-0)
- BUS 100 - Essential Business Skills 3(3-0)

Required Courses II (3 hours)
Select one of the following:
- BIS 101 - Essential Business Communications Skills 3(3-0)
- BIS 360 - Business Communication 3(3-0)

Required Courses III (3 hours)
Select one of the following:
- MKT 300 - Introduction to Marketing 3(3-0)
- MKT 304 - Integrated Marketing Management 3(3-0)

Required Courses IV (12 hours)
- MKT 340 - Personal Selling 3(3-0)
- MKT 420 - Advanced Selling and Negotiation 3(3-0)
- MKT 440 - Sales Management 3(3-0)
- MKT 460 - Organizational Selling 3(3-0)

Total: 21 semester hours

Retailing Minor
B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees

The minor in retailing is designed for those students who either aspire to a retail-related field or will work closely with the field of retailing. Examples of programs at CMU for which this minor is relevant include: Fashion Merchandising, Commercial Recreation, and Sport Studies. The minor provides an overview of retailing and merchandising principles in a managerial framework. It does not provide the practical experience developed through the retailing internship or the integrating experience of retail strategy development. Students should expect to find these skills within the major. In addition, students should not expect that the Retailing Minor will make them competitive with students whose major is Retail Management for entry level managerial positions in the retail industry.

**Admission Requirements, Retention & Termination Standards**
To sign a minor in Retailing:
See an advisor in the Department of Marketing and Hospitality Services Administration.

1. At least fifteen hours beyond their major requirements are required for business majors.
2. No more than a total of 27 hours of credit earned in business courses, including business transfer hours, may be counted towards graduation unless the student is majoring in the College of Business Administration.

Core Courses (6 hours)
- ACC 201 - Concepts of Financial Accounting 3(3-0)
- ACC 250 - Introduction to Financial Accounting 3(3-0)
- MKT 220 - Introduction to Retail Merchandising 3(3-0)

**Note:** You may count either ACC 201 or ACC 250, not both.

Electives (15 hours)
Select five of the following:
- MKT 300 - Introduction to Marketing 3(3-0)
- MKT 304 - Integrated Marketing Management 3(3-0)
- MKT 310 - Marketing Communications 3(3-0)
- MKT 320 - Retail Management 3(3-0)
- MKT 325 - Merchandising Management 3(3-0)
- MKT 330 - Marketing Channels 3(3-0)
- MKT 360 - Electronic Commerce and Marketing Strategy

**Note:** You may count either MKT 300 or MKT 304, not both.

Total: 21 semester hours

Advertising Minor

This is an interdepartmental minor. Please check the index for the page number.

Electronic Media Sales Minor

This is an interdepartmental minor. Please check the index for the page number.
Introduction

The College of Communication and Fine Arts is an active cultural center of the University. It consists of two schools (Music and Broadcast & Cinematic Arts), three departments (Art & Design, Journalism, and Communication and Dramatic Arts), and three interdisciplinary programs (Integrative Public Relations, Music Theatre, and Media Design, Production and Technology) with over 140 faculty. Whether you decide to pursue a degree in one of the disciplines or simply enjoy the benefits of University Theatre, the Art Gallery, WMHW/FM, News Central, or university bands and choirs, the College has much to offer to enrich every student’s life. With a constant flow of guest speakers and artists-in-residence, the College is a unique place to notice, to ponder, and to mirror the human condition. It is a place to learn to appreciate art and the diverse cultures that have produced it. Participation in musical and theatrical events, dance, broadcasting, newspaper production, and forensics and debating activities is encouraged and available to all students at Central Michigan University.

College Mission

The College of Communication and Fine Arts believes that Arts & Communication are fundamental to the health, well-being and advancement of society and embraces the power of communication in all its forms. Through scholarship and creativity, the College provides opportunities for students and faculty to pursue their passions, enhance their abilities and realize their potential. The College prepares students to be independent, critical thinkers, lifelong learners and successful professionals in a variety of careers through its commitment to a high quality, comprehensive education.

Areas of Study

Each department, school, and interdisciplinary program offers a major and/or minor, many with a variety of concentrations. The primary fields of study within the College are:

- Art & Design (Art Studio Concentration, Graphic Design, Art History, Art Education)
- Broadcast and Cinematic Arts
- Journalism (also with a concentration in Public Relations), Photojournalism, Advertising, Public Affairs, Public Relations)
- Music (Music Education, Performance & Applied Music)
- Communication and Dramatic Arts (Communication, Theatre & Interpretation, Acting, Design Technology, Dance)
- Integrative Public Relations
- Media Design, Production, and Technology
- Music Theatre

See the Index of this Bulletin for more information on each of the above programs.

Programs for Education Degrees

The departments of Art & Design and Communication and Dramatic Arts offer majors and minors under the Bachelor of Science in Education degree, and the School of Music offers majors and minors under the Bachelor of Music Education degree. If you are interested in teacher certification, consult both the specific department in this Bulletin and the sections on teacher certification.

Professional Opportunities and Internships

Majors in the College are encouraged to participate in career-related experiences. These experiences may be gained through department-sponsored activities, university-wide productions, internships, and summer employment. See your major or minor advisor to develop a plan of study that balances your course load with extracurricular activities.

Student Organizations

The College of Communication and Fine Arts supports many student chapters of professional organizations, honor societies, and service clubs such as The National Broadcasting Society/Alpha Epsilon Rho, Public Relations Student Society of America, Society of Professional Journalists, Alpha Psi Omega, Delta Omicron, and the Student Art League. Participation will help you prepare for a career and become better acquainted with other students, faculty, and working professionals. Students are encouraged to contact individual departments for further information.
Art and Design (ART)

For information, please contact the chairperson, 989-774-3025, 132 Wightman Hall; www.art.cmich.edu/

Why Study Art?

The study of the visual arts helps students develop their artistic abilities, strengthen their analytic skills, and improve their interpretive capabilities. Art teaches creative problem solving, self-expression, and self-directed learning. Students in art courses are exposed to the rigors of scholarly inquiry, importance of creative endeavors, and necessity of synthesizing knowledge.

Art at CMU

The Department of Art and Design offers a variety of courses which enable students to pursue individual interests. Courses in general education and complete degree programs for the elementary and secondary school teacher as well as courses and degree programs that prepare the student for professional art careers and advanced study in the visual arts are important parts of the curriculum.

The Faculty

Rachael Barron-Duncan, Larry Burditt, Scott deBrestian, Jesse Dominguez, Brian Elder, Ren Hullender, Clark Most, Johanna Paas, Sally Rose, Jonathon Russell, Kris Sanford, David Stairs, Greg Stahly, Margaret Ware, Al Wildey

Majors

Art Major

(Studio and Graphic Design Concentrations)

B.F.A. degree

Admission Requirements, Retention & Termination Standards

This degree program, which requires 78 hours in art, offers art majors a firm foundation in basic courses such as drawing, design, and art history. This foundation not only provides a strong base for all specialized studio areas, but also prepares students to qualify for advanced degree programs.

Students must complete ART 106, 117, 119, and 125 before enrolling in any 300+ studio course. Students should seek advising assistance from the department upon arrival to the university and should select a major advisor in their area of concentration at the beginning of their junior year, once they have been accepted into the program.

Students must have an overall grade point average of 2.3 for all art courses counted toward the major. Courses taken on a credit/no credit basis may not be counted toward fulfillment of requirements for the art major or minor.

Studio Concentration Requirements:

Acceptance into the B.F.A. degree program in the Studio Concentration may be applied for when the student has completed or is currently enrolled in ART 106, 117, 119, 125; two courses in art history; and three studio courses.

Students whose applications fail to be accepted to the B.F.A. program are welcome to reapply the following semester.

In addition to the general curricula, the candidate for the B.F.A. degree must complete the following requirements:

1. Fill out a degree form.
2. Complete a minor.
3. Enroll in a studio and history sequence.
4. Participate in at least three semesters of faculty critiques.
5. Submit a final portfolio to the Art Department including a resume, artist’s statement, visual documentation of thesis work, visual documentation list, and other supporting materials.

Graphic Design Concentration Requirements:

Students seeking admission to the Graphic Design Concentration must, upon completion of ART 231, 235 and 349, submit a portfolio; no further Graphic Design Courses may be taken until accepted into the Concentration. Admission is limited. Students who fail to be accepted are welcome to reapply the following semester.

In addition to the general curricula, the candidate for the B.F.A. degree must complete the following requirements:

2. Complete three semesters of faculty critiques.
3. Submit a final portfolio to the Art Department including a resume, artist’s statement, visual documentation of thesis work, visual documentation list, and other supporting materials.
Core Courses I (12 hours)
Foundations
ART 106 - Introduction to Drawing 3(0-6)
ART 117 - Introduction to Contemporary Issues in Art 3(3-0)
ART 119 - Design Foundations 3(0-6)
ART 125 - Digital Design 3(0-6)

Core Courses II (6 hours)
ART 283 - Introduction to Western Art, Part I 3(3-0)
ART 285 - Introduction to Western Art, Part II 3(3-0)

Core Courses III (12 hours)
Select from the following:
ART 175 - Fiber Structures and Weaving 3(0-6)
ART 214 - Introduction to Ceramics 3(2-3)
ART 217 - Introduction to Figure Drawing 3(0-6)
ART 233 - Introduction to Painting 3(0-6)
ART 241 - Introduction to Photography 3(0-6)
ART 251 - Introduction to Printmaking 3(0-6)
ART 261 - Introduction to Sculpture 3(0-6)

Core Courses IV (12 hours)
Select from the following:
ART 287 - Introduction to Non-Western Art 3(3-0)
ART 319 - Art Criticism and the Methodology of Art History 3(3-0)
ART 341 - History of Photography 3(3-0)
ART 363 - History of Design: 1750-2010 3(3-0)
ART 366 - Contemporary Design Issues 3(3-0)
ART 380 - Greek Art and Architecture 3(3-0)
ART 381 - Early Christian and Byzantine Art 3(3-0)
ART 382/WST 382 - Gender and Art 3(3-0)
ART 383 - Modern Architecture 3(3-0)
ART 385 - European Art from 1890-1940 3(3-0)
ART 386 - American Art 3(3-0)
ART 387 - Baroque Art 3(3-0)
ART 388 - Eighteenth-Century Art 3(3-0)
ART 389 - Art of the Ancient Near East and Egypt 3(3-0)
ART 480 - Roman Art and Architecture 3(3-0)
ART 481 - Western Medieval Art 3(3-0)
ART 482 - Italian Renaissance Art 3(3-0)
ART 483 - Nineteenth Century European Art 3(3-0)
ART 485 - Art After 1945 3(3-0)
ART 486 - Independent Study in Art History 1-6(Spec)
ART 488 - Northern Renaissance Art 3(3-0)
ART 489 - Islamic Art 3(3-0)
ART 580 - Seminar in Ancient/Medieval Art History 3-6(3-0)
ART 581 - Seminar in Early Modern Art History 3-6(3-0)
ART 582 - Seminar in Modern and Contemporary Art History 3-6(3-0)
ART 586 - Special Topics Seminar in Art History 3-9(3-0)
ART 589 - Research Seminar in Art History 3(3-0)

You may choose to take ART 341, 363, and 366, but may count only one of these courses toward the Core IV requirement.

Core Courses V (3 hours)
Students in the Studio Concentration are required to take ART 471;
Graphic Design Concentration students are required to take ART 472:
ART 471 - BFA Exhibition 3(3-0)
ART 472 - Graphic Design Capstone Experience 3(0-6)

Concentrations
Select one of the following:

Studio Concentration:
Electives I (27 hours)
Select from the following:
ART 258 - Everyday Web Design 3(0-6)
ART 314 - Ceramics Studio: Wheel-throwing 3(0-6)
ART 334 - Watercolor Painting 3(0-6)
ART 342 - Experimental Photography Studio 3-6(Spec)
ART 406 - Drawing Studio 3-9(Spec)
ART 414 - Ceramics Studio 3-9(Spec)
ART 417 - Figure Drawing Studio 3-9(Spec)
ART 433 - Painting Studio 3-9(Spec)
ART 441 - Photography Studio 3-9(Spec)
ART 451 - Printmaking Studio 3-9(Spec)
ART 475 - Papermaking/Book Arts II 3(0-6)
ART 584 - Drawing in Florence 3(Spec)

Electives II (3 hours)
Select from the following:
ART 506 - Advanced Drawing Studio 1-12(Spec)
ART 510 - Advanced Ceramics 3-12(Spec)
ART 517 - Advanced Figure Drawing Studio 1-12(Spec)
ART 533 - Advanced Painting Studio 1-12(Spec)
ART 541 - Advanced Photography Studio 1-12(Spec)
ART 551 - Advanced Printmaking Studio 1-12(Spec)
ART 575 - Surface Design on Fabric II 3(0-6)

Electives III (3 hours)
Select any ART course except ART 114 or 126.

Total: 78 semester hours

Graphic Design Concentration:
Electives I (30 hours)
Select hours from the following:
ART 231 - Introduction to Graphic Design 3(0-6)
ART 235 - Logo and Identity Design 3(0-6)
ART 335 - Design Bureau 3(0-6)
ART 349 - Typography 3(0-6)
ART 358 - Web Design I 3(0-6)
ART 363 - History of Design: 1750-2010 3(3-0)
ART 435 - Professional Design Practices 3(0-6)
ART 438 - Motion Graphics 3(0-6)
ART 449 - Advanced Typography 3(0-6)
ART 458 - Web Design II 3(0-6)
ART 535 - Digital Multimedia for Designers 3(0-6)

Electives II (3 hours)
Select any ART course except ART 114 or 126.

Total: 78 semester hours
Art Major: Studio Concentration
B.A.A. degree

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

This art major consists of 57 semester hours arranged in consultation with a department advisor. Students must have an overall grade point average of 2.3 for all art courses counted toward the major. Students must complete ART 106, 119, and 125 before enrolling in any 300+ studio course. ART 117 is a pre- / corequisite to all 300+ studio courses, so must be taken prior to or during the same semester as the first 300+ studio course. Students should seek advising assistance from the department upon arrival at the university and should select a major advisor in their freshman year.

After the completion of 20 credit hours in ART, including ART 125, a digital portfolio must be submitted for faculty review. Enrollment in future ART classes is contingent on this submission.

Courses taken on a credit/no credit basis may not be counted toward fulfillment of requirements for the art major or minor.

Core Courses I (12 hours)
ART 106 - Introduction to Drawing 3(0-6)
ART 117 - Introduction to Contemporary Issues in Art 3(3-0)
ART 119 - Design Foundations 3(0-6)
ART 125 - Digital Design 3(0-6)

Core Courses II (6 hours)
ART 283 - Introduction to Western Art, Part I 3(3-0)
ART 285 - Introduction to Western Art, Part II 3(3-0)

Core Courses III (6 hours)
Select from the following:
ART 287 - Introduction to Non-Western Art 3(3-0)
ART 319 - Art Criticism and the Methodology of Art History 3(3-0)
ART 341 - History of Photography 3(3-0)
ART 363 - History of Design: 1750-2010 3(3-0)
ART 366 - Contemporary Design Issues 3(3-0)
ART 380 - Greek Art and Architecture 3(3-0)
ART 381 - Early Christian and Byzantine Art 3(3-0)
ART 382/WST 382 - Gender and Art 3(3-0)
ART 383 - Modern Architecture 3(3-0)
ART 385 - European Art from 1890-1940 3(3-0)
ART 386 - American Art 3(3-0)
ART 387 - Baroque Art 3(3-0)
ART 388 - Eighteenth-Century Art 3(3-0)
ART 389 - Art of the Ancient Near East and Egypt 3(3-0)
ART 480 - Roman Art and Architecture 3(3-0)
ART 481 - Western Medieval Art 3(3-0)
ART 482 - Italian Renaissance Art 3(3-0)
ART 483 - Nineteenth Century European Art 3(3-0)
ART 485 - Art After 1945 3(3-0)
ART 486 - Independent Study in Art History 1-6(Spec)
ART 488 - Northern Renaissance Art 3(3-0)
ART 489 - Islamic Art 3(3-0)
ART 580 - Seminar in Ancient/Medieval Art History 3-6(3-0)
ART 581 - Seminar in Early Modern Art History 3-6(3-0)
ART 582 - Seminar in Modern and Contemporary Art History 3-6(3-0)
ART 586 - Special Topics Seminar in Art History 3-9(3-0)
ART 589 - Research Seminar in Art History 3(3-0)

Note: You may choose to take ART 341, 363, and 366, but may only count one of these courses toward the Core III requirement.

Core Courses IV (9 hours)
Select from the following:
ART 175 - Fiber Structures and Weaving 3(0-6)
ART 214 - Introduction to Ceramics 3(2-3)
ART 217 - Introduction to Figure Drawing 3(0-6)
ART 233 - Introduction to Painting 3(0-6)
ART 241 - Introduction to Photography 3(0-6)
ART 251 - Introduction to Printmaking 3(0-6)
ART 258 - Everyday Web Design 3(0-6)
ART 261 - Introduction to Sculpture 3(0-6)

Core Courses V (18 hours)
Select from the following:
ART 314 - Ceramics Studio: Wheel-throwing 3(0-6)
ART 334 - Watercolor Painting 3(0-6)
ART 342 - Experimental Photography Studio 3-6(Spec)
ART 406 - Drawing Studio 3-9(Spec)
ART 414 - Ceramics Studio 3-9(Spec)
ART 417 - Figure Drawing Studio 3-9(Spec)
ART 433 - Painting Studio 3-9(Spec)
ART 441 - Photography Studio 3-9(Spec)
ART 451 - Printmaking Studio 3-9(Spec)
ART 475 - Papermaking/Book Arts II 3(0-6)
ART 506 - Advanced Drawing Studio 1-12(Spec)
ART 510 - Advanced Ceramics 3-12(Spec)
ART 517 - Advanced Figure Drawing Studio 1-12(Spec)
ART 533 - Advanced Painting Studio 1-12(Spec)
ART 541 - Advanced Photography Studio 1-12(Spec)
ART 551 - Advanced Printmaking Studio 1-12(Spec)
ART 575 - Surface Design on Fabric II 3(0-6)
ART 584 - Drawing in Florence 3(Spec)

Core Courses VI (3 hours)
ART 499 - BAA Senior Seminar 3(3-0)

Electives (3 hours)
Select any ART courses except ART 114 or 126.

Total: 57 semester hours
Art History Major
B.A. degree

Admission Requirements, Retention & Termination Standards

This degree program, which requires 39 credit hours, offers students a firm foundation in the history of art and its methodologies. This foundation not only provides a strong basis for all specialized area studies, but also prepares students for advanced degree programs. Students planning or considering a major or minor in Art History are urged to consult with an advisor as early as possible in their college careers.

Students must have an overall grade point average of 2.3 for all art courses counted toward the major. Courses taken on a credit/no credit basis may not be counted toward fulfillment of requirements for the Art History major or minor.

Art History majors are encouraged to participate in the CMU Semester Abroad program.

Art History majors and minors planning to do graduate work are strongly urged to take both the Graduate Record Examination (GRE) early in their senior year. This examination is generally required for admission to graduate schools.

ART 319 should be taken in either the second or third semester in the program, after completing 36 credit hours, including 6 hours of Art History courses. This course acts as a mid-point, preparing students for 300+ level courses. All 500-level courses have ART 319 as a prerequisite.

Students should enroll in ART 589 during their final year, where they will conduct independent research and produce a senior thesis. ART 589 requires one 500+ level Art History course as a prerequisite.

Core Courses I (9 hours)
ART 283 - Introduction to Western Art, Part I 3(3-0)
ART 285 - Introduction to Western Art, Part II 3(3-0)
ART 287 - Introduction to Non-Western Art 3(3-0)

Core Courses II (6 hours)
ART 319 - Art Criticism and the Methodology of Art History 3(3-0)
ART 589 - Research Seminar in Art History 3(3-0)

Core Courses III (9 hours)
Select one course each from Groups 1, 2, and 3:

Group 1
ART 380 - Greek Art and Architecture 3(3-0)
ART 381 - Early Christian and Byzantine Art 3(3-0)
ART 389 - Art of the Ancient Near East and Egypt 3(3-0)
ART 480 - Roman Art and Architecture 3(3-0)
ART 481 - Western Medieval Art 3(3-0)
ART 580 - Seminar in Ancient/Medieval Art History 3-6(3-0)

Group 2
ART 387 - Baroque Art 3(3-0)
ART 388 - Eighteenth-Century Art 3(3-0)
ART 482 - Italian Renaissance Art 3(3-0)
ART 488 - Northern Renaissance Art 3(3-0)
ART 581 - Seminar in Early Modern Art History 3-6(3-0)

Group 3
ART 383 - Modern Architecture 3(3-0)
ART 385 - European Art from 1890-1940 3(3-0)
ART 386 - American Art 3(3-0)
ART 483 - Nineteenth Century European Art 3(3-0)
ART 485 - Art After 1945 3(3-0)
ART 582 - Seminar in Modern and Contemporary Art History 3-6(3-0)

Group 4
ART 341 - History of Photography 3(3-0)
ART 363 - History of Design: 1750-2010 3(3-0)
ART 366 - Contemporary Design Issues 3(3-0)
ART 382/WS 382 - Gender and Art 3(3-0)
ART 486 - Independent Study in Art History 1-6(Spec)
ART 489 - Islamic Art 3(3-0)
ART 586 - Special Topics Seminar in Art History 3-9(3-0)

Electives I (9 hours)
Select three (3) courses from Groups 1-4.

Electives II (3 hours)
Select one 500-level course not previously taken from Groups 1-4.

Electives III (3 hours)
Select one studio art course.

Total: 39 semester hours

Visual Arts Education Major
B.S. in Ed. degree, Provisional Secondary Certification, Grades K-12

Note: This major does not require a minor.

Admission Requirements, Retention & Termination Standards

This art major consists of 51 semester hours arranged in consultation with a departmental advisor. This will certify the graduate to teach art, K-12. The student is required to make arrangements to have an elementary school experience during directed teaching. A minimum 2.7 GPA (B-) must be earned in all teaching majors. Courses taken on a credit/no credit basis may not be counted toward fulfillment of requirements for the art major or minor.

Required Courses (27 hours)
ART 106 - Introduction to Drawing 3(0-6)
ART 119 - Design Foundations 3(0-6)
ART 283 - Introduction to Western Art, Part I 3(3-0)
ART 285 - Introduction to Western Art, Part II 3(3-0)
ART 287 - Introduction to Non-Western Art 3(3-0)
ART 343 - Art in the Elementary School Grades K-4 3(3-0)
ART 344 - Art in the Middle School Grades 5-8 3(3-0)
ART 346 - Secondary School Art and Mid-Tier Observation 3(2-2)
ART 446 - Visual Arts and Aesthetic Education 3(3-0)

Electives I (18 hours)
Select from the following:
ART 175 - Fiber Structures and Weaving 3(0-6)
ART 214 - Introduction to Ceramics 3(2-3)
ART 217 - Introduction to Figure Drawing 3(0-6)
ART 231 - Introduction to Graphic Design 3(0-6)
ART 233 - Introduction to Painting 3(0-6)
ART 241 - Introduction to Photography 3(0-6)
ART 251 - Introduction to Printmaking 3(0-6)
ART 261 - Introduction to Sculpture 3(0-6)

Electives II (6 hours)
Six hours selected in consultation with the advisor. Course must be 300 level or above.

Total: 51 semester hours
Minors

Art History Minor
B.A.; B.A.A.; B.F.A.; B.S. degrees

A minor in art history consists of at least 21 hours in art history, arranged in consultation with a department advisor.

Required Courses (6 hours)
ART 283 - Introduction to Western Art, Part I 3(3-0)
ART 285 - Introduction to Western Art, Part II 3(3-0)

Electives (15 hours)
Select from the following:
ART 287 - Introduction to Non-Western Art 3(3-0)
ART 319 - Art Criticism and the Methodology of Art History 3(3-0)
ART 341 - History of Photography 3(3-0)
ART 363 - History of Design: 1750-2010 3(3-0)
ART 366 - Contemporary Design Issues 3(3-0)
ART 380 - Greek Art and Architecture 3(3-0)
ART 381 - Early Christian and Byzantine Art 3(3-0)
ART 382/WST 382 - Gender and Art 3(3-0)
ART 383 - Modern Architecture 3(3-0)
ART 385 - European Art from 1890-1940 3(3-0)
ART 386 - American Art 3(3-0)
ART 387 - Baroque Art 3(3-0)
ART 388 - Eighteenth-Century Art 3(3-0)
ART 389 - Art of the Ancient Near East and Egypt 3(3-0)
ART 480 - Roman Art and Architecture 3(3-0)
ART 481 - Western Medieval Art 3(3-0)
ART 482 - Italian Renaissance Art 3(3-0)
ART 483 - Nineteenth Century European Art 3(3-0)
ART 485 - Art After 1945 3(3-0)
ART 486 - Independent Study in Art History 1-6(Spec)
ART 488 - Northern Renaissance Art 3(3-0)
ART 489 - Islamic Art 3(3-0)
ART 580 - Seminar in Ancient/Medieval Art History 3-6(3-0)
ART 581 - Seminar in Early Modern Art History 3-6(3-0)
ART 582 - Seminar in Modern and Contemporary Art History 3-6(3-0)
ART 586 - Special Topics Seminar in Art History 3-9(3-0)
ART 589 - Research Seminar in Art History 3(3-0)

Note: You may choose to take ART 341, 363, and ART 366, but may count only one of these courses toward the minor.

Total: 21 semester hours

Art Minor
B.A.; B.A.A.; B.F.A.; B.S. degrees

This minor must be arranged in consultation with a departmental advisor.

Required Courses (15 hours)
ART 106 - Introduction to Drawing 3(0-6)
ART 119 - Design Foundations 3(0-6)
ART 285 - Introduction to Western Art, Part II 3(3-0)

Plus one course each in two studio areas other than drawing (6 hours).

Electives (6 hours)
Select any ART courses except ART 114 or 126.

Total: 21 semester hours

Media Design, Production, and Technology Minor

This is an interdisciplinary minor. Please check the index for the page number.
Broadcast and Cinematic Arts (BCA)

For information, please contact the director, 989-774-3851, 340 Moore Hall; www.bca.cmich.edu/

Why Study Broadcast and Cinematic Arts?
Through classroom, studio, and cocurricular experiences, the study of broadcast and cinematic arts offers students the opportunity to investigate the electronic and filmic mass and social media which so widely impact their professional and private lives. In addition to imparting career training, BCA classes provide the background and analytical skills needed by all educated people to understand the aesthetic and cultural impact on society of traditional and evolving media.

Broadcast and Cinematic Arts at CMU
The School of Broadcast and Cinematic Arts offers both theoretical and applied courses in digital media production, performance, advertising, programming, sales, promotion, management, electronic journalism, and film criticism. These classes prepare students for a wide variety of challenging and stimulating careers in telecommunications companies, advertising or public relations agencies, Internet and social media enterprises, as well as related industries. A separate curricular track is available to prepare students to teach media studies at the secondary school level. BCA also offers a Cinema Studies minor available to students throughout the University as well as a unique minor in Electronic Media Sales.

As early as possible, a student seeking to major or minor in the School should contact the BCA office in order to be assigned a faculty advisor who will aid in curricular planning and authorization. Specific program requirements are listed below. It is expected that each BCA major and minor will be involved every semester in one or more of the school’s cocurricular activities. These include WMHW-FM, Moore Hall TV (and the associated Central Premiere Productions), M2D2 (Multi Media Digital Design), News Central 34, The Film Society, and Moore Media Records. Students are also encouraged to participate in BCA chapters of the National Broadcasting Society, the Radio and Television Digital News Association, and Alliance for Women in Media.

The Faculty
Sarah Adams, William Anderson, Kevin Campbell, Edward Christian, Kevin Corbett, Aaron Jones, Peter June, Kenneth Jurkiewicz, Eric Limarenko, Maggie Mayes, Peter Orlik, W. Lawrence Patrick, Heather Polinsky, Mark Ranzenberger, Chad Roberts, Amy Sindik, Jeffrey Smith, Trey Stohlman, William R. Sykes, Tiffani Waite, Patricia Williamson

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

In order to sign a BCA major or minor, a student must first meet with an assigned advisor and provide written evidence that the following requirements have been met. These requirements do not apply to the Cinema Studies minor.

I. Grade Point Average (GPA):
A. Prior to applying for admission as a BCA major or minor, a student must have completed 42 semester hours of university work with an overall GPA of 2.30. These 42 hours must include BCA 210 with a minimum grade of C.
B. BCA majors and minors are required to earn a minimum grade of C in each BCA core (required) curriculum course both before and after signing the major and minor.
C. A minimum 2.7 GPA must be achieved in the BCA teaching major.

II. Written English Competency:
Any student wishing to major or minor in BCA must attain a minimum grade of B in TAI 170 (the recommended course) or one of its accepted substitutes (TAI 302, COM 101, COM 267, COM 269, or COM 357).
Students granted competency by successfully completing the Oral English Competency Examination are further required to take one of the accepted substitutes for TAI 170 (other than COM 101) and achieve a grade of at least B in order to meet BCA competency.

Note: See also the individual majors and minors for specific information regarding that particular program of study.

III. Oral English Competency:
Any student wishing to major or minor in BCA must attain a minimum grade of B in TAI 170 (the recommended course) or one of its accepted substitutes (TAI 302, COM 101, COM 267, COM 269, or COM 357).
Students granted competency by successfully completing the Oral English Competency Examination are further required to take one of the accepted substitutes for TAI 170 (other than COM 101) and achieve a grade of at least B in order to meet BCA competency.

Note: See also the individual majors and minors for specific information regarding that particular program of study.

Majors
Broadcast and Cinematic Arts Major
B.A.; B.A.A.; B.S. degrees

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
See information at the beginning of this section.

Additional Notes:
The minimum requirement for a major is 38 hours. All BCA majors and minors must earn a minimum grade of C in each core course required in the curriculum. At least 18 hours of coursework in the major must be taken at CMU. Only six hours of intern credit may count toward a major and toward graduation. Courses taken for credit/no credit do not count toward the major except for BCA 329. Only four hours of BCA 329 can count toward this major.
A list of various career course sequences is available in the school office.

(continued)
Required Courses I (20 hours)

BCA 210 - Survey of the Media Mass 4(4-0)
BCA 211 - Introduction to Writing for Electronic Media 3(3-0)
BCA 222 - Audio Production 3(1-4)
BCA 223 - Video Production 3(1-4)
BCA 499 - Senior Seminar 1(0-0)
BCA 503 - Critiquing Mass Media 3(3-0)
BCA 510 - Electronic Media Law 3(3-0)

Required Courses II (3 hours)

Select one of the following:
BCA 310 - Understanding New Communication Technologies 3(3-0)
BCA 332 - Online Electronic Media 3(2-2)

Required Courses III (3 hours)

Select one of the following:
BCA 311 - Electronic Media Copywriting 3(3-0)
BCA 318 - Electronic Media Newswriting 3(3-0)

Electives (12 hours)

BCA course work selected by the student. Six of these 12 hours must be at the 400 or 500 level. BCA 490 and 529 do not fulfill this 400-500 requirement.

Total: 38 semester hours

Students following the B.A.A. degree: Three hours of electives from ART or MUS are also required and these three hours cannot be used to satisfy University Program requirements.

Broadcast and Cinematic Arts Major
B.F.A. degree

Admission Requirements, Retention & Termination Standards
See information at the beginning of this section.

Additional Notes:

BCA students who possess a significant background in one or more of the fine arts may be eligible to pursue a Bachelor of Fine Arts. Interested students must present a portfolio demonstrating past fine arts success to the school's B.F.A. faculty advisor in order to apply for admission to this program.

The minimum requirement for the B.F.A. major is 70 hours. A grade of C or better must be earned in each of the required core classes. At least 18 hours of BCA courses must be taken at CMU. Courses taken for credit/no credit do not count toward the major except for BCA 329.

Required Courses I (23 hours)

BCA 210 - Survey of the Mass Media 4(4-0)
BCA 211 - Introduction to Writing for Electronic Media 3(3-0)
BCA 222 - Audio Production 3(1-4)
BCA 223 - Video Production 3(1-4)
BCA 317 - Electronic Media Performance 3(2-2)
BCA 499 - Senior Seminar 1(0-0)
BCA 503 - Critiquing Mass Media 3(3-0)
BCA 510 - Electronic Media Law 3(3-0)

Required Courses II (3 hours)

Select one of the following:
BCA 310 - Understanding New Communication Technologies 3(3-0)
BCA 332 - Online Electronic Media 3(2-2)

Required Courses III (3 hours)

Select one of the following:
BCA 311 - Electronic Media Copywriting 3(3-0)
BCA 318 - Electronic Media Newswriting 3(3-0)

Required Courses IV (4 hours)

Any combination of the following:
BCA 329 - Practicum in Electronic Media 1-8(Spec)
BCA 529 - Internship in Electronic Media Film 2-6(Spec)

Other Requirements (25 hours)

At least 25 hours in non-BCA fine arts courses which have been specified as fine arts by the appropriate academic departments. See the BCA B.F.A. advisor for details.

Electives (12 hours)

Select from the following:
BCA 332 - Online Electronic Media 3(2-2)
BCA 342 - Field Audio Production 3(2-2)
BCA 399 - Electronic Media Career Building 1(1-0)
BCA 411 - Long-Form Electronic Media Writing 3(3-0)
BCA 415 - Television Advertising Production 3(3-0)
BCA 421 - Advanced Audio Production 3(2-2)
BCA 440 - Introduction to Cinematic Production and Post Production 3(2-2)
BCA 441 - Multi-camera Video Producing and Directing 3(2-2)
BCA 506 - Series Script Writing For Visual Media 3(3-0)
BCA 508 - Screenwriting for Cinematic Narrative 3(3-0)
BCA 512 - Electronic Media Promotion 3(3-0)
BCA 517 - Advanced Audio and Video Performance 3(2-2)
BCA 519 - Electronic Media Programming 3(3-0)
BCA 520 - Special Topics in Electronic Media 1-9(Spec)
BCA 521 - Advanced Electronic Cinematography 3(2-2)
BCA 522 - Multimedia Audio Post-Production 3(2-2)
BCA 525 - Film Genre Study 3-9(Spec)
BCA 527 - Film Directors 3-9(Spec)
BCA 528 - History and Analysis of Nonfiction Film 3(2-2)
BCA 532 - Advanced Video/Multimedia Post-Production 3(2-2)
BCA 533 - Advanced Electronic Media Design 3(2-2)
BCA 540 - Recording Industry & Business 3(3-0)
BCA 542 - Contemporary Recording & Mixing 3(2-2)
BCA 566 - Hockey's Cinematic Depictions 1(1-0)

Total: 70 semester hours

Speech Major: BCA Emphasis
Program for Speech Teaching Certification with broadcasting focus (B.S. in Ed. degree)

This major is offered in cooperation with the Department of Communication and Dramatic Arts, and is advised by BCA faculty.

Admission Requirements, Retention & Termination Standards
See information at the beginning of this section.

Additional Notes:

The minimum requirement for this major is 44 hours. A grade of C or better must be earned in each of the required core classes. At least 18 hours of BCA courses must be taken at CMU. Only six hours of intern credit (BCA 529) can count toward the major and toward graduation. Courses taken for credit/no credit do not count toward the major except for BCA 329. The student must complete at least 33 hours of the major, including COM 492 and COM 493, prior to student teaching.

Required Courses I (17 hours)

BCA 210 - Survey of the Mass Media 4(4-0)
BCA 211 - Introduction to Writing for Electronic Media 3(3-0)
BCA 222 - Audio Production 3(1-4)
BCA 223 - Video Production 3(1-4)
BCA 317 - Electronic Media Performance 3(2-2)
BCA 499 - Senior Seminar 1(1-0)
BCA 503 - Critiquing Mass Media 3(3-0)
BCA 510 - Electronic Media Law 3(3-0)

Required Courses II (3 hours)

Select one of the following:
BCA 310 - Understanding New Communication Technologies 3(3-0)
BCA 332 - Online Electronic Media 3(2-2)

Required Courses III (3 hours)

Select one of the following:
BCA 311 - Electronic Media Copywriting 3(3-0)
BCA 318 - Electronic Media Newswriting 3(3-0)

Required Courses IV (4 hours)

Any combination of the following:
BCA 329 - Practicum in Electronic Media 1-8(Spec)
BCA 529 - Internship in Electronic Media Film 2-6(Spec)

Other Requirements I (14 hours)

COM 251 - Foundations of Communication Theory 3(3-0)
COM 267 - Introduction to Debate 3(3-0)
COM 492 - Speech Methods in Secondary School 4(4-0)
COM 493 - Field Experience in Speech Education 1(Spec)
TAI 182 - Acting I 3(3-0)
Other Requirements II (3-4 hours)
Select one of the following:
- COM 353 - Small Group Communication 3(3-0)
- TAI 170 - Oral Interpretation of Literature 3(3-0)
- TAI 177 - Stagecraft and Stage Lighting 4(4-0)

Departmental Electives (7 hours)
Three of these seven hours must be at the 400 or 500 level. BCA 490 and BCA 529 do not fulfill this requirement.
Total: 44-45 semester hours

Integrative Public Relations Major
B.A.; B.A.A., B.S. degrees
This is an interdisciplinary major. Please check the index for the page number.

Minors

Broadcast and Cinematic Arts Minor
B.A.; B.A.A.; B.F.A.; B.S. degrees

Admission Requirements, Retention & Termination Standards
See information at the beginning of this section.

Additional Notes:
- At least 12 hours of coursework in the minor must be taken at CMU. Only three hours of intern credit (BCA 529) may count toward the minor. Courses taken for credit/no credit do not count toward the minor, except for BCA 329. Only two hours of BCA 529 can count toward the minor.

Required Courses (16 hours)
- BCA 210 - Survey of the Mass Media 4(4-0)
- BCA 211 - Introduction to Writing for Electronic Media 3(3-0)
- BCA 222 - Audio Production 3(1-4)
- BCA 223 - Video Production 3(1-4)
- BCA 503 - Critiquing Mass Media 3(3-0)

Required Courses II (3 hours)
Select one of the following:
- BCA 222 - Audio Production 3(1-4)
- BCA 223 - Video Production 3(1-4)

Electives (6 hours)
Minimum of 6 additional hours of BCA coursework selected by the student. BCA 290 and 300 do not count toward this minimum.
Total: 25 semester hours

Broadcast and Cinematic Arts Minor
Available on B.S. in B.A. degree only

Admission Requirements, Retention & Termination Standards
See information at the beginning of this section.

Additional Notes:
- At least 12 hours of coursework in the minor must be taken at CMU. Only three hours of intern credit may count toward the minor. Courses taken for credit/no credit do not count toward the minor, except for BCA 329.

Required Courses I (13 hours)
- BCA 210 - Survey of the Mass Media 4(4-0)
- BCA 211 - Introduction to Writing for Electronic Media 3(3-0)
- BCA 265QR - Understanding Media Measurement 3(3-0)
- BCA 510 - Electronic Media Law 3(3-0)

Required Courses II (3 hours)
Select one of the following:
- BCA 222 - Audio Production 3(1-4)
- BCA 223 - Video Production 3(1-4)

Required Courses III (6 hours)
Select two of the following:
- BCA 511 - Electronic Media Sales 3(3-0)
- BCA 512 - Electronic Media Promotion 3(3-0)
- BCA 516 - Electronic Media Management 3(3-0)
- BCA 519 - Electronic Media Programming 3(3-0)

Total: 22 semester hours

Cinema Studies Minor
B.A.; B.A.A.; B.S. degrees

Admission Requirements, Retention & Termination Standards
BCA 320 is a variable content course and can be taken if film-related, in consultation with program advisor.

BCA 520 is a variable content course and can be taken if film-related, in consultation with program advisor and approval of instructor.

No coursework on this minor can be double-counted toward a BCA major or minor except BCA 503.

Required Courses (15 hours)
- BCA 101 - History and Appreciation of the Cinema 3(2-2)
- BCA 503 - Critiquing Mass Media 3(3-0)
- BCA 525 - Film Genre Study 3-9(Spec)
- BCA 527 - Film Directors 3-9(Spec)

Electives (6 hours)
BCA 290 - French Film and Other Media 3(3-0)
BCA 300 - African and African American Film 3(3-0)
BCA 320 - Special Topics in Electronic Media 1-9(Spec)
BCA 490 - Independent Study in Electronic Media 1-4(Spec)
BCA 520 - Special Topics in Electronic Media 1-9(Spec)
BCA 525 - Film Genre Study 3-9(Spec)
BCA 527 - Film Directors 3-9(Spec)
BCA 566 - Hockey's Cinematic Depictions 1(1-0)
ENG 326 - The Literary Dimensions of Film 3(2-2)

Total: 21 semester hours

Electronic Media Sales Minor
This is an interdepartmental minor. Please check the index for the page number.

Media Design, Production, and Technology Minor
This is an interdisciplinary minor. Please check the index for the page number.
Why Study Communication and Dramatic Arts?

The ability to communicate well, crucial to all of our activities, is developed through informed and careful study in the disciplines of communication and dramatic arts. Among the many areas of study are: public speaking, intercultural communication, business and organizational communication, interpersonal and group communication, debate and persuasion, theatre performance (including dramatic, musical and narrative theatre), theatre design and technology, and various dance techniques and choreography.

Communication and Dramatic Arts at CMU

The Department of Communication and Dramatic Arts at CMU is a hybrid department comprised of two areas: (1) the communication area (COM) and (2) the theatre, interpretation, and dance area (TID). While each area has its own unique programs and courses of study that are cited below, together the areas comprise a department that can address the complex nature of oral communication and performance in its various forms.

The professional and academic goals for the Communication area are the following: (1) to generate an appreciation for and an ability to utilize communication theory appropriate to the students’ vocational aspirations and societal needs; (2) to encourage the development of communication skills that help students build and maintain a sense of self-worth, understanding, and self-confidence; (3) to explore the integration of communication theory and skills with other social-science disciplines; (4) to sensitize students to the variety of perspectives and perceptions of people from different backgrounds and cultures and show the role of communication in creating understanding; (5) to assist students in developing communication competencies that enhance self-directed learning and problem-solving ability; (6) to provide service for the public good; (7) to provide students with an opportunity to demonstrate communication skills in applied communication settings; (8) to provide quality education to update and refine the students’ knowledge in accordance with their developing needs; and (9) to contribute to the general advancement of knowledge by stimulating and supporting research efforts. For more information about Communication programs, call the Communication and Dramatic Arts Office at 989-774-3177.

The Theatre, Interpretation and Dance Area engages undergraduates through scholarly inquiry, performance and production in an understanding of, appreciation for and experience with the dynamic, complex interaction between texts, artists and audiences and promotes awareness of the cultural environments and communities in which these elements interact. To these ends, the Theatre, Interpretation and Dance Area strives to: (1) provide students with a foundation for the breadth and depth of study in the fields of theatre, interpretation and dance; (2) encourage a balance between learning by doing (performance and production) and by academic scholarship; (3) afford opportunities for all students to become involved in coursework and/or production regardless of their pre-professional or avocational interests; and (4) create a life-long interest in and appreciation for the importance of the arts in the well-being of the individual and larger society within which they function. For more information about Theatre, Interpretation, and Dance programs, call the Communication and Dramatic Arts Office at 989-774-3177.

The Department of Communication and Dramatic Arts offers specialized majors and minors in Communication, and Theatre, Interpretation, and Dance. For those interested in teacher preparation, a Speech major and minor are offered at the secondary level. The department also participates in the interdisciplinary Language Arts program, which offers a major and a minor at the elementary teaching level, the interdisciplinary Integrative Public Relations program and the interdisciplinary Music Theatre program.

The faculty

Speech Education Major & Minor

Speech Major
B.S. in Ed. degree, Provisional Secondary Certification

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
Any student in good academic standing at CMU may sign a major in Speech. Every student intending to major in speech must meet with an advisor to specify the course of study. A minimum 2.7 GPA (B-) must be earned in this major. Students must have completed at least 30 hours of the major program, including COM 492 and COM 493, prior to student teaching.

Core Courses (33 hours)
- COM 251 - Foundations of Communication Theory 3(3-0)
- COM 267 - Introduction to Debate 3(3-0)
- COM 357 - Public Speaking 3(3-0)
- COM 361 - Interpersonal Communication 3(3-0)
- COM 492 - Speech Methods in Secondary School 4(4-0)
- COM 493 - Field Experience in Speech Education 1(Spec)
- COM 569 - Communication in the Classroom 3(3-0)
- TAI 170 - Oral Interpretation of Literature 3(3-0)
- TAI 177 - Stagecraft and Stage Lighting 4(4-0)
- TAI 182 - Acting I 3(3-0)
- TAI 481 - Directing 3(3-0)

Required Courses (8 hours)
8 hours chosen from COM and TAI courses in consultation with a departmental advisor.

Total: 41 semester hours

Speech Minor
B.S. in Ed. degree, Provisional Secondary Certification

Required Courses (23 hours)
- COM 251 - Foundations of Communication Theory 3(3-0)
- COM 267 - Introduction to Debate 3(3-0)
- COM 357 - Public Speaking 3(3-0)
- COM 492 - Speech Methods in Secondary School 4(4-0)
- TAI 170 - Oral Interpretation of Literature 3(3-0)
- TAI 177 - Stagecraft and Stage Lighting 4(4-0)
- TAI 182 - Acting I 3(3-0)
- TAI 481 - Directing 3(3-0)

Total: 23 semester hours

Note: TAI 481 has prerequisites or other requirements. Check the course description.

Communication Major & Minor

Communication Major
B.A.; B.A.A.; B.S. degrees

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
Any student in good academic standing at CMU may sign a major in Communication. Every student intending to major in Communication must meet with an advisor to specify the course of study. A minimum 2.0 GPA (C) must be earned in the major. A minimum grade of C must be earned in COM 251 and COM 301. Students must achieve a C or better to count COM 401 toward the COM major and satisfy requirements for graduation.

Required Courses (19 hours)
- COM 100 - Communication and Society 1(1-0)
- COM 251 - Foundations of Communication Theory 3(3-0)
- COM 301 - Survey of Research in Communication 3(3-0)
- COM 353 - Small Group Communication 3(3-0)
- COM 357 - Public Speaking 3(3-0)
- COM 361 - Interpersonal Communication 3(3-0)
- COM 401 - Capstone in Communication 3(3-0)

Electives (21 hours)
At least 9 credit hours must be taken at the 400 or 500-level with at least 3 credit hours at the 500 level.

Elective Courses I (9-12 hours)
- COM 101 - Introduction to Communication 3(3-0)
- COM 225 - Introduction to Communication in Virtual Environments 3(3-0)
- COM 267 - Introduction to Debate 3(3-0)
- COM 269 - Practicum in Debate/Forensics 2-8(Spec)
- COM 363 - Principles and Types of Interviewing 3(3-0)
- COM 365 - Persuasion and Social Influence 3(3-0)
- COM 367 - Nonverbal Communication 3(3-0)
- COM 464 - Communication Internship 1-6(Spec)
- COM 490 - Independent Study 1-4(Spec)
- COM 495 - Communication Facilitation 2-6(Spec)

Elective Courses II (9-12 hours)
- COM 195 - Intercultural Communication 3(3-0)
- COM 264 - Organizational Communication 3(3-0)
- COM 352 - Communication and Social Influence 3(3-0)
- COM 362 - Gender Communication 3(3-0)
- COM 369 - Health Communication 3(3-0)
- COM 461 - Communication in Leadership 3(3-0)
- COM 468 - Advanced Interpersonal Communication 3(3-0)
- COM 523 - Dark Side of Communication 3-9(Spec)
- COM 527 - Political Communication 3(3-0)
- COM 562 - Family Communication 3(3-0)
- COM 569 - Communication in the Classroom 3(3-0)

Total: 40 semester hours

Communication Minor
B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

Required Courses (16 hours)
- COM 100 - Communication and Society 1(1-0)
- COM 251 - Foundations of Communication Theory 3(3-0)
- COM 301 - Survey of Research in Communication 3(3-0)
- COM 353 - Small Group Communication 3(3-0)
- COM 357 - Public Speaking 3(3-0)
- COM 361 - Interpersonal Communication 3(3-0)

Electives (9 hours)
Select additional hours of COM in consultation with an advisor, at least six of which must be at the 400 or 500 level. (No more than 6 hours from COM 464, 490, and 495 can be counted toward the minor.)

Total: 25 semester hours
Theatre and Interpretation Majors and Minors

Theatre and Interpretation Major
B.A.; B.S. degrees

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
Any student in good academic standing at CMU may sign a major in Theatre and Interpretation. Every student intending to major in Theatre and Interpretation must meet with an advisor to specify the course of study. A minimum 2.0 GPA (C) must be earned in the major.

Core Courses (31 hours)
TAI 170 - Oral Interpretation of Literature 3(3-0)
TAI 177 - Stagecraft and Stage Lighting 4(4-0)
TAI 182 - Acting I 3(3-0)
TAI 278 - Stage Makeup 3(2-2)
TAI 481 - Directing 3(3-0)
TAI 499 - Senior Capstone 3(3-0)
TAI 574 - History of Drama and Theatre I 3(3-0)
TAI 575 - History of Drama and Theatre II 3(3-0)
TAI 580 - Dramatic Theory and Criticism 3(3-0)

In addition, take 3 studio courses in 3 different areas.

Required Courses (12 hours)
Select 12 hours of TAI courses in consultation with an advisor.

Total: 43 semester hours

Theatre and Interpretation Minor
B.A.; B.S.; B.A.A. degrees

Required Courses (25 hours)
TAI 170 - Oral Interpretation of Literature 3(3-0)
TAI 177 - Stagecraft and Stage Lighting 4(4-0)
TAI 182 - Acting I 3(3-0)
TAI 278 - Stage Makeup 3(2-2)
TAI 481 - Directing 3(3-0)
TAI 499 - Senior Capstone 3(3-0)
TAI 574 - History of Drama and Theatre I 3(3-0)
TAI 575 - History of Drama and Theatre II 3(3-0)
TAI 580 - Dramatic Theory and Criticism 3(3-0)

Total: 25 semester hours

Theatre & Interpretation Major
B.F.A. degree

The curriculum leading to the Bachelor of Fine Arts degree is designed for individuals who qualify for and are admitted to intensive specialization in Acting/Directing or Design/Technical Theatre. Interested students must consult with the TID Area Coordinator. Transfer students who wish to enter the B.F.A. program should consult with the TID Area Coordinator.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
Any student in good academic standing at CMU may sign a major in Theatre and Interpretation. Every student intending to major in Theatre and Interpretation must meet with an advisor to specify the course of study. A minimum 2.0 GPA (C) must be earned in the major.

The student is also required to demonstrate proficiency in the field of specialization prior to graduation.

Required Courses (45 hours)
Select 45 hours in TAI courses in consultation with the TID Area Coordinator.

Electives (25 hours)
Select 25 hours of elective cognate fine arts courses in consultation with the TID Area Coordinator.

Total: 70 semester hours

Integrative Public Relations Major
B.A., B.A.A., B.S. degrees

This is an interdisciplinary major. Please check the index for the page number.

Music Theatre Major
B.F.A. Degree

This is an interdisciplinary major. Please check the index for the page number.

Dance Minor
B.A.; B.S. degrees

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
Students electing a dance minor must consult an advisor prior to beginning their program.

Core Courses I (12 hours)
DAN 175 - Dance Appreciation 3(3-0)
DAN 232 - Dance Composition I 2(2-0)
DAN 305 - Studio: Dance Performance 1-4(Spec)
DAN 430 - Dance Production 3(2-2)
DAN 530 - History of Dance 3(3-0)

Core Courses II (1 hour)
Select one TAI studio course in one of the following areas of technical theatre for a faculty-supervised theatre production or for a faculty-supervised dance concert.
TAI 309 - Studio: Stage Management 1-4(Spec)
TAI 310 - Studio: Sound 1-4(Spec)
TAI 311 - Studio: Properties 1-4(Spec)
TAI 312 - Studio: Scenery Construction and Rigging 1-4(Spec)
TAI 313 - Studio: Scenery Design 1-4(Spec)
TAI 314 - Studio: Lighting 1-4(Spec)
TAI 315 - Studio: Lighting Design 1-4(Spec)
TAI 316 - Studio: Technical Direction 1-4(Spec)
TAI 317 - Studio: Costuming 1-4(Spec)
TAI 318 - Studio: Wardrobe Management 1-4(Spec)
TAI 319 - Studio: Makeup 1-4(Spec)

Electives I (8 hours)
Choose any 8 hours in the following technique classes:
DAN 133 - Modern I 2(1-2)
DAN 136 - Ballet Technique I 2(Spec)
DAN 233 - Dance Technique II 2(1-2)
DAN 236 - Ballet II 2(Spec)
DAN 333 - Modern Dance III 2-4(1-2)

Electives II (4 hours)
Choose 4 hours from the following:
DAN 137 - Tap I 2(1-2)
DAN 138 - Jazz I 2(Spec)
DAN 578 - Special Topics In Dance 1-9(Spec)

Total: 25 semester hours
**Journalism (JRN)**

For information, please contact the chairperson, 989-774-3196, 454 Moore Hall; 
https://www.cmich.edu/colleges/CCFA/CCFADepartmentofJournalism/Pages/default.aspx

**Why Study Journalism?**

Journalism and mass communications transmit and interpret culture and bind society together, making them among the most vital forces in the maintenance of any society and fundamental to democratic government and a free society. The mission of the Department of Journalism is to foster in its students the skills, values, and practices associated with professional journalism and strategic communication; to further their understanding of how those attributes intersect with local, national and global citizenship; to demand critical thinking; to challenge them to be the creators of and leaders in a constantly changing communication environment, and to fully engage with diverse audiences.

Careers in the exciting and expanding field of mass communications begin with journalism studies. CMU journalism graduates find jobs in news reporting, magazine and feature writing, web editing, photojournalism, public relations, and advertising. Journalism education also benefits students going into law, politics, consulting, health education, business, and environmental and sports studies and many other fields that require information gathering, precision writing and visual communication skills.

**Journalism at CMU**

CMU’s journalism program is accredited by the Accrediting Council for Education in Journalism and Mass Communications, a distinction held by only one other Michigan university. Our program balances classroom theory with service learning and other structured hands-on experiences that help students develop the skills required for entry-level positions in the media, as well as related professions and for entrepreneurial media-related careers.

Students may select a major in journalism, a journalism major with a concentration in public relations, or a major in photojournalism. All students enroll in a common set of courses that emphasizes information gathering, processing and writing, visual communication skills and the philosophical framework of the profession, including the role of mass communications in contemporary society, the role of media in racial and global diversity and the legal context in which the industry operates.

The department also offers majors in advertising and integrative public relations (IPR). The IPR major is an interdepartmental major with the School of Broadcast and Cinematic Arts and the Department of Communication and Dramatic Arts. We also offer a journalism minor and two interdepartmental minors in advertising (with the Department of Marketing and Hospitality Services Administration), and public affairs (with the Department of Political Science and Public Administration), and an interdisciplinary minor, Media Design, Production and Technology. See the Index for the page number for these programs.

Students interested in one of these programs are advised to contact a Department of Journalism advisor as early as possible and meet with that advisor each semester before registering for classes. Majors and minors are also expected to be involved each semester in co-curricular activities: CMLife, Grand Central Magazine, the Society of Professional Journalists, the Public Relations Student Society of America, the Central Press Photographers Association, and the American Advertising Federation, also known as Ad Club.

Employers expect journalism graduates to have had at least one internship, an indicator that an applicant has the attitude and skills necessary to be successful in the workplace. The journalism department will help arrange internships that match your career interests and allow you to build a portfolio of your work.

**CMU’s Journalistic Integrity Policy**

The Department of Journalism holds truth, accuracy and fairness as the fundamental principles of journalism education and media professions. Each faculty member in the department is responsible for instilling those values in our students as the credibility of media professionals depends on trustworthiness and integrity. To maintain the high standards this program has long established and the strong reputation it has long enjoyed among the professionals and alumni throughout the state, the country and the world, the department reserves the right to remove a student from its program if the student is found to have violated these standards. Violations may include, but are not limited to, fabricating assignments, plagiarism, misrepresentation to faculty, clients, sources or others during the performance of an assignment or project, or willfully violating the codes of ethics as established by industry standards, such as those promulgated by the Society of Professional Journalists, the National Press Photographers Association, the Advertising Federation, or the Public Relations Society of America.

**The Faculty**

Sean Baker, William Barre, Tim Boudreau, Lori F. Brost, Steven Coon, Elina Erzikova, Tim Fitzgerald, John K. Hartman, Teresa Hernandez, Sara Kubik, Ronald Marmarelli, Michael Mann, Kenneth McDonald, Carol McGinnis, Kent Miller, Mark T. Ranzenberger, Betsy Rau, Richard Ren, Edgar Simpson, Johnny Sparks, Alice A. Tait, James Wojcik, Jiafei Yin
Majors

Journalism Major
B.A.; B.S. degrees

A Journalism Major requires 42 hours of journalism coursework. The Journalism Department requires that ALL graduating seniors take an exit exam prior to graduation as part of the department’s assessment effort.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students majoring in Journalism must meet the criteria established by the Accrediting Council on Education in Journalism and Mass Communications. That means that they must take 72 semester credit hours of their degree work outside of the major. Students may take a maximum of 52 hours under the JRN Designator. They must take liberal arts and sciences courses in compliance with CMU’s University Program requirements, listed under the University Program and area requirements for the B.A. or B.S. degree. A grade of C or better is required in each course counted toward the Journalism Major and an overall grade point average of 2.5 for all journalism courses counted toward the major.

The last 18 hours of journalism course work leading to a journalism major should be taken within the Journalism Department of CMU. No more than 3 credits of journalism internship can be applied toward the major.

Each student must consult with a Department of Journalism faculty advisor before registering for courses each semester to ensure orderly progress toward meeting these requirements.

Required Courses I (3 hours)
Select one of the following:
JRN 101 - Media and Society 3(3-0)
JRN 102 - Introduction to Journalism 3(3-0)

Required Courses II (21 hours)
JRN 202 - Writing for the Mass Media 3(3-0)
JRN 203QR - Information Gathering for the Mass Media 3(3-0)
JRN 220 - Basic Media Photography 3(3-0)
JRN 312 - Reporting 3(3-0)
JRN 315 - Editing 3(3-0)
JRN 340 - Introduction to Digital Journalism 3(3-0)
JRN 404 - Law of Mass Communication 3(3-0)

Required Courses III (3 hours)
Select one of the following:
JRN 372 - International and Cross-cultural Mass Communication 3(3-0)
JRN 380 - Racial and Cultural Diversity: Mass Media’s Role 3(3-0)

Required Courses IV (3 hours)
Select one of the following:
JRN 448 - Journalism Practicum 1-3(Spec)
JRN 449 - Journalism Internship 3(Spec)

Required Courses V (3 hours)
Select one of the following:
JRN 445 - Multimedia Reporting Capstone 3(3-0)
JRN 500 - Current Issues in Mass Communication 3(3-0)

Electives (9 hours)
Select from the following:
JRN 250 - Social Media: Managing the Message 3(3-0)
JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)
JRN 339 - Social Media: Reputation, Image and Interaction 3(3-0)
JRN 417 - Sports Reporting 3(3-0)
JRN 423 - Online Visual Storytelling 3(3-0)
JRN 430 - Magazine and Feature Writing 3(3-0)
JRN 440 - Advanced Digital Journalism 3(3-0)
JRN 441 - Data Journalism 3(3-0)
JRN 516 - Public Affairs Reporting 3(3-0)
JRN 597 - Special Studies 1-6(Spec)

OR another JRN course as approved by the advisor.

Total: 42 semester hours

Please note that JRN 339, JRN 348, JRN 417, JRN 440, JRN 441 are offered mostly in the fall while JRN 423, JRN 445 and JRN 516 are offered mostly in the spring semester.

Note: JRN 202, 205, 312, 348, 430, and 516 are approved for offering as Writing Intensive. Check the Course Search and Registration for WI sections.

Journalism Major: Public Relations Concentration
B.A.; B.S. degrees

A Journalism major requires 42 hours of journalism coursework. The Journalism Department requires that ALL graduating seniors take an exit exam prior to graduation as part of the department’s assessment efforts.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Students majoring in journalism (public relations concentration) must meet the criteria established by the Accrediting Council on Education in Journalism and Mass Communications. That means that they must take 72 semester credit hours of their degree work outside of the major. Students may take a maximum of 52 hours under the JRN Designator. They must take liberal arts and sciences courses in compliance with CMU’s University Program requirements, listed under the University Program and area requirements for the B.A. or B.S. degree. A grade of C or better is required in each course counted toward the major and an overall grade point average of 2.5 for all journalism courses counted toward the major.

The last 18 hours of journalism course work leading to a Photojournalism major should be taken within the Journalism Department of CMU. No more than 3 credits of journalism internship can be applied toward the major.

Each student must consult with a Department of Journalism faculty advisor before registering for courses each semester to ensure orderly progress toward meeting these requirements.

Required Courses I (3 hours)
Select one of the following:
JRN 101 - Media and Society 3(3-0)
JRN 102 - Introduction to Journalism 3(3-0)

Required Courses II (21 hours)
JRN 202 - Writing for the Mass Media 3(3-0)
JRN 203QR - Information Gathering for the Mass Media 3(3-0)
JRN 220 - Basic Media Photography 3(3-0)
JRN 312 - Reporting 3(3-0)
JRN 315 - Editing 3(3-0)
JRN 340 - Introduction to Digital Journalism 3(3-0)
JRN 380 - Racial and Cultural Diversity: Mass Media’s Role 3(3-0)

Required Courses III (3 hours)
Select one of the following:
JRN 372 - International and Cross-cultural Mass Communication 3(3-0)
JRN 380 - Racial and Cultural Diversity: Mass Media’s Role 3(3-0)

Required Courses IV (3 hours)
Select one of the following:
JRN 448 - Journalism Practicum 1-3(Spec)
JRN 449 - Journalism Internship 3(Spec)

Required Courses V (3 hours)
Select one of the following:
JRN 445 - Multimedia Reporting Capstone 3(3-0)
JRN 500 - Current Issues in Mass Communication 3(3-0)

Electives (9 hours)
Select from the following:
JRN 250 - Social Media: Managing the Message 3(3-0)
JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)
JRN 339 - Social Media: Reputation, Image and Interaction 3(3-0)
JRN 417 - Sports Reporting 3(3-0)
JRN 417 - Sports Reporting 3(3-0)
JRN 423 - Online Visual Storytelling 3(3-0)
JRN 430 - Magazine and Feature Writing 3(3-0)
JRN 440 - Advanced Digital Journalism 3(3-0)
JRN 441 - Data Journalism 3(3-0)
JRN 516 - Public Affairs Reporting 3(3-0)
JRN 597 - Special Studies 1-6(Spec)

OR another JRN course as approved by the advisor.

Total: 42 semester hours

Note: JRN 202, 205, 312, 348, 430, and 516 are approved for offering as Writing Intensive. Check the Course Search and Registration for WI sections.
Photojournalism Major
B.A.; B.S. degrees

A Photojournalism Major requires 48 hours of journalism coursework.

The Journalism Department requires that ALL graduating seniors take an exit exam prior to graduation as part of the department’s assessment efforts.

Admission Requirements, Retention & Termination Standards

Students majoring in Photojournalism must meet the criteria established by the Accrediting Council on Education in Journalism and Mass Communications. That means that they must take 72 semester credit hours of their degree work outside of the major. Students may take a maximum of 52 hours under the JRN designator. They must take liberal arts and sciences courses in compliance with CMU’s University Program requirements, listed under the University Program and area requirements for the B.A. or B.S. degrees. A grade of C or better is required in each course counted toward the Photojournalism major and an overall grade point average of 2.5 for all journalism courses counted toward the major.

The last 18 hours of journalism course work leading to a Photojournalism major should be taken within the Journalism Department of CMU. No more than 3 credits of journalism internship can be applied toward the major.

Each student must consult with a Department of Journalism faculty advisor before registering for courses each semester to ensure orderly progress toward meeting these requirements.

Required Courses I (3 hours)
Select one of the following:
JRN 101 - Media and Society 3(3-0)
JRN 102 - Introduction to Journalism 3(3-0)

Required Courses II (12 hours)
JRN 202 - Writing for the Mass Media 3(3-0)
JRN 220 - Basic Media Photography 3(3-0)
JRN 340 - Introduction to Digital Journalism 3(3-0)
JRN 404 - Law of Mass Communication 3(3-0)

Required Courses III (3 hours)
Select one of the following:
JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)
JRN 380 - Racial and Cultural Diversity: Mass Media’s Role 3(3-0)

Required Courses IV (24 hours)
ART 241 - Introduction to Photography 3(0-6)
JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)
JRN 320 - Photo Editing 3(3-0)
JRN 420 - Photography Studio Techniques 3(3-0)
JRN 422 - The Photographic Process 3(3-0)
JRN 423 - Online Visual Storytelling 3(3-0)
JRN 445 - Multimedia Reporting Capstone 3(3-0)
JRN 521 - Seminar in News Photography 3(3-0)

Required Courses V (3 hours)
Select one of the following:
JRN course, 300 level or above, approved by advisor (3 hours) OR
JRN 529 - Photojournalism Internship 1-4(Spec)

Required Courses VI (3 hours)
Select one of the following:
ART 342 - Experimental Photography Studio 3-6(Spec)
ART 441 - Photography Studio 3-9(Spec)

Total: 48 semester hours

Note: JRN 420 and 422 are offered mostly in the fall semester and JRN 521 is offered mostly in the spring semester.

Note: JRN 202, 205, 312, 348, 430, and 516 are approved for offering as Writing Intensive. Check the Course Search and Registration for WI sections.

Advertising Major
B.A.; B.S. degrees

An Advertising Major requires 39 hours of journalism and marketing coursework.

The Journalism Department requires that ALL graduating seniors take an exit exam prior to graduation as part of the department’s assessment efforts.

Admission Requirements, Retention & Termination Standards

Students majoring in Advertising must meet the criteria established by the Accrediting Council on Education in Journalism and Mass Communications. That means that they must take 72 semester credit hours of their degree work outside of the major. Students may take a maximum of 52 hours under the JRN designator. They must take liberal arts and sciences courses in compliance with CMU’s University Program requirements, listed under the University Program and area requirements for the B.A. or B.S. degree. A grade of C or better is required in each course counted toward the Advertising major and an overall grade point average of 2.5 for all journalism courses counted toward the major.

The last 18 hours of journalism and marketing course work leading to an advertising major should be taken within the journalism and marketing departments of CMU. No more than six credits of journalism internship can be applied toward the major.

Each advertising major must consult with a journalism faculty advisor prior to registering for courses each semester to ensure orderly progress toward meeting these requirements.

Required Courses I (3 hours)
Select one of the following:
JRN 101 - Media and Society 3(3-0)
JRN 102 - Introduction to Journalism 3(3-0)

Required Courses II (3 hours)
Select one of the following:
JRN 372 - The Asian Media and Cross-cultural Mass Communication 3(3-0)
JRN 380 - Racial and Cultural Diversity: Mass Media’s Role 3(3-0)

Required Courses III (30 hours)
JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)
JRN 350 - Public Relations Principles and Practices 3(3-0)
JRN 360 - Advertising Principles 3(3-0)
JRN 361 - Writing for Advertising 3(3-0)
JRN 365 - Advertising Media 3(3-0)
JRN 369 - Advertising and Public Relations Research 3(3-0)
JRN 404 - Law of Mass Communication 3(3-0)
JRN 466 - Advertising Campains 3(3-0)
JRN 569 - Advertising Internship 1-4(Spec)
MKT 300 - Introduction to Marketing 3(3-0)

Required Courses IV (3 hours)
Select one of the following:
JRN 366 - Advertising Account Management 3(3-0)
JRN 465 - Advertising Copy and Design 3(3-0)
JRN 467 - Advertising Account Planning 3(3-0)

Total: 39 semester hours

Integrative Public Relations Major
B.A.; B.A.A.; B.S. degrees

This is an interdisciplinary major. Please check the index for the page number.
Minors

**Journalism Minor**

*B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees*

A journalism minor requires at least 21 hours of journalism course work. A grade of C or better is required in each course counted toward the minor.

**Required Courses I (3 hours)**

Select one of the following:

- JRN 101 - Media and Society 3(3-0)
- JRN 102 - Introduction to Journalism 3(3-0)

**Required Courses II (12 hours)**

- JRN 202 - Writing for the Mass Media 3(3-0)
- JRN 203QR - Information Gathering for the Mass Media 3(3-0)
- JRN 312 - Reporting 3(3-0)
- JRN 340 - Introduction to Digital Journalism 3(3-0)

**Electives I (3 hours)**

Select one of the following:

- JRN 220 - Basic Media Photography 3(3-0)
- JRN 302 - Introduction to Graphics and Visual Communication 3(3-0)

OR one advanced journalism writing course (numbered 300 or above) as approved by the minor advisor.

**Electives II (3 hours)**

One journalism course in theory or principles as approved by the minor advisor.

**Total: 21 semester hours**

**Advertising Minor**

This is an interdepartmental minor. Please check the index for the page number.

**Public Affairs Minor**

This is an interdepartmental minor. Please check the index for the page number.

**Media Design, Production, and Technology Minor**

This is an interdisciplinary minor. Please check the index for the page number.

**Undergraduate Certificate in Social Media**

Please note: As of Summer, 2016, this program has been placed on hiatus. Please consult with your advisor for more information.

The purpose of the Undergraduate Certificate in Social Media is to prepare students to understand the history and development of social media, identify the cultural, legal and ethical impact of using social media in society, and to analyze its benefits in order to strategically incorporate it in the public or private sector.

**Note:** This program is offered in an online format only. Contact Global Campus for more information.

**Minimum Totals for Graduation: 15 hours**

**Admission Requirements, Retention & Termination Standards**

Please note: this program is on hiatus as of Summer, 2016.

1. The Social Media Certificate is available for students enrolled on CMU’s main campus or through Global Campus. The program will be offered in an online format only. Students who enroll in online programs must meet the criteria set by CMU Global Campus. See the current CMU Global Campus Bulletin at [https://bulletins.cmich.edu/](https://bulletins.cmich.edu/) (location: Online).

2. A minimum of a C or better is required for JRN 105, 250 and 370.

3. JRN 460 is a practicum experience in a selected public or private sector organization. Written agreement (CMU approved forms) required from on-site supervisor to follow all evaluation procedures and the instructor must be satisfied the placement will meet the course objectives.

**Required Courses (12 hours)**

- JRN 105 - Social Media in Society 3(3-0)
- JRN 250 - Social Media: Managing the Message 3(3-0)
- JRN 370 - Social Media Legal and Ethical Issues 3(3-0)
- JRN 460 - Social Media Practicum, Portfolio and Plan 3(3-0)

**Electives (3 hours)**

Three semester hours that purposefully complement the social media certificate and the student’s interests in consultation with the program faculty advisor.

**Total: 15 semester hours**

See the Index for Requirements for Undergraduate Certificates
Music (MUS)
For information, please contact the director, 989-774-1945, Music 162; www.mus.cmich.edu/

Why Study Music?
Music is a universal human phenomenon. It is one means by which human beings may understand the essence of their culture, and every culture on earth possesses some musical system. Through musical participation, humans are able to make connections with one another in ways which are impossible to achieve by any other means. When students study music, they come to know a dimension of "humanness" which is otherwise closed to them. In a society which increasingly focuses on passive participation, music study provides students with opportunities for active creative involvement. The student who sings or plays an instrument alone or as part of an ensemble is able to reach a part of himself or herself which cannot be discovered in any other way. The student who listens to the works of composers such as Bach or Mozart is communicating across centuries of time with some of the best thinking that the human mind has to offer. Without musical study, a student cannot completely understand what it means to be a human being.

Music Offerings at CMU
The School of Music provides offerings in four basic areas: curricular programs for students who aspire to careers in music; activities for all students who have an interest in music (all of the musical organizations in the School of Music are open to all students on campus, whether music majors or not); courses for students with a general interest in music; and cultural offerings in the form of recitals, concerts, and lectures, most of which are free of charge.

Musical education and activities are not limited to students in the School of Music. The University offers a wide variety of opportunities related to music. In addition, the University plays host to a number of professional and community musical groups whose performances are open to all students and members of the community. Many are scheduled through the University’s main arts calendar.

Bachelor of Music Education
Completion of this degree will qualify a student for recommendation to the State Board for a Secondary Provisional Certificate which will permit the holder to teach music in grades K-12.

Admission Requirements, Retention & Termination Standards
Admission as a Music Major or Minor
Admission to the School of Music requires the presentation of a successful performance audition and passage of a basic musicianship examination. If a student does not pass the basic musicianship examination, he/she may be denied access to music core courses. Further information concerning audition is available in the School of Music office.

Admission to Music Candidacy
Prior to enrolling in classes above 200 level, a student must apply to the School of Music Office for admission to Music Candidacy. Admission to the School of Music requires a successful audition and passage of the examination at a later date will fulfill the requirement. A student who has not been accepted into the Music Program may take courses in music, but will not be considered a music major or minor. A student who has been denied access to music core courses may be granted tentative admission to the Music Program if they can demonstrate the ability to perform at a level equivalent to that of a music major.

Admission as a Music Major or Minor
Admission to the Music Program requires a successful audition and passage of the examination at a later date will fulfill the requirement. A student who has not been accepted into the Music Program may take courses in music, but will not be considered a music major or minor. A student who has been denied access to music core courses may be granted tentative admission to the Music Program if they can demonstrate the ability to perform at a level equivalent to that of a music major.

Additional Requirements for Music Majors and Minors
Additional Requirements for Music Majors and Minors
Music major and minors on all degree programs must receive a grade of "C" or better in each required MUS course. Credit/No Credit grades are not acceptable on music majors and minors.

Requirements for Bachelor of Music Education
All students pursuing this degree should see the section on Admission to Teacher Education Programs.

In order to complete this degree a student must complete either the Instrumental or Choral option. These options require both a major and minor in music. Neither the majors nor the minors are available except on this degree and in the combination below.

A minimum 2.7 GPA (B-) must be earned in all teaching majors and minors.
# Music Education Major:
## Instrumental Option

### Admission Requirements, Retention & Termination Standards

See the information at the beginning of this section.

### Core Courses I (29 hours)

**Music Theory, History, and Literature**
- 7 semesters of MUS 097.
- MUS 097 - Recital Attendance
- MUS 101 - Theory I (3-0)
- MUS 102 - Theory II (3-0)
- MUS 103 - Sight Singing and Ear Training I (0-2)
- MUS 104 - Sight Singing and Ear Training II (0-2)
- MUS 109 - Introduction to Music Technology (1-1)
- MUS 201 - Theory III (3-0)
- MUS 202 - Theory IV (3-0)
- MUS 203 - Sight Singing and Ear Training III (0-2)
- MUS 204 - Sight Singing and Ear Training IV (0-2)
- MUS 211 - Historical Survey of Music I (3-0)
- MUS 212 - Historical Survey of Music II (3-0)
- MUS 304 - Instrumentation and Scoring (3-2)
- MUS 311 - Historical Survey of Music III (3-0)

### Core Courses II (4 hours)

**Music Education**
- MUS 230 - Introduction to Music Education (2-1)
- MUS 333 - Music Education in the Elementary Grades (2-0)

### Required Courses (7 hours)

**Applied Study**
- 4 semesters of MUS 151-179 (4 hours)
- 3 semesters of MUS 351-379 (3 hours)
- Solo performance (0 hours)
- MUS 151 - Organ 1-12(Spec)
- MUS 152 - Piano 1-12 (Spec)
- MUS 153 - Violin 1-12(Spec)
- MUS 155 - Violoncello 1-12(Spec)
- MUS 157 - String Bass 1-12(Spec)
- MUS 158 - Composition 1-4(Spec)
- MUS 159 - Guitar 1-8(Spec)
- MUS 161 - Flute 1-12(Spec)
- MUS 163 - Oboe 1-12(Spec)
- MUS 165 - Clarinet 1-12(Spec)
- MUS 167 - Bassoon 1-12(Spec)
- MUS 169 - Saxophone 1-12(Spec)
- MUS 171 - Trumpet 1-12(Spec)
- MUS 173 - Horn 1-12(Spec)
- MUS 175 - Trombone 1-12(Spec)
- MUS 177 - Euphonium 1-12(Spec)
- MUS 178 - Tuba 1-12(Spec)
- MUS 179 - Percussion 1-12(Spec)
- MUS 351 - Organ 1-16(Spec)
- MUS 352 - Piano 1-16(Spec)
- MUS 353 - Violin 1-16(Spec)
- MUS 355 - Violoncello 1-16(Spec)
- MUS 357 - String Bass 1-16(Spec)
- MUS 358 - Composition 2-8(Spec)
- MUS 359 - Guitar 1-8(Spec)
- MUS 360 - Harpsichord 1-8(Spec)
- MUS 361 - Flute 1-16(Spec)
- MUS 363 - Oboe 1-16(Spec)
- MUS 365 - Clarinet 1-16(Spec)
- MUS 367 - Bassoon 1-16(Spec)
- MUS 369 - Saxophone 1-16(Spec)
- MUS 371 - Trumpet 1-16(Spec)
- MUS 373 - Horn 1-16(Spec)

### Core Courses III (4 hours)

**Music Education**
- MUS 244 - Woodwind Techniques (2-0)
- MUS 246 - String Techniques I (2-0)
- MUS 280 - Introduction to Conducting (2-0)
- MUS 331 - Instrumental Organization (2-0)
- MUS 344 - Percussion Techniques (2-0)
- MUS 382 - Instrumental Conducting and Materials (2-0)
- MUS 431 - Instrumental Classroom and Rehearsal Methods (2-1)

### Required Courses II (8 hours)

**Performance - Ensemble:**
- 6-7 semesters of MUS 185 or MUS 186 (6-7 hours)
- 1-2 semesters of MUS 281, MUS 285, or MUS 286 (1-2 hours)
- If applied study on major is satisfied with MUS 161-179 and MUS 361-379, then a minimum of 2 semesters of MUS 186, marching band section.
- MUS 185 - Orchestra 1-8(Spec)
- MUS 186 - Band 1-8(spec)
- MUS 281 - Chamber Ensemble 1-8(Spec)
- MUS 285 - Percussion Ensemble 1-8(Spec)
- MUS 286 - Jazz Ensemble 1-8(Spec)

### Required Courses III (0-4 hours)

**Performance - Secondary Applied Study**
Select one of the following options:

**Option 1**
If Applied Study requirement on major is satisfied with MUS 153-179 and MUS 353-379, then MUS 147, 148, 247, and 248 (4 hours) or passing piano proficiency (0 hours).
- MUS 147 - Piano Class I (0-2)
- MUS 148 - Piano Class II (0-2)
- MUS 247 - Piano Class III (0-2)
- MUS 248 - Piano Class IV (0-2)

**Option 2**
If Applied Study requirements on major is satisfied with MUS 151 or 152, then MUS 153-179 (4 hours).

**Note:** All applied study used to fulfill the requirements of MUS 153-179 must be on the same instrument.

### Music Electives (0-4 hours)
Courses selected must be at the 300 level or above.

**Total:** 40 semester hours

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# Music: Instrumental Minor

### Required Courses I (18 hours)

**Music Education**
- MUS 141 - Vocal Techniques I (1-0-2)
- MUS 144 - Woodwind Techniques (2-0-4)
- MUS 146 - Brass Techniques (2-0-4)
- MUS 244 - Double Reed Techniques (1-0-2)
- MUS 246 - String Techniques I (2-0-4)
- MUS 280 - Introduction to Conducting (2-0-4)
- MUS 331 - Instrumental Organization (2-0)
- MUS 344 - Percussion Techniques (2-0-4)
- MUS 382 - Instrumental Conducting and Materials (2-0-4)
- MUS 431 - Instrumental Classroom and Rehearsal Methods (2-1)

### Required Courses II (8 hours)

**Performance - Ensemble:**
- 6-7 semesters of MUS 185 or MUS 186 (6-7 hours)
- 1-2 semesters of MUS 281, MUS 285, or MUS 286 (1-2 hours)
- If applied study on major is satisfied with MUS 161-179 and MUS 361-379, then a minimum of 2 semesters of MUS 186, marching band section.
- MUS 185 - Orchestra 1-8(Spec)
- MUS 186 - Band 1-8(spec)
- MUS 281 - Chamber Ensemble 1-8(Spec)
- MUS 285 - Percussion Ensemble 1-8(Spec)
- MUS 286 - Jazz Ensemble 1-8(Spec)

### Required Courses III (0-4 hours)

**Performance - Secondary Applied Study**
Select one of the following options:

**Option 1**
If Applied Study requirement on major is satisfied with MUS 153-179 and MUS 353-379, then MUS 147, 148, 247, and 248 (4 hours) or passing piano proficiency (0 hours).
- MUS 147 - Piano Class I (1-0-2)
- MUS 148 - Piano Class II (1-0-2)
- MUS 247 - Piano Class III (1-0-2)
- MUS 248 - Piano Class IV (1-0-2)

**Option 2**
If Applied Study requirements on major is satisfied with MUS 151 or 152, then MUS 153-179 (4 hours).

**Note:** All applied study used to fulfill the requirements of MUS 153-179 must be on the same instrument.

### Music Electives (0-4 hours)
Courses selected must be at the 300 level or above.

**Total:** 30 semester hours
Music Education Major: Choral Option

Admission Requirements, Retention & Termination Standards
See the information at the beginning of this section.

Core Courses I (29 hours)

Music Theory, History, and Literature

- 7 semesters of MUS 097.
- MUS 097 - Recital Attendance 0
- MUS 101 - Theory I 3(3-0)
- MUS 102 - Theory II 3(3-0)
- MUS 103 - Sight Singing and Ear Training I 1(0-2)
- MUS 104 - Sight Singing and Ear Training II 1(0-2)
- MUS 109 - Introduction to Music Technology 1(1-1)
- MUS 201 - Theory III 3(3-0)
- MUS 202 - Theory IV 3(3-0)
- MUS 203 - Sight Singing and Ear Training III 1(0-2)
- MUS 204 - Sight Singing and Ear Training IV 1(0-2)
- MUS 211 - Historical Survey of Music I 3(3-0)
- MUS 212 - Historical Survey of Music II 3(3-0)
- MUS 304 - Instrumentation and Scoring 3(2-2)
- MUS 311 - Historical Survey of Music III 3(3-0)

Core Courses II (4 hours)

Music Education

- MUS 230 - Introduction to Music Education 2(1-2)
- MUS 333 - Music Education in the Elementary Grades 2(2-0)

Required Courses (7 hours)

- 2 semesters of MUS 150, 151, or 152 (2 hours)
- 2 semesters of MUS 250, 151 or 152 (2 hours)
- 3 semesters of MUS 350, 351, or 352 (3 hours)
- Solo performance (0 hours)

Note: All applied study used to fulfill these requirements must be on the same instrument.

- MUS 150 - Voice 1-12(Spec)
- MUS 151 - Organ 1-12(Spec)
- MUS 152 - Piano 1-12(Spec)
- MUS 350 - Voice 1-12(Spec)
- MUS 351 - Organ 1-16(Spec)
- MUS 352 - Piano 1-16(Spec)

Total: 40 semester hours

Music: Choral Minor

Required Courses I (13 hours)

Music Education

- MUS 241 - Diction for Singers 2(1-2)
- MUS 246 - String Techniques I 2(0-4)
- MUS 280 - Introduction to Conducting 2(0-4)
- MUS 338 - Voice Pedagogy 2(1-2)
- MUS 381 - Choral Conducting and Materials 2(0-4)
- MUS 433 - Secondary Choral & General Music Methods 3(3-0)

Required Courses II (2 hours)

Music Education

- Select one of the following:
  - MUS 144 - Woodwind Techniques 2(0-4)
  - MUS 146 - Brass Techniques 2(0-4)

Required Courses III (2 hours)

Music Education

- Select one of the following:
  - MUS 317 - Song Repertoire for Young Voices 2(2-0)
  - MUS 318 - Song Repertoire 2(1-2)

Required Courses IV (2 hours)

Music Education

- Select one of the following:
  - MUS 511 - Choral Literature I 2(2-0)
  - MUS 512 - Choral Literature II (Since 1750) 2(2-0)

Required Courses V (7 hours)

Performance - Ensemble

- 6 semesters of MUS 182, 183, or 282 (6 hours)
- 1 semester of MUS 284 (1 hour)

- MUS 182 - Women's Chorus 1-8(Spec)
- MUS 183 - Concert Choir 1-8(Spec)
- MUS 282 - Chamber Singers 1-8(Spec)
- MUS 284 - Techniques for the Singing Actor 1-6(Spec)

Required Courses VI (0-4 hours)

Performance - Secondary Applied Study

Select one of the following options:

Option 1
- If Applied study requirement on major is satisfied with MUS 150, 250, and 350, then MUS 147, 148, 247 and 248 (4 hours) or passing piano proficiency (0 hours).
- MUS 147 - Piano Class I 1(0-2)
- MUS 148 - Piano Class II 1(0-2)
- MUS 247 - Piano Class III 1(0-2)
- MUS 248 - Piano Class IV 1(0-2)

Option 2
- If Applied Study requirement on major is satisfied with MUS 151 or 152, then MUS 150 (4 hours).
- MUS 150 - Voice 1-12(Spec)

Music Electives (0-4 hours)

Selected in consultation with an advisor.

Total: 30 semester hours

Music Education Major: General Music Option

Admission Requirements, Retention & Termination Standards
See the information at the beginning of this section.

Core Courses I (29 hours)

Music Theory, History, and Literature

- 7 semesters of MUS 097.
- MUS 097 - Recital Attendance 0
- MUS 101 - Theory I 3(3-0)
- MUS 102 - Theory II 3(3-0)
- MUS 103 - Sight Singing and Ear Training I 1(0-2)
- MUS 104 - Sight Singing and Ear Training II 1(0-2)
- MUS 201 - Theory III 3(3-0)
- MUS 202 - Theory IV 3(3-0)
- MUS 203 - Sight Singing and Ear Training III 1(0-2)
- MUS 204 - Sight Singing and Ear Training IV 1(0-2)
- MUS 211 - Historical Survey of Music I 3(3-0)
- MUS 212 - Historical Survey of Music II 3(3-0)
- MUS 304 - Instrumentation and Scoring 3(2-2)
- MUS 311 - Historical Survey of Music III 3(3-0)

Core Courses II (4 hours)

Music Education

- MUS 230 - Introduction to Music Education 2(1-2)
- MUS 333 - Music Education in the Elementary Grades 2(2-0)

Required Courses (7 hours)

- Applied Study
  - Passage of 300-Level Jury in one applied area is required.
  - Complete one of the following options:

  Option 1
  - If Applied study requirement on major is satisfied with MUS 150, 250, and 350, then MUS 147, 148, 247 and 248 (4 hours) or passing piano proficiency (0 hours).
    - MUS 147 - Piano Class I 1(0-2)
    - MUS 148 - Piano Class II 1(0-2)
    - MUS 247 - Piano Class III 1(0-2)
    - MUS 248 - Piano Class IV 1(0-2)

  Option 2
  - If Applied Study requirement on major is satisfied with MUS 151 or 152, then MUS 150 (4 hours).
    - MUS 150 - Voice 1-12(Spec)

Music Electives (0-4 hours)

Selected in consultation with an advisor.

Total: 30 semester hours
Option A

Instrumental Emphasis
- MUS 141 and MUS 142 (2)
- 1 semester of MUS 150 (1) Voice
- 4 semesters of MUS 151-179 (4) Instrumental Study
- Solo Performance (0)
- 300-Level Proficiency (0)

MUS 141 - Vocal Techniques I 1(0-2)
MUS 142 - Vocal Techniques II 1(0-2)
MUS 150 - Voice 1-12(Spec)
MUS 151 - Organ 1-12(Spec)
MUS 152 - Piano 1-12(Spec)
MUS 153 - Violin 1-12(Spec)
MUS 155 - Violoncello 1-12(Spec)
MUS 157 - String Bass 1-12(Spec)
MUS 158 - Composition 1-4(Spec)
MUS 159 - Guitar 1-8(Spec)
MUS 161 - Flute 1-12(Spec)
MUS 163 - Oboe 1-12(Spec)
MUS 165 - Clarinet 1-12(Spec)
MUS 167 - Bassoon 1-12(Spec)
MUS 169 - Saxophone 1-12(Spec)
MUS 171 - Trumpet 1-12(Spec)
MUS 173 - Horn 1-12(Spec)
MUS 175 - Trombone 1-12(Spec)
MUS 177 - Euphonium 1-12(Spec)
MUS 178 - Tuba 1-12(Spec)
MUS 179 - Percussion 1-12(Spec)

Note: All applied study used to fulfill these requirements must be on the same instrument.

Option B

Vocal Emphasis
- 2 semesters of MUS 150 (2) Voice
- 2 semesters of MUS 250 (2) Voice
- 3 semesters of MUS 151-179, 350, and/or 450 (3) Instrumental and/or Vocal Study
- Solo Performance (0)
- 300-Level Proficiency (0)

MUS 150 - Voice 1-12(Spec)
MUS 151 - Organ 1-12(Spec)
MUS 152 - Piano 1-12(Spec)
MUS 153 - Violin 1-12(Spec)
MUS 155 - Violoncello 1-12(Spec)
MUS 157 - String Bass 1-12(Spec)
MUS 158 - Composition 1-4(Spec)
MUS 159 - Guitar 1-8(Spec)
MUS 161 - Flute 1-12(Spec)
MUS 163 - Oboe 1-12(Spec)
MUS 165 - Clarinet 1-12(Spec)
MUS 167 - Bassoon 1-12(Spec)
MUS 169 - Saxophone 1-12(Spec)
MUS 171 - Trumpet 1-12(Spec)
MUS 173 - Horn 1-12(Spec)
MUS 175 - Trombone 1-12(Spec)
MUS 177 - Euphonium 1-12(Spec)
MUS 178 - Tuba 1-12(Spec)
MUS 179 - Percussion 1-12(Spec)

MUS 250 - Voice 1-12(Spec)
MUS 350 - Voice 1-16(Spec)
MUS 450 - Voice 1-8(Spec)

Total: 40 semester hours

Music: General Music Minor

Required Courses I (16 hours)

Music Education
- MUS 149 - Class Guitar 1(1-0)
- MUS 280 - Introduction to Conducting 2(0-4)
- MUS 344 - Percussion Techniques 2(0-4)
- MUS 381 - Choral Conducting and Materials 2(0-4)
- MUS 433 - Secondary Choral & General Music Methods 3(3-0)
- MUS 531 - Orff Techniques 2(1-2)
- MUS 533 - Kodály Pedagogy 2(1-2)
- MUS 534 - Music for Pre-School Children 2(2-0)

Required Courses II (2 hours)

Music Education
- Select one of the following:
- MUS 144 - Woodwind Techniques 2(0-4)
- MUS 146 - Brass Techniques 2(0-4)

Required Courses III (7-11 hours)

Performance
- Ensemble (7 hours)
  - 7 semesters of study comprised of one of the following options:
    - Option A
      Instrumental Emphasis
      If 300 Level Jury requirement on major is satisfied with MUS 153-179, then 4-5 semesters of MUS 185 or 186 (4-5), 2-3 semesters of MUS 181, 182, 183, and/or 282 (2-3).
    - Option B
      Vocal Emphasis
      If 300 Level Jury requirement on major is satisfied with MUS 150, 151, 152, and/or 250, then 4-7 semesters of MUS 181, 182, or 183 (4-7), 0-3 semesters of MUS 185, 186, 281, 282, 284-286 (0-3).
      MUS 181 - Men's Chorus 1-8(Spec)
      MUS 182 - Women's Chorus 1-8(Spec)
      MUS 183 - Concert Choir 1-8(Spec)
      MUS 185 - Orchestra 1-8(Spec)
      MUS 186 - Band 1-8(Spec)
      MUS 281 - Chamber Ensemble 1-8(Spec)
      MUS 282 - Chamber Singers 1-8(Spec)
      MUS 284 - Techniques for the Singing Actor 1-6(Spec)
      MUS 285 - Percussion Ensemble 1-8(Spec)
      MUS 286 - Jazz Ensemble 1-8(Spec)

Secondary Applied Study (0-4 hours)
- If 300 Level Jury requirement on major is satisfied with MUS 150, 153-179, and/or 250, then MUS 147, 148, 247, and 248 (4) or passing piano proficiency (0).
- If 300 Level Jury requirement on major is satisfied with MUS 151 or 152, then MUS 249 (1).
- MUS 147 - Piano Class I 1(0-2)
- MUS 148 - Piano Class II 1(0-2)
- MUS 247 - Piano Class III 1(0-2)
- MUS 248 - Piano Class IV 1(0-2)
- MUS 249 - Functional Piano 1(0-2)

Music Electives (1-5 hours)
Select in consultation with an advisor.

Total: 30 semester hours
Bachelor of Music Degree

Admission Requirements, Retention & Termination Standards

Admission as a Music Major or Minor Admission to all music majors and minors requires a successful performance audition and passage of a basic musicianship examination. If a student does not pass the basic musicianship examination, passage of the examination at a later date will fulfill the requirement. A student who has not been accepted into the Music Program may be denied access to music core courses. Further information concerning admission as a music major or minor (including audition dates, appropriate repertoire, and study guides for the basic musicianship examination) is available in the School of Music office, or online at www.mus.cmich.edu.

Admission to Music Candidacy

Prior to enrolling in classes above 200 level, a student must apply to the School of Music Office for admission to Music Candidacy. Admission to this program will allow a student access to music study at the 300 level and above. Requirements for admission include signed authorizations appropriate to a student’s curriculum, passage of a 300 level performance examination on the appropriate instrument, and completion of MUS 101, 102, 103, 104, 147, 148, 201, 202, 203, 204, 211, 212, 247, and 248 with a grade of “C” or better. Tentative admission will be granted if it is clear from the application that it is possible to remove all deficiencies within one academic year. Such tentative admission will be reviewed at the end of that period and access to courses 300 level and above will be revoked if requirements remain unfulfilled. It is the student’s responsibility to document the fulfillment of all admission requirements. Applications for admission to Music Candidacy are available in the School of Music office.

Additional Requirements for Music Majors and Minors

Music major and minors on all degree programs must receive a grade of “C” or better in each required MUS course. Credit/No Credit grades are not acceptable on music majors and minors.

Core Courses (32 hours)
• 7 semesters of MUS 097.
MUS 097 - Recital Attendance 0
MUS 101 - Theory I 3(3-0)
MUS 102 - Theory II 3(3-0)
MUS 103 - Sight Singing and Ear Training I 1(0-2)
MUS 104 - Sight Singing and Ear Training II 1(0-2)
MUS 109 - Introduction to Music Technology 1(1-1)
MUS 201 - Theory III 3(3-0)
MUS 202 - Theory IV 3(3-0)
MUS 203 - Sight Singing and Ear Training III 1(0-2)
MUS 204 - Sight Singing and Ear Training IV 1(0-2)
MUS 211 - Historical Survey of Music I 3(3-0)
MUS 212 - Historical Survey of Music II 3(3-0)
MUS 302 - Contrapuntal Techniques 3(3-0)
MUS 304 - Instrumentation and Scoring 3(2-2)
MUS 311 - Historical Survey of Music III 3(3-0)

Music: Theory/Composition Major

Admission Requirements, Retention & Termination Standards

See the information at the beginning of this section.

Courses (32 hours)
See Core Courses at the beginning of this section.

Required Courses I (10 hours)

Applied Courses
• Recital (0)
• 2 semesters of MUS 158 (2 hours)
• 4 semesters of MUS 358 (8 hours)
MUS 158 - Composition 1-4(Spec)
MUS 358 - Composition 2-8(Spec)

Required Courses II (15 hours)

Theory Courses
MUS 209 - Music Technology II 2(2-0)
MUS 309 - Electroacoustic Music I 2(2-0)
MUS 503 - Advanced Counterpoint 2(2-0)
MUS 504 - Modern Compositional Styles/Techniques 2(2-0)
MUS 505 - Seminar Contemporary Music Analysis 2(2-0)
MUS 506 - Advanced Scoring 2(2-0)
MUS 520 - Jazz Arranging 3(3-0)

Required Courses III (6 hours)

Supportive Courses in Music
• MUS 147, 148, 247, 248 and/or MUS 152 (6 hours). Specific courses determined by placement exam.
MUS 147 - Piano Class I 1(0-2)
MUS 148 - Piano Class II 1(0-2)
MUS 152 - Piano 1-12(Spec)
MUS 247 - Piano Class III 1(0-2)
MUS 248 - Piano Class IV 1(0-2)
MUS 249 - Functional Piano 1(0-2)

Required Courses IV (14 hours)

Supportive Course in Music
• Instrumental or Vocal Applied Study (4 hours)
• 8 semesters of ensemble (8 hours)
MUS 280 - Introduction to Conducting 2(0-4)

Other Requirements I (3 hours)

Supportive Courses outside Music
Select one of the following:
PHL 480 - Philosophy of the Arts 3(3-0)

Other Requirements II (3 hours)

Supportive Courses outside Music
Select one of the following:
PHS 101 - Survey of Physical Science 3(3-0)
PHY 100 - Conceptual Physics 3(3-0)

Music Electives (6 hours)
Selected in consultation with an advisor.
Total: 89 semester hours
Music: Orchestral Instruments Major

**Admission Requirements, Retention & Termination Standards**

See the information at the beginning of this section.

**Core Courses (32 hours):**

See Core Courses at the beginning of this section.

**Required Courses I (36 hours)**

Major Area Performance Courses

- 4 semesters of MUS 153 - 179 (8 hours)
- 4 semesters of MUS 353 - 379 (16 hours)
- Junior Recital (0 hours), Senior Recital (0 hours)
- 8 semesters of MUS 185 or MUS 186 (8 hours)
- 4 semesters of MUS 281 or MUS 285 (4 hours)

**Note:** All applied study used to fulfill these requirements must be on the same instrument.

MUS 153 - Violin 1-12(Spec)
MUS 155 - Violoncello 1-12(Spec)
MUS 157 - String Bass 1-12(Spec)
MUS 158 - Composition 1-4(Spec)
MUS 159 - Guitar 1-8(Spec)
MUS 161 - Flute 1-12(Spec)
MUS 163 - Oboe 1-12(Spec)
MUS 165 - Clarinet 1-12(Spec)
MUS 167 - Bassoon 1-12(Spec)
MUS 169 - Saxophone 1-12(Spec)
MUS 171 - Trumpet 1-12(Spec)
MUS 173 - Horn 1-12(Spec)
MUS 175 - Trombone 1-12(Spec)
MUS 177 - Euphonium 1-12(Spec)
MUS 178 - Tuba 1-12(Spec)
MUS 179 - Percussion 1-12(Spec)
MUS 180 - Orchestra 1-8(Spec)
MUS 181 - Harpsichord 1-8(Spec)
MUS 182 - Chamber Ensemble 1-8(Spec)
MUS 280 - Introduction to Conducting 2(0-4)
MUS 314 - History of Symphonic Literature 3(3-0)
MUS 335 - Instrumental Pedagogy 2(2-0)
MUS 505 - Seminar in Contemporary Music Analysis 2(2-0)

Music Electives (8 hours)

Selected in consultation with an advisor.

Total: 89 semester hours

Music: Organ Major

**Admission Requirements, Retention & Termination Standards**

See the information at the beginning of this section.

**Core Courses (32 hours):**

See Core Courses at the beginning of this section.

**Required Courses I (33 hours)**

Major Area Performance Courses

- 4 semesters of MUS 151 (8 hours)
- 2 semesters of MUS 150, MUS 152 or MUS 360 (2 hours)
- 4 semesters of MUS 351 (16 hours)
- Junior Recital (0 hours), Senior Recital (0 hours)
- 7 semesters of MUS 180, MUS 181, MUS 182, MUS 183, MUS 185, MUS 186, MUS 281 OR MUS 282 (7 hours)

MUS 150 - Voice 1-12(Spec)
MUS 151 - Organ 1-12(Spec)
MUS 152 - Piano 1-12(Spec)
MUS 180 - Festival Chorus 1-8(Spec)
MUS 181 - Men’s Chorus 1-8(Spec)
MUS 182 - Women’s Chorus 1-8(Spec)
MUS 183 - Concert Choir 1-8(Spec)
MUS 185 - Orchestra 1-8(Spec)
MUS 186 - Band 1-8(Spec)
MUS 281 - Chamber Ensemble 1-8(Spec)
MUS 282 - Chamber Singers 1-8(Spec)
MUS 351 - Organ 1-16(Spec)
MUS 360 - Harpsichord 1-8(Spec)

**Required Courses II (14 hours)**

Supportive Courses in Music

MUS 189 - Introduction to Accompanying 1(0-2)
MUS 236 - Piano Pedagogy I 2(2-0)
MUS 249 - Functional Piano 1(0-2)
MUS 280 - Introduction to Conducting 2(0-4)
MUS 316 - History and Literature of the Organ 2(2-0)
MUS 389 - Service Playing 2(2-0)
MUS 413 - History and Literature of Church Music 2(2-0)
MUS 540 - Organ Pedagogy Practicum 2(2-0)

Other Requirements (8 hours)

Supportive Courses outside Music

Select one of the following options:

**Option I (8 hours)**

- FRN 101 - Elementary French I 4(4-0)
- FRN 102 - Elementary French II 4(4-0)

**Option II (8 hours)**

- GER 101 - Elementary German I: Language and Culture 4(4-0)
- GER 102 - Elementary German II: Language and Culture 4(4-0)

Music Electives (2 hours)

Selected in consultation with an advisor.

Total: 89 semester hours
Music: Piano Major

**Admission Requirements, Retention & Termination Standards**
See the information at the beginning of this section.

**Core Courses (32 hours):**
See Core Courses at the beginning of this section.

**Required Courses I (33 hours)**
**Major Area Performance Courses**
- 4 semesters of MUS 152 (8 hours)
- 2 semesters of MUS 150 Voice, MUS 151 Organ OR MUS 360 Harpsichord (2 hours)
- 4 semesters of MUS 352 (16 hours)
- Junior Recital (0 hours), Senior Recital (0 hours)
- 7 semesters of MUS 180, MUS 181, MUS 182, MUS 183, MUS 185, MUS 186, MUS 281 OR MUS 282 (7 hours)

MUS 150 - Voice 1-12(Spec)
MUS 151 - Organ 1-12(Spec)
MUS 152 - Piano 1-12(Spec)
MUS 180 - Festival Chorus 1-8(Spec)
MUS 181 - Men’s Chorus 1-8(Spec)
MUS 182 - Women’s Chorus 1-8(Spec)
MUS 183 - Concert Choir 1-8(Spec)
MUS 185 - Orchestra 1-8(Spec)
MUS 186 - Band 1-8(Spec)
MUS 281 - Chamber Ensemble 1-8(Spec)
MUS 282 - Chamber Singers 1-8(Spec)
MUS 352 - Piano 1-16(Spec)
MUS 360 - Harpsichord 1-8(Spec)

**Required Courses II (12 hours)**
**Supportive Courses in Music**

MUS 189 - Introduction to Accompanying 1(0-2)
MUS 236 - Piano Pedagogy I 2(2-0)
MUS 237 - Piano Pedagogy II 2(2-0)
MUS 249 - Functional Piano 1(0-2)
MUS 280 - Introduction to Conducting 2(0-4)
MUS 514 - Survey of Keyboard Literature 2(2-0)
MUS 516 - Survey of Keyboard Literature II 2(2-0)

**Required Courses III (1-2 hours)**
**Supportive Courses in Music**

Select one of the following:
MUS 241 - Diction for Singers 2(1-2)
MUS 339 - Piano Pedagogy Practicum 1(1-1)

**Other Requirements (8 hours)**
**Supportive Courses outside Music**

Select one of the following options:

**Option I (8 hours)**
FRN 101 - Elementary French I 4(4-0)
FRN 102 - Elementary French II 4(4-0)

**Option II (8 hours)**
GER 101 - Elementary German I: Language and Culture 4(4-0)
GER 102 - Elementary German II: Language and Culture 4(4-0)

**Music Electives (2-3 hours)**
Selected in consultation with an advisor.

Total: 89 semester hours

Music: Voice Major

**Admission Requirements, Retention & Termination Standards**
See the information at the beginning of this section.

**Core Courses (32 hours):**
See Core Courses at the beginning of this section.

**Required Courses I (28 hours)**
**Major Area Performance Courses**
- 2 semesters of MUS 150 (4 hours)
- 2 semesters of MUS 250 (4 hours)
- 2 semesters of MUS 350 (4 hours)
- 2 semesters of MUS 450 (8 hours)
- Junior Recital (0 hours)
- Senior Recital (0 hours)
- 6 semesters of MUS 182, 183, or 282 (6 hours)
- 2 semesters of MUS 284 (2 hours)

MUS 150 - Voice 1-12(Spec)
MUS 182 - Women’s Chorus 1-8(Spec)
MUS 183 - Concert Choir 1-8(Spec)
MUS 250 - Voice 1-12(Spec)
MUS 282 - Chamber Singers 1-8(Spec)
MUS 284 - Techniques for the Singing Actor 1-6(Spec)
MUS 350 - Voice 1-16(Spec)
MUS 450 - Voice 1-8(Spec)

**Required Courses II (12 hours)**
**Supportive Courses in Music**

- 4 hours of MUS 147, 148, 247, 248, 249; and/or MUS 152; specific courses determined by a placement exam.

MUS 147 - Piano Class I 1(0-2)
MUS 148 - Piano Class II 1(0-2)
MUS 152 - Piano 1-12(Spec)
MUS 247 - Piano Class III 1(0-2)
MUS 248 - Piano Class IV 1(0-2)
MUS 249 - Functional Piano 1(0-2)

**Required Courses III (8 hours)**
**Supportive Courses in Music**

MUS 241 - Diction for Singers 2(1-2)
MUS 280 - Introduction to Conducting 2(0-4)
MUS 318 - Song Repertoire 2(1-2)
MUS 338 - Voice Pedagogy 2(1-2)

**Other Requirements (16 hours)**
**Supportive Music Courses outside Music**

FRN 101 - Elementary French I 4(4-0)
FRN 102 - Elementary French II 4(4-0)
GER 101 - Elementary German I: Language and Culture 4(4-0)
GER 102 - Elementary German II: Language and Culture 4(4-0)

**Music Elective (1 hour)**
Selected in consultation with an advisor.

Total: 89 semester hours
Bachelor of Arts or Bachelor of Science Degree

The music major on these degrees is designed for students preparing for careers as musicologists, composers, music librarians, performers, or church musicians who prefer to study music within a broad-based liberal arts degree program or for those students who wish to combine a music major with a second major in another discipline.

Admission Requirements, Retention & Termination Standards

Admission as a Music Major or Minor Admission to all music majors and minors requires a successful performance audition and passage of a basic musicianship examination. If a student does not pass the basic musicianship examination, passage of the examination at a later date will fulfill the requirement. A student who has not been accepted into the Music Program may be denied access to music core courses. Further information concerning admission as a music major or minor (including audition dates, appropriate repertoire, and study guides for the basic musicianship examination) is available in the School of Music office, or online at www.mus.cmich.edu/

Admission to Music Candidacy

Prior to enrolling in classes above 200 level, a student must apply to the School of Music Office for admission to Music Candidacy. Admission to this program will allow a student access to music study at the 300 level and above. Requirements for admission include signed authorizations appropriate to a student’s curriculum, passage of a 300 level performance examination on the appropriate instrument, and completion of MUS 101, 102, 103, 104, 147, 148, 201, 202, 203, 204, 211, 212, 247, and 248 with a grade of "C" or better. Tentative admission will be granted if it is clear from the application that it is possible to remove all deficiencies within one academic year. Such tentative admission will be reviewed at the end of that period and access to courses 300 level and above will be revoked if requirements remain unfulfilled. It is the student's responsibility to document the fulfillment of all admission requirements. Applications for admission to Music Candidacy are available in the School of Music office.

Additional Requirements for Music Majors and Minors

Music major and minors on all degree programs must receive a grade of "C" or better in each required MUS course. Credit/No Credit grades are not acceptable on music majors and minors.

Music Major

Admission Requirements, Retention & Termination Standards

See the information above.

Required Courses I (26 hours)

Music Theory, History, and Literature

- 4 semesters of MUS 097.
- MUS 097 - Recital Attendance 0
- MUS 101 - Theory I 3(3-0)
- MUS 102 - Theory II 3(3-0)
- MUS 103 - Sight Singing and Ear Training I 1(0-2)
- MUS 104 - Sight Singing and Ear Training II 1(0-2)
- MUS 109 - Introduction to Music Technology 1(1-1)
- MUS 201 - Theory III 3(3-0)
- MUS 202 - Theory IV 3(3-0)
- MUS 203 - Sight Singing and Ear Training III 1(0-2)
- MUS 204 - Sight Singing and Ear Training IV 1(0-2)
- MUS 211 - Historical Survey of Music I 3(3-0)
- MUS 212 - Historical Survey of Music II 3(3-0)
- MUS 311 - Historical Survey of Music III 3(3-0)

Required Courses II (4 hours)

Performance - Applied Study

- 4-5 semesters of MUS 182, MUS 183, MUS 185, or MUS 186 (4-5);
- 1-2 semesters of MUS 281, MUS 282, MUS 284, MUS 285, or MUS 286 (1-2)

Required Courses III (6 hours)

Performance - Ensemble

- MUS 182 - Women’s Chorus 1-8(Spec)
- MUS 183 - Concert Choir 1-8(Spec)
- MUS 185 - Orchestra 1-8(Spec)
- MUS 186 - Band 1-8(Spec)
- MUS 281 - Chamber Ensemble 1-8(Spec)
- MUS 282 - Chamber Singers 1-8(Spec)
- MUS 284 - Techniques for the Singing Actor 1-6(Spec)
- MUS 285 - Percussion Ensemble 1-8(Spec)
- MUS 286 - Jazz Ensemble 1-8(Spec)

Other Requirements (1-3 hours)

Supportive Courses outside of Music

Select a course from one of the following designators: ART, DAN, TAI.

Music Electives (1-3 hours)

Courses selected must be at 300 level or above.

Total semester hours: 40

Music Minor

Required Courses I (8 hours)

MUS 101 - Theory I 3(3-0)
MUS 102 - Theory II 3(3-0)
MUS 103 - Sight Singing and Ear Training I 1(0-2)
MUS 104 - Sight Singing and Ear Training II 1(0-2)

Required Courses II (3 hours)

Select one of the following:

MUS 110 - Music in Society 3(3-0)
MUS 114 - Listening Experience 3(3-0)

Required Courses III (4 hours)

- 2 semesters of Applied Study (2 hours)
- 2 semesters of Ensemble (2 hours)

Electives (5 hours)

Selected in consultation with an advisor.

Total: 20 semester hours

Bachelor of Fine Arts Degree

Music Theater Major

B.F.A. Degree

This is an interdisciplinary major. Please check the index for the page number.
**Introduction**

The primary mission of the College of Education and Human Services (EHS) is to provide the highest quality undergraduate and graduate educational experiences that develop effective professionals, critical thinkers, and lifelong learners. Students will expand their understanding of themselves and their roles in a diverse and global society. Through a broad range of technological and human services, the College and its graduates, in collaboration with the constituencies they serve, will be proactive forces for improving the quality of life in the twenty-first century.

We believe that involvement in the field, prior to graduation, is a critical component of all of our programs. While many remain in their original professions—teaching, leisure services, or an area of human environmental studies—other graduates eventually go to graduate school for advanced study into areas such as counseling, special education, or educational administration. Whether you are just exploring these fields or want to sign a major, know that the faculty and staff are deeply committed to caring for and serving you.

**Human Service-Related Programs**

An array of Human Service programs is offered through EHS. If you see yourself interacting with people in a professional capacity, or think you would like a career in a business or a human service agency setting working with clients face-to-face to help them in meeting their needs, you should explore human service-related programs in EHS.

All professional degree programs include carefully designed, direct experiences in real-life settings. These required experiences, which differ from program to program, have one common element—close contact with people with whom you will work as a professional.

Much of the hands-on experience in EHS takes place in the many clinics and centers which provide service to the university and the community at large. These clinics include: the Human Growth and Development Learning Laboratory, the Center for Community Counseling and Development and the Reading Clinic. College centers are: Center for Leisure Services, Opportunities for Talent Development, Kromer Instructional Material Center (see below), Science/Mathematics/Technology Center, Center for Excellence in Education, Great Explorations in Math and Science Center, and The Center for Charter Schools.

**Interdisciplinary Programs**

The purpose of the Language Arts program (major or minor) is to prepare prospective teachers to function effectively in this integral component of the elementary classroom. The goal of the program is to have the students possess the knowledge, skills, and understanding of the role of language arts in elementary education. The phone number is 989-774-3975 and the office location is EHS 421.

Much of the hands-on experience in EHS takes place in the many clinics and centers which provide service to the university and the community at large. These clinics include: the Human Growth and Development Learning Laboratory, the Center for Community Counseling and Development and the Reading Clinic. College centers are: Center for Leisure Services, Opportunities for Talent Development, Kromer Instructional Material Center (see below), Science/Mathematics/Technology Center, Center for Excellence in Education, Great Explorations in Math and Science Center, and The Center for Charter Schools.

**Kromer Instructional Materials Center**

The Kromer Instructional Materials Center, located on the first floor of the new EHS building, serves Education and Human Services and the university and local community. The KIMC has PreK-12 manipulative materials, kits, games, puppets, charts, maps, models, and other resources that can be used in a variety of educational settings. The KIMC also has a vast collection of Ellison dies, die cut machines, spiral binding materials, a laminator and other supplies to build or protect hands-on manipulative resources. Lamination is available by appointment. We welcome patrons from the university and surrounding Mt. Pleasant community to come in and work on their projects in our facility.

**Teaching-Related Programs**

The process of becoming a certified teacher in Michigan starts when you enter CMU and declare your intent to focus on that area. Advising is a critical component for all education students; some courses may be counted in different types of ways to meet various curricular requirements. Meeting with your advisor and mentor regularly is important. The Department of Teacher Education and Professional Development prepares students for certification in elementary and secondary education through its professional education courses. Other departmental majors and minors are located within 25 academic departments across the university.

CMU is accredited by the Teacher Education Accreditation Council (TEAC) and approved by the Michigan Department of Education. CMU is expected to meet high standards for all of our professional education programs.

**Interdisciplinary Programs**

The purpose of the Language Arts program (major or minor) is to prepare prospective teachers to function effectively in this integral component of the elementary classroom. The goal of the program is to have the students possess the knowledge, skills, and understanding of the role of language arts in elementary education. The phone number is 989-774-3975 and the office location is EHS 421.

The Leadership Minor is a 24 credit hour interdisciplinary program. The major objective of the program is to educate students for and about leadership positions in their community and profession. The minor complements a wide variety of academic programs. Contact the Department of Recreation, Parks and Leisure Services Administration at 989-774-1939 or see the advisor in Finch 213.

**Graduate Programs**

Graduate programs are offered in all five departments within EHS, as well as an Interdisciplinary Masters of Arts in Education. The Department of Counseling and Special Education offers master’s level programs in Professional Counseling, School Counseling and Special Education. The Educational Leadership Department offers doctorate degrees in Education Leadership, a specialist degree in General Education Administration, and master’s degrees in Higher Education Administration, School Principalship, (Site-Based Leadership and Charter School Emphases), and Teacher Leadership, and a Graduate Certificate in College Teaching. Human Environmental Studies offers graduate programs in Apparel Product Development & Merchandising Technology, and Nutrition and Dietetics, as well as graduate certificates in Nutrition and Dietetics and Gerontology. Teacher Education and Professional Development offers graduate degrees in the following areas: Early Childhood Education, Reading and Literacy K-12, and Educational Technology. The department also offers a Graduate Certificate in Educational Technology.
Counseling and Special Education (CED, SPE)

For information, please contact the chairperson, 989-774-3205, EHS 321;
https://www.cmich.edu/colleges/ehs/dept/cse/

Why Study Counseling and Special Education?
The study of Counseling and Special Education will help you to develop a knowledge and understanding of individual differences, life span issues and working with others. The programs offered emphasize working with clients and students as individuals within a group setting and serving them throughout the life span. All programs provide experiential applications for students. If you are interested in a career in counseling or in working with persons with special needs or in improving your skills in these areas, you should discuss your plans with a member of the Counseling and Special Education faculty.

Counseling and Special Education at CMU
The Department of Counseling and Special Education offers undergraduate special education majors on the Bachelor of Science degree, grades K-12. A program is also offered for teachers holding general elementary or secondary certification to become approved in the area of emotional impairment or cognitive impairment.

Courses are offered by the counseling program to assist students in personal growth and development, and to prepare graduates for careers as counselors.

The department also offers programs leading to a Master of Arts degree which prepare graduates for positions requiring counseling skills or advanced specialization and/or additional teaching endorsements in the areas of emotional impairment, learning disabilities, autism, and cognitive impairment at the K-12 level.

See the Graduate Bulletin for a complete description of graduate programs.

The Faculty
Ellen Armbruster, Dawn Decker, Laura Frey, JoDell Heroux, Holly Hoffman, Andrea Jasper, Meaghan McCollow, Twinet Parmer, Suzanne Shellady, Jordan Shurr, Jennifer Wirz

Special Education Major
Teachers of Students with Cognitive Impairment
B.S. in Ed. degree, Provisional Elementary Certification or B.S. in Ed. degree, Secondary Certification with Emotional or Cognitive Impairment Endorsement

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
Teacher Certification - All programs are subject to changes in state certification rules and students should contact an advisor before pre-registration each semester. A student who plans to major in special education should contact the EHS Center for Student Services, EHS 421, as soon as possible to initiate the Admission to Teacher Education process. Students must fulfill all requirements listed for Admission to Teacher Education programs as specified in the Teacher Certification section of this Bulletin.

All students preparing to become approved to teach in special education must also meet requirements for certification in general elementary or secondary education. The endorsements in cognitive impairment and emotional impairment, both K-12, require either an elementary or secondary education general education certificate. Students completing a special education endorsement will be eligible to teach special education students in grades kindergarten through twelve (or age 26).

Before a major is signed the student must have earned a grade of C or higher in SPE 126 (3) Introduction to Special Education.

Effective Fall semester, 1990, students will be required to complete two student teaching assignments, one in Special Education during one semester and one in General Education during another semester. Application for student teaching must be made through the office of the Department of Teacher Education and Professional Development by the established deadline in advance of each placement, with approval recommended by Special Education prior to placement. Fall student teaching applications are due the preceding spring semester, and spring student teaching applications are due the preceding fall semester, by the established deadline.

A minimum 2.7 GPA (B-) must be earned in the Special Education major.

For Special Education major, Teachers of students with Cognitive Impairment, the following courses require a C+ or better: SPE 322, 323, 324, 519, 521, and 522.

Core Courses (24 hours)
SPE 126 - Introduction to Special Education 3(3-0)
SPE 322 - Curriculum and Instruction for Students with Special Needs 6(6-0)
SPE 323 - Classroom Management for Students with Special Needs 3(3-0)
SPE 324 - Special Education Classroom-Based Assessment 6(2-8)
SPE 550 - Teaching Culturally Diverse Students 3(3-0)
SPE 570 - Career Development and Transition 3(3-0)

Note: SPE 322, 323, and 324 require a C+ or better.

Required Courses (15 hours)
Professional Sequence
SPE 458 - Special Education Student Teaching: Cognitive Impairment 6(Spec)
SPE 519 - Students with Cognitive Impairment 3(3-0)
SPE 521 - Teaching Students with Cognitive Impairment 3(3-0)
SPE 522 - Field Experience–Cognitive Impairment 3-6(Spec)

Note: SPE 519, 521, and 522 require a C+ or better.
Note: SPE 519, 521, and 522 require a C+ or better.

Total: 39 semester hours
**Special Education Major**

**Teachers of Students with Emotional Impairment**

B.S. in Ed. degree, Provisional Elementary Certification or B.S. in Ed. Degree, Secondary Certification with Emotional or Cognitive Impairment Endorsement

**Admission Requirements, Retention & Termination Standards**

Teacher Certification - All programs are subject to changes in state certification rules and students should contact an advisor before pre-registration each semester. A student who plans to major in special education should contact the EHS Center for Student Services, EHS 421, as soon as possible to initiate the Admission to Teacher Education process. Students must fulfill all requirements listed for Admission to Teacher Education programs as specified in the Teacher Certification section of this Bulletin.

All students preparing to become approved to teach in special education must also meet requirements for certification in general elementary or secondary education. The endorsements in cognitive impairment and emotional impairment, both K-12, require either an elementary or secondary education general education certificate. Students completing a special education endorsement will be eligible to teach special education students in grades kindergarten through twelve (or age 26).

Before a major is signed the student must have earned a grade of C or higher in SPE 126 (3) Introduction to Special Education.

Effective Fall semester, 1990, students will be required to complete two student teaching assignments, one in Special Education during one semester and one in General Education during another semester. Application for student teaching must be made through the office of the Department of Teacher Education and Professional Development by the established deadline in advance of each placement, with approval recommended by Special Education prior to placement. Fall student teaching applications are due the preceding spring semester, and spring student teaching applications are due the preceding fall semester, by the established deadline.

A minimum 2.7 GPA (B-) must be earned in all teaching majors.

For Special Education Major, Teachers of Students with Emotional Impairment, the following courses require a C+ or better: SPE 322, 323, 324, 578, 579, and 581.

**Core Courses (24 hours)**

SPE 126 - Introduction to Special Education 3(3-0)
SPE 322 - Curriculum and Instruction for Students with Special Needs 3(3-0)
SPE 323 - Classroom Management for Students with Special Needs 3(3-0)
SPE 324 - Special Education Classroom-Based Assessment 6(2-8)
SPE 550 - Teaching Culturally Diverse Students 3(3-0)
SPE 570 - Career Development and Transition 3(3-0)

**Note:** SPE 322, 323, and 324 require a C+ or better.

**Required Courses (15 hours)**

**Professional Sequence**

SPE 456 - Special Education Student Teaching: Emotional Impairment 6(Spec)
SPE 578 - Students with Emotional Impairment 3(3-0)
SPE 579 - Teaching Students with Emotional Impairment 3(3-0)
SPE 581 - Field Experience-Emotional Impairment 3-6(Spec)

**Note:** SPE 578, 579, and 581 require a C+ or better.

**Total: 39 semester hours**

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**Educational Leadership (EDL)**

For information, please contact the chairperson, 989-774-3204, EHS 334; https://www.cmich.edu/colleges/cgs/landing_pages/Pages/Educational-Leadership.aspx

**Why Study Educational Leadership?**

Leadership skills are vital to all academic and community institutions. Because the Department of Educational Leadership provides leadership preparation programs, our students are virtually all at or near graduate level in studies. If you are interested in a career as an elementary, secondary, or higher education administrator, leader of a voluntary organization or community agency, or simply want to increase your administrative skills, you will definitely want to discuss your plans with a member of the department's faculty.

**Educational Leadership at CMU**

The department offers a minor in Leadership in Student Affairs. Master's degrees in Higher Education Administration (Accelerated master's degree available for Undergraduate students with a minor in Leadership in Student Affairs), School Principalship, Teacher Leadership, a Specialist in Education and a Doctor of Education in Educational Leadership, as well as a Graduate Certificate in College Teaching. The Specialist in Education degree provides students an opportunity to enhance their leadership skills in a field-based academic program. The Doctor of Education degree in educational leadership assists experienced leaders to achieve the level of practitioner scholar and to provide strong organizational leadership.

See the Graduate Bulletin for a complete description of graduate programs.

**The Faculty**

Frimpomaa Ampaw, Eric Buschlen, Mark Deschaine, Anne Hornak, Benjamin Jankens, Matthew Johnson, Daniel Kaczynski, Barbara Klocko, Sarah Marshall, Regina Umpstead, David E. Whale
Leadership in Student Affairs Minor
B.A., B.A.A., B.S. degrees
The Educational Leadership minor is a 21-credit hour, career-focused program designed for students looking to develop skills in the professional area of student affairs or many other educational settings. The goal of this program is to foster personal development, self-awareness, ethical and inclusive decision making, and community building through an intentional integration of theoretical frameworks and practical applications to prepare students for their careers. The program is designed to serve as a bridge to the CMU Master’s in Higher Education program.

Admission Requirements, Retention & Termination Standards
In order to be considered for admission to the program, an applicant must submit a letter of intent, meet with an advisor, and sign a (minor) Degree Authorization Form.

Program Requirements
Successful progress through the program is based upon obtaining satisfactory grades consistent with CMU policy for undergraduate programs. Completion of the program also entails the submission of a cumulative final portfolio outlining the student’s experience in the EDL courses. The final portfolio will be submitted in EDL 598. The proposed minor consist of 21 credits with 12 credits at the 500-level.

Required Courses (21 hours)
EDL 360 - Leading Diverse Teams 3(3-0)
EDL 452 - Immersive Leadership in Educational Settings 3(3-0)
EDL 476 - Outcome-Based Learning 3(3-0)
EDL 512 - Assessment in Higher Education 3(3-0)
EDL 516 - Leadership for Social Justice 3(3-0)
EDL 557 - Helping Skills in Student Affairs 3(3-0)
EDL 598 - College Student Development 3(3-0)
LDR 200 - Introduction to Leadership 3(2-2)

Note: You may only choose one of EDL 360 OR 452.

Total: 21 semester hours

Accelerated Master of Arts in Higher Education Administration
Advanced undergraduate students in the Leadership in Student Affairs minor who would like to pursue advanced studies in higher education administration may consider an option whereby they can complete their bachelor’s degree and a Master of Arts in Higher Education Administration. The program requirements on the Accelerated Master’s Degree Program are identical to those of the Master of Arts in Higher Education Administration, but allow the student to apply 12 credit hours of graduate coursework toward both their bachelor’s degree and their Master of Arts in Higher Education Administration.

Admission Criteria for Accelerated Program
To be eligible for the Accelerated Master of Arts in Higher Education Administration, the student must have:
1. Overall undergraduate grade point average (GPA) of at least 3.0;
2. Completed a minimum of 86 credit hours;
3. Completion of all University Program and Competency requirements;
4. Signed Leadership in Student Affairs minor;
5. Acceptance of applicant’s admission portfolio by the Department of Educational Leadership.

Application Process:
1. Undergraduate students seeking admission to the Accelerated Master’s Degree Program must submit the application for admission to the College of Graduate Studies no later than March 15 of the year prior to graduation from their undergraduate program.
2. Applicants must provide evidence of promise as an administrator by preparing and submitting an admission portfolio directly to the Department of Educational Leadership. The following items must be included in the contents of the portfolio:
   a. current resume identifying training, experience, and professional accomplishments;
   b. minimum of two letters of reference (dated and submitted on organizational letterhead) from individuals who can appropriately address the applicant’s potential as an administrator and attest to the applicant’s potential for success in the program;
   c. two-page statement incorporating how the applicant’s program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
      i. Vision for student success and achievement;
      ii. Involvement of all stakeholders;
      iii. Leadership for a diverse and complex society; and
      iv. Demonstration of ethical behavior;
   d. identification of at least two significant activities that indicate experiences, abilities, and potential for educational leadership. For each activity identified, applicants should clearly describe the activity and the role and responsibilities they assumed, include the number of people involved or impacted by the activity, describe the budget (if applicable) or resources used, and summarize with a self-reflective statement addressing the insight and learning that occurred.

Retention Standards
The student is responsible for fulfilling all of the requirements for the undergraduate degree and, therefore, additional credits may be taken to complete the Bachelor’s degree requirements during the final year. The student must earn a minimum of a 3.0 GPA or higher in the four courses that count towards the master’s degree. If a student does not earn a 3.0 GPA or higher in each course that is intended to be applied to the graduate degree, they must reapply for admission to the MA in HE program.

Courses that will count towards the Minor as well as the Master’s degree:
EDL 512 Assessment in Higher Education 3(3-0)
EDL 516 Social Justice Leadership 3(3-0)
EDL 557 Helping Skills 3(3-0)
EDL 598 College Student Development 3(3-0)
Human Environmental Studies

(AMD, FMD, FNS, GRN, IND, HDF)

For information, please contact the chairperson 989-774-3218, EHS 228;
https://www.cmich.edu/colleges/ehs/dept/hevs/

Why Study in Human Environmental Studies?

The Human Environmental Studies Department has a unique perspective providing an integration of knowledge and diverse areas of specialization. These areas include: human development and family studies, design and merchandising, and foods and nutrition. The areas focus on the interaction between humans and their interactions with the natural, constructed, and behavioral environments.

The programs within human environmental studies prepare students for a variety of careers in fashion merchandising and design, nutrition, dietetics, commercial and residential interior design, early childhood education, life management education, gerontology, and family services.

Human Environmental Studies at CMU


The department offers a Master of Science in Nutrition and Dietetics, a Master of Science in Apparel Product Development and Merchandising, and an online Graduate Certificate in Nutrition and Dietetics. For more information about these programs consult the College of Graduate Studies Bulletin and/or the Global Campus Bulletin.

Transfer students seeking a major must complete a minimum of 12 credit hours at CMU. Transfer students seeking a minor must complete a minimum of 9 credit hours at CMU.

The Faculty


Fashion Merchandising and Design

Fashion Merchandising and Design Major

B.A.; B.A.A.; B.S. degrees

The purpose of the major is to study aesthetic and functional design, marketing, and retailing of apparel and textiles. The major is planned to prepare students for a variety of professional careers in the apparel and textile industry.

Career possibilities are available in the design, production, and distribution of apparel and textile products. The major includes an apparel merchandising and design core of 36 hours, plus additional required courses and an elective in each of the concentrations of apparel design or apparel merchandising.

In addition to the required courses in the cores, students are required to choose a concentration.

Admission Requirements, Retention & Termination Standards

1. Student must have a minimum GPA of 2.0 to sign a major.
2. Student must have a minimum program GPA of 2.7 in order to graduate with this major.
3. Student must achieve a grade of C or better in all major courses in order to graduate with this major.
4. In order to enroll in a major course, student must have achieved a C or better in the required major prerequisite course(s).
5. Upon receipt of the third C- or lower in a major course, student will not be allowed to complete the major.

Core Courses (36 hours)

FMD 141 - Apparel Design Analysis 3(3-0)
FMD 155 - Introduction to Textiles 3(2-2)
FMD 246 - Computer-Aided Design for Apparel 3(2-2)
FMD 252 - Dress and Culture 3(3-0)
FMD 256 - Introduction to Fashion Industry 3(3-0)
FMD 330 - Preprofessional Seminar in Apparel Merchandising and Design 2(2-0)
FMD 346 - Advanced CAD for Apparel 3(2-2)
FMD 355 - Textile Analysis 3(2-2)
FMD 401 - Internship in Apparel Merchandising and Design 4(Spec)
FMD 457 - Portfolio Techniques 3(3-0)
FMD 459 - Global Apparel Supply Chain Management 3(3-0)
FMD 550 - Apparel Product Development 3(2-2)

Concentrations

Select one of the following concentrations:

Fashion Design Concentration

Supportive Course in Fashion Design (0-3 hours)

Determined by placement exam

Students with no previous sewing experience should begin with FMD 044.

Students with previous sewing experience must take the placement exam before registering for FMD 140. Placement into 200-level or above design classes requires passage of placement exam and submission of garment(s) for faculty evaluation. You may take the sewing construction placement exam online. Visit www.ehs.cmich.edu/amd and click on “placement test” button. Students do not earn credit for passage of the placement exam.

FMD 044 - Basic Skills in Apparel Construction 3(2-2)

(continued)
**College of Education and Human Services**

**Fashion Merchandising Concentration**

**Required Courses (13 hours)**
- FMD 332 - Fashion Buying 3(2-2)
- FMD 356 - Visual Merchandising 3(1-3)
- FMD 358 - Multichannel Fashion Merchandising 3(3-0)
- FMD 410 - Fashion Advertising and Promotion 3(3-0)
- CPS 106 - Spreadsheet Concepts 1(1-0)

**Electives (3 hours)**
- Select one of the following:
  - ACC 201 - Concepts of Financial Accounting 3(3-0)
  - BLR 325 - Women and the Law 3(3-0)
  - MGT 320 - Human Resource Management 3(3-0)
  - MGT 357 - Women in Management 3(3-0)
  - MKT 340 - Personal Selling 3(3-0)
- Any 3 credit FMD elective selected in consultation with an advisor.

Total: 54 semester hours

**Fashion Merchandising and Design Minor**

**Required Courses I (15 hours)**
- FMD 141 - Apparel Design Analysis 3(3-0)
- FMD 155 - Introduction to Textiles 3(2-2)
- FMD 246 - Computer-Aided Design for Apparel 3(2-2)
- FMD 252 - Dress and Culture 3(3-0)
- FMD 256 - Introduction to Fashion Industry 3(3-0)

**Required Courses II**
- Select one of the following tracks:
  - **Merchandising Track (9 hours)**
    - Select FMD 332, 356, and ONE of FMD 358 OR 410, for 9 hours:
    - FMD 332 - Fashion Buying 3(2-2)
    - FMD 356 - Visual Merchandising 3(1-3)
    - FMD 358 - Multichannel Fashion Merchandising 3(3-0)
    - FMD 410 - Fashion Advertising and Promotion 3(3-0)
  - **CAD Track (9 hours)**
    - FMD 346 - Advanced CAD for Apparel 3(2-2)
    - FMD 410 - Fashion Advertising and Promotion 3(3-0)
    - FMD 546 - Experimental CAD for Apparel 3-9(Spec)
  - **Design Track (9 hours)**
    - Students with no previous sewing experience should begin with FMD 044. Students with previous sewing experience must take the placement exam before registering for FMD 140. Placement into 200-level or above design classes requires passage of placement exam and submission of garment(s) for faculty evaluation. You may take the sewing construction placement exam online. 
    - Visit www.ehs.cmich.edu/amd and click on “placement test” button. Students do not earn credit for passage of the placement exam.

**Supportive Course in Apparel Design (0-3 hours)**
- Determined by placement exam.
- FMD 044 - Basic Skills in Apparel Construction 3(2-2)

**Required Courses (9 hours)**
- FMD 140 - Introduction to Clothing Construction & Design 3(2-2)
- FMD 240 - Advanced Apparel Construction 3(2-2)
- FMD 354 - Apparel Design Methods 3(2-2)

Total: 24 semester hours

**Foods and Nutrition**

**Dietetics Major**

**B.A.; B.S. degrees**

Completion of this undergraduate program satisfies the academic requirements of the Academy of Nutrition and Dietetics and the Dietetics major has been approved by the Accreditation Council for Education in Nutrition and Dietetics (ACEND). This enables a student to apply for a Dietetic Internship following graduation. Completion of these requirements and passing of the Registration Examination for Dietitians meet the requirements for the Registered Dietitian (R.D.) credential.

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

Students must have a minimum of 3.0 overall GPA in order to sign the dietetics major and enter the Pre-professional Phase. Forty students per year will be selected to move forward to the Professional Phase each fall semester. Students must achieve an overall minimum GPA of 3.0 and a DPD minimum GPA of 3.2 in order to be considered for the Professional Phase. Both GPAs must include courses completed at other institutions as well as those completed at CMU.

**Selection criteria include:**
1. Application
2. Overall GPA
3. DPD GPA
4. To graduate with dietetics as a major and to receive a verification statement from the dietetics program, students are not allowed to take any required dietetic courses as credit/no credit.
5. Professional recommendation
6. Work, volunteer, and extra curricular experience
7. Autobiographical statement

**Professional Phase Requirements:**
1. Adherence to the ADA Professional Code of Ethics
2. Maintenance of a 3.0 GPA overall and in DPD coursework

**Dietetics Core (40 hours)**
- FNS 160 - Introduction to Foods 3(2-2)
- FNS 271 - Food and Culture in the United States 3(3-0)
- FNS 361 - Experimental Foods 3(2-2)
- FNS 364 - Foodservice Operations 3(3-0)
- FNS 367 - Institutional Food Production Laboratory 1(0-2)
- FNS 370 - Nutrition 3(3-0)
- FNS 374 - Nutrition in the Life Cycle 4(4-0)
- FNS 469 - Foodservice Systems Administration 3(3-0)
- FNS 471 - Medical Nutrition Therapy I 3(3-0)
- FNS 472 - Medical Nutrition Therapy II 3(3-0)
- FNS 473 - Advanced Nutrition 4(4-0)
- FNS 570 - Nutritional Education 4(4-0)
- FNS 573 - Field Work: Community Nutrition 3(Spec)

**Other Requirements I (5-8 hours)**
- CHM 120 - Survey of Chemistry 4(0-2)
- CHM 127 - Introductory Chemistry Laboratory 1(0-2)
- CHM 131 - General Chemistry I 4(3-3)
- CHM 132 - General Chemistry II 4(3-3)

**Note:** You must take both CHM 120 and 127 OR CHM 131 and 132.

**Other Requirements II (10 hours)**
- BIO 208 - Microbiology 3(2-3)
- CHM 342 - Survey of Organic Chemistry 4(3-3)
- CHM 421 - Survey of Biochemistry 3(3-0)
Notes:
- A student opting to take CHM 345 and CHM 346 instead of CHM 342 must have the equivalent of CHM 132 as a prerequisite.
- A student with CHM 345 and CHM 346 may elect CHM 521 and CHM 522, instead of CHM 421.

Other Requirements III (4-8 hours)
Select one of the following options:
**Option 1 (4 hours)**
- BIO 392 - Mammalian Physiology 4(3-3)

**Option 2 (8 hours)**
- HSC 214 - Human Anatomy 4(3-3)
- HSC 215 - Human Physiology 4(3-2)

Other Requirements IV (3 hours)
Select one of the following:
- HSC 544 - Biostatistics 3(2-1)
- STA 282QR - Introduction to Statistics 3(3-0)

Total: 62-69 semester hours

Nutrition Minor
**B.A.; B.A.A.; B.F.A.; B.S. degrees**

**Required Course (3 hours)**
- FNS 370 - Nutrition 3(3-0)

**Electives (19-21 hours)**
Select from the following in consultation with an advisor:
- FNS 271 - Food and Culture in the United States 3(3-0)
- FNS 371 - Nutrition & Women's Health 3(3-0)
- FNS 373 - Contemporary Nutritional Issues 3(3-0)
- FNS 374 - Nutrition in the Life Cycle 4(4-0)
- FNS 375 - Nutrition and Performance 3(3-0)
- FNS 377 - Nutrition in Disabilities and Disease 3(3-0)
- FNS 378 - Maternal and Infant Nutrition 3(3-0)
- FNS 470 - Applied Nutrition 3(3-0)
- FNS 475 - Nutritional and Herbal Supplements 3(3-0)
- FNS 490 - Independent Study in Foods and Nutrition 1-6(Spec)
- FNS 575/GRN 575 - Geriatric Nutrition 3(3-0)
- FNS 577 - Advanced Topics in Nutrition: Eating Disorders 3(3-0)
- HSC 503 - Health Implications of Obesity 3(3-0)

Total: 22-24 semester hours

Human Development & Family Studies

**Child Development Major**
**B.A.; B.A.A.; B.S. degrees**

Child Development is an interdisciplinary field of study that examines the growth and development of children in their social contexts. The Child Development major is a flexible plan of study designed to prepare students for a wide variety of careers in human and service settings working with children and families. It may also be used as preparatory training for graduate studies in child developmental and professional programs in health- and counseling-related fields.

- Students who take this major cannot minor in Child Development or double major in Family Studies.
- Students may only double count 9 credits when combining the Child Development Major with the Family Studies Minor.

Admission Requirements, Retention & Termination Standards
1. Student must have completed or currently be enrolled in HDF 100 and must have a minimum GPA of 2.0 in order to sign a major.
2. Student must have a minimum program GPA of 2.5 in order to graduate with this major.
3. Student must receive a grade of C+ or better in HDF 419 in order to graduate with this major.

**Core Courses (9 hours)**
**Core HDFS**
- HDF 100 - Lifespan Development 3(3-0)
- HDF 211 - Marriage and Close Relationships 3(3-0)
- HDF 307 - Parent-Child Relations 3(3-0)

**Required Courses I (6 hours)**
**Development Content**
- HDF 308 - Theories of Child and Adolescent Development 3(3-0)
- HDF 510 - Child Development Seminar: Promoting Resilience 3(3-0)

**Required Courses II (7-8 hours)**
**Development Content**
Select two classes from the following:
- HDF 302 - Infant and Toddler Development 4(3-2)
- HDF 303 - Early Childhood Development 4(3-2)
- HDF 306 - Adolescent Development 3(3-0)

**Required Courses III (3 hours)**
**Diversity**
Select one of the following:
- HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)
- HDF 212 - Families in Cultural Perspective 3(3-0)
- HDF 320 - HDFS International Service Learning 3-6(Spec)
- SPE 585 - Early Childhood Special Education 3(3-0)

**Required Courses IV (9 hours)**
**Professional Skills and Methods**
- HDF 219 - Field Work 3(1-6)
- HDF 317 - Child Development Skills and Methods 3(3-0)
- HDF 419 - HDFS Internship 1-12(Spec)

**Required Courses V (3 hours)**
**Professional Skills and Methods**
Select one of the following:
- HDF 400 - Developmental Assessment of Children 3(3-0)
- HDF 414 - Human Development and Family Studies Research Methods 3(3-0)
- HDF 506 - Practicum in Parent Involvement 3(2-2)

Total: 37-38 semester hours
Early Childhood Development and Learning Minor
B.S. in Ed. degree, Provisional Elementary Certification, or Provisional Elementary Certification with Emotional or Cognitive Impairment Endorsement

Early Childhood Development and Learning is a field of study that examines the growth and development of children through age eight, within the context of teaching and working with children in educational and social settings. The courses on this minor meet the course work requirements for early childhood education and preschool teaching by the Michigan Department of Education and the training guidelines of the National Association for the Education of Young Children (NAEYC). This minor is especially appropriate for students who plan on working in inclusive early childhood settings such as Pre-K-3 elementary classrooms, child care centers, preschools, Head Start and Early Head Start programs.

Students who complete this minor may take the Michigan Early Childhood Examination. Successful completion of this examination results in the addition of the Early Childhood (ZS) Endorsement to the student’s teaching certificate. The ZS Endorsement is required for employment in Michigan Public Schools Pre-K through Kindergarten Programs. Completion of this minor requires that students also complete Option 1 – Major Option (Optional Minor), Minors Option 1 – Two minor Option (optional third minor) or a Special Education Major: Emotional or Cognitive Impairment Studies Minor.

Students who complete this minor may take the Michigan Early Childhood Examination. Successful completion of this examination results in the addition of the Early Childhood (ZS) Endorsement to the student’s teaching certificate. The ZS Endorsement is required for employment in Michigan Public Schools Pre-K through Kindergarten Programs. Completion of this minor requires that students also complete Option 1 – Major Option (Optional Minor), Minors Option 1 – Two minor Option (optional third minor) or a Special Education Major: Emotional or Cognitive Impairment Studies Minor.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Student must have completed or currently be enrolled in HDF 100 or EDU 280 or PSY 220 as a pre-requisite and must have a minimum overall GPA of 2.5 in order to sign a minor.
2. Student must have a minimum program GPA of 2.7 in order to graduate with all teaching minors.
3. HDF 402 is a departmental methods course and must be completed with a grade of C+ or better before student teaching.
4. In order to meet Michigan Department of Education Standards for the ZS Endorsement Capstone Experience, student teaching assignments must take place in at least two of the three areas (infant/toddler, preschool, and K-3) under the direction of a qualified cooperating teacher.

Prerequisite Course (3 hours)
Select one of the following:
EDU 280 - Education of Children 3(3-0)
HDF 100 - Lifespan Development 3(3-0)
PSY 220 - Developmental Psychology 3(3-0)

Note: These courses may be double counted on the degree.

Development & Family Courses (14 hours)
HDF 302 - Infant and Toddler Development 4(3-2)
HDF 303 - Early Childhood Development 4(3-2)
HDF 309 - Families, Schools, and Communities 3(3-0)
HDF 400 - Developmental Assessment of Children 3(3-0)

Learning Courses I (9 hours)
HDF 200 - Constructivism as a Tool for Learning 2(2-0)
HDF 402 - Guidance for Young Children 4(Spec)
SPE 585 - Early Childhood Special Education 3(3-0)

Learning Courses II (3 hours)
Select one of the following:
EDU 525 - Early Childhood Education 3(3-0)
HDF 403 - Best Practices in Early Childhood Settings 3(3-0)

Total: 29 semester hours

Child Development Minor
B.A., B.A.A., B.S. degrees

The minor is designed to complement a wide variety of majors selected by students interested in working with individuals in family and human service settings. Due to the variability in students’ goals for completing the minor, all students are encouraged to see an advisor prior to beginning the course work. The minor is authorized by a designated advisor in the Department of Human Environmental Studies. Enrollment in HDF 100 and a minimum GPA of 2.0 are required for authorization of the minor.

Students who take this minor cannot major in Child Development. Students may only double count 9 credits when combining the Child Development Minor with the Family Studies Major or the Family Studies Minor.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

1. Students must have a minimum GPA of 2.0 to sign a minor.
2. Students must have a minimum program GPA of 2.5 in order to graduate with this minor.

Core Courses (9 hours)
Core HDFS
HDF 100 - Lifespan Development 3(3-0)
HDF 211 - Marriage and Close Relationships 3(3-0)
HDF 307 - Parent-Child Relations 3(3-0)

Required Courses I (6 hours)
Development Content
HDF 308 - Theories of Child and Adolescent Development 3(3-0)
HDF 510 - Child Development Seminar: Promoting Resilience 3(3-0)

Required Courses II (7-8 hours)
Development Content
Select two courses from the following:
HDF 302 - Infant and Toddler Development 4(3-2)
HDF 303 - Early Childhood Development 4(3-2)
HDF 306 - Adolescent Development 3(3-0)

Required Courses III (3 hours)
Diversity
Select one from the following:
HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)
HDF 212 - Families in Cultural Perspective 3(3-0)
HDF 320 - HDFS International Service Learning 3-6(Spec)
SPE 585 - Early Childhood Special Education 3(3-0)

Total: 25-26 semester hours
Early Childhood Development and Learning Major

B.S. in Ed. degree, Provisional Elementary Certification

Early Childhood Development and Learning is a field of study that examines the growth and development of children birth through age eight, within the context of teaching and working with children in educational and social settings. The courses on this major meet the course work requirements for early childhood education and preschool teaching by the Michigan Department of Education and the training guidelines of the National Association for the Education of Young Children (NAEYC). This major is especially appropriate for students who plan on working in early childhood settings such as K-3 elementary classrooms, child care centers, preschools, Head Start and Early Head Start programs.

Students who complete this major may take the Michigan Early Childhood Examination. Successful completion of this examination results in the addition of the Early Childhood (ZS) Endorsement to the student’s teaching certificate. The ZS Endorsement is required for employment in Michigan Public School Preschool Programs.

Completion of this major requires that students also complete Option 2: Comprehensive Major - Child Development on the B.S. in Ed. degree.

Admission Requirements, Retention & Termination Standards

1. A minimum 2.7 GPA (B-) must be earned in all teaching majors.
2. A minimum 2.5 GPA and completion of (or enrollment in) one of the following courses (HDF 100, EDU 280, or PSY 220) are required for authorization of this major.
3. HDF 402 is a departmental methods course and must be completed with a grade of C+ or better before student teaching.
4. In order to meet Michigan Department of Education Standards for the ZS Endorsement Capstone Experience, student teaching assignments must take place in at least two of the three areas (infant/toddler, preschool, and K-3) under the direction of a qualified cooperating teacher.

Required Courses (3 hours)
Select one of the following:
EDU 280 - Education of Children 3(3-0)
HDF 100 - Lifespan Development 3(3-0)
PSY 220 - Developmental Psychology 3(3-0)

Development & Family Courses (14 hours)
HDF 302 - Infant and Toddler Development 4(3-2)
HDF 303 - Early Childhood Development 4(3-2)
HDF 309 - Families, Schools, and Communities 3(3-0)
HDF 400 - Developmental Assessment of Children 3(3-0)
HDF 401 - Child Development Seminar: Promoting Resilience 3(3-0)
HDF 497 - Special Topics in Human Development & Family Studies 1-15(Spec)
HDF 508 - Early Childhood Program Administration and Learning Environments 3(3-0)
SPE 585 - Early Childhood Special Education 3(3-0)

Total: 35 semester hours

Early Childhood Development and Learning Major

B.A., B.A.A., B.S. degrees

Early Childhood Development and Learning is a field of study that examines the growth and development of children birth through age eight, within the context of teaching and working with children in educational and social settings. The courses in this major meet the course work requirements for early childhood education and preschool teaching by the Michigan Department of Education and the training guidelines of the National Association for the Education of Young Children (NAEYC). This major is especially appropriate for students who plan on working in non-elementary school early childhood settings such as child care centers, preschools, Head Start and Early Head Start programs. Students interested in the teaching of young children within the elementary school setting should refer to the Early Childhood Development and Learning major on the B.S. in Education degree.

Admission Requirements, Retention & Termination Standards

1. Student must have completed or currently be enrolled in HDF 100 or EDU 280 or PSY 220 and must have a minimum GPA of 2.0 in order to sign a major.
2. Student must have a minimum program GPA of 2.7 in order to graduate with this major.
3. Student must receive a grade of C+ or better in HDF 409 in order to graduate with this major.

Required Courses (3 hours)
Select one of the following:
EDU 280 - Education of Children 3(3-0)
HDF 100 - Lifespan Development 3(3-0)
PSY 220 - Developmental Psychology 3(3-0)

Development & Family Courses (14 hours)
HDF 302 - Infant and Toddler Development 4(3-2)
HDF 303 - Early Childhood Development 4(3-2)
HDF 309 - Families, Schools, and Communities 3(3-0)
HDF 400 - Developmental Assessment of Children 3(3-0)
HDF 497 - Special Topics in Human Development & Family Studies 1-15(Spec)
HDF 508 - Early Childhood Program Administration and Learning Environments 3(3-0)
SPE 585 - Early Childhood Special Education 3(3-0)

Trends & International Applications Courses (3 hours)
Select one of the following in consultation with advisor:
HDF 320 - HDFS International Service Learning 3-6(Spec)
HDF 497 - Special Topics in Human Development & Family Studies 1-15(Spec)
HDF 510 - Child Development Seminar: Promoting Resilience 3(3-0)
HDF 597 - Special Topics in Human Development & Family Studies 1-15(Spec)

Capstone (8 hours)
HDF 409 - Lead Teaching in Early Childhood 8(Spec)

Total: 43 semester hours
Family Studies Major

B.A.; B.A.A.; B.S. degrees

This major is designed for students who either plan to enter the human services field upon graduating from CMU, or attend graduate school for advanced education. The program prepares students for careers working in human service settings to help individuals and families build life skills using prevention- and intervention-based educational programs. With appropriate graduate education, potential career options include: marriage and family therapy, sexual therapy, family research and/or college instruction. The Family Studies program is accredited by the National Council on Family Relations and graduates are eligible to become Certified Family Life Educators (CFLE). Child Development Majors desiring the CFLE certification should consult with their adviser. Students who take the Family Studies major cannot minor in Family Studies or double major in Child Development. Students may only double count 9 credits when combining the Family Studies Major with the Child Development Minor.

Admission Requirements, Retention & Termination Standards

1. Student must have completed or be currently enrolled in HDF 100 (or equivalent) and have a minimum GPA of 2.0 to sign a major.
2. Student must have a minimum program GPA of 2.5 in order to graduate with this major.
3. Student must receive a grade of C+ or better in HDF 419 in order to graduate with this major.

Core Courses (9 hours)
Core HDFS
- HDF 100 - Lifespan Development 3(3-0)
- HDF 211 - Marriage and Close Relationships 3(3-0)
- HDF 307 - Parent-Child Relations 3(3-0)

Required Courses I (9 hours)
Family Studies Content
- HDF 213/WST 213 - Introduction to Human Sexuality 3(3-0)
- HDF 411 - Families in Social, Legal, & Political Contexts 3(3-0)
- HDF 418 - Family Development in Late Life 3(3-0)

Required Courses II (3 hours)
Family Studies Content
Select one of the following:
- HDF 214QR - Consumer Economics 3(3-0)
- HDF 315 - Family Management Theory 3(3-0)

Required Courses III (12 hours)
Professional Skills and Methods
- HDF 219 - Field Work 3(1-6)
- HDF 319 - Family Studies Skills and Methods 3(3-0)
- HDF 414 - Human Development and Family Studies Research Methods 3(3-0)
- HDF 419 - HDFS Internship 1-12(Spec)

Electives (6 hours)
Select additional hours from the following list:
- COM 562 - Family Communication 3(3-0)
- GRN 247 - Introduction to Gerontology 3(3-0)
- HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)
- HDF 212 - Families in Cultural Perspective 3(3-0)
- HDF 306 - Adolescent Development 3(3-0)
- HDF 320 - HDFS International Service Learning 3-6(Spec)
- HDF 413 - Facilitating Discussion in Human Sexuality Groups 3(3-0)
- HDF 511 - Seminar in Human Sexuality 3(3-0)
- HDF 513 - Readings in the Family 3(3-0)
- HDF 517 - Readings in Marital Counseling and Divorce 3(3-0)
- HSC 519 - Death Education and Suicide Prevention 3(3-0)
- HSC 523 - AIDS Education 1(1-0)
- HSC 524 - Workshop on Health Fitness 2(Spec)
- HSC 525 - Sexually Transmitted Disease Workshop 1(Spec)
- HSC 526 - Behavioral Health 3(3-0)
- HSC 527 - Sex Education Workshop 1(Spec)
- HSC 528 - Smoking and Health Education Workshop 1(Spec)
- HSC 529 - Alcohol Education Workshop 1(Spec)
- REL 334 - Death and Dying 3(3-0)
- SWK 100 - Introduction to Social Work 3(3-0)

Note: You may select only one of HDF 519 or REL 334.

Total: 39 semester hours

Family Studies Minor

B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

This minor is designed to complement a large number of majors, particularly those that prepare students to work in health and human service settings. Advisors for this minor are located in the Department of Human Environmental Studies.

Students who take this minor cannot major in Family Studies.

Students may only double count 9 credits when combining the Family Studies Minor with the Child Development Major or the Child Development Minor.

Admission Requirements, Retention & Termination Standards

1. Student must have a minimum GPA of 2.0 to sign a minor.
2. Students must have a minimum program GPA of 2.5 in order to graduate with this minor.

Core Courses (9 hours)
Core HDFS
- HDF 100 - Lifespan Development 3(3-0)
- HDF 211 - Marriage and Close Relationships 3(3-0)
- HDF 307 - Parent-Child Relations 3(3-0)

Required Courses I (6 hours)
Family Studies Content
- HDF 213/WST 213 - Introduction to Human Sexuality 3(3-0)
- HDF 411 - Families in Social, Legal, & Political Contexts 3(3-0)

Required Courses II (3 hours)
Family Studies Content
Select one of the following:
- HDF 214QR - Consumer Economics 3(3-0)
- HDF 315 - Family Management Theory 3(3-0)

Electives (6 hours)
Note: Students are strongly advised to select elective courses in consultation with an advisor.
- COM 562 - Family Communication 3(3-0)
- GRN 247 - Introduction to Gerontology 3(3-0)
- HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)
- HDF 212 - Families in Cultural Perspective 3(3-0)
- HDF 306 - Adolescent Development 3(3-0)
- HDF 320 - HDFS International Service Learning 3-6(Spec)
- HDF 413 - Facilitating Discussion in Human Sexuality Groups 3(3-0)
- HDF 418 - Family Development in Late Life 3(3-0)
- HDF 511 - Seminar in Human Sexuality 3(3-0)
- HDF 513 - Readings in the Family 3(3-0)
- HDF 517 - Readings in Marital Counseling and Divorce 3(3-0)
- HSC 523 - AIDS Education 1(1-0)
- HSC 524 - Workshop on Health Fitness 2(Spec)
- HSC 525 - Sexually Transmitted Disease Workshop 1(Spec)
- HSC 526 - Behavioral Health 3(3-0)
- HSC 527 - Sex Education Workshop 1(Spec)
- HSC 528 - Smoking and Health Education Workshop 1(Spec)
- HSC 529 - Alcohol Education Workshop 1(Spec)
- HSC 530 - Drug Abuse Workshop 1(Spec)
- HSC 532 - Workshop on Health Fitness 2(Spec)
- PES 143 - Sexual Assault and Harassment/Awareness and Avoidance 2(1-0)
- PSY 350 - Clinical Interviewing and Counseling 3(3-0)

Total: 24 semester hours
Gerontology Minor
B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

Gerontology is the holistic study of aging. It is a useful complement to numerous majors including those preparing students for work in human service settings, recreation and leisure, marketing, policy and planning, and in the design of environments, products, and attire. Students seeking applied settings are encouraged to intern or work in aging services to enhance their courses. To prepare for graduate studies, students are encouraged to participate in research with older adults. This minor has 12 required hours and 12 hours of electives, which allow the student to fit special interests and needs. Advisors for this minor are located in Human Environmental Studies.

Required Courses (9 hours)
- GRN 247 - Introduction to Gerontology 3(3-0)
- HSC 390 - Health and Aging 3(3-0)
- PSY 325 - Psychology of Aging 3(3-0)

Other Requirement (3 hours)
Select one of the following:
- HDF 418 - Family Development in Late Life 3(3-0)
- SOC 320 - Sociology of Aging and Retirement 3(3-0)

Electives (12 hours)
Select hours from the following:
- GRN/WST 430 - Women and Aging 3(3-0)
- GRN/FNS 575 - Geriatric Nutrition 3(3-0)
- GRN 590 - Independent Study 1-4(Spec)
- GRN 597 - Special Topics 1-4(Spec)
- HDF 248 - Service Learning in Gerontology 3(Spec)
- HDF 535 - Dementia Care: Diagnosis, Treatment and Prevention 3(3-0)
- HSC 517 - Drugs and the Elderly 2(2-0)
- HSC 519 - Death Education and Suicide Prevention 3(3-0)
- REL 334 - Death and Dying 3(3-0)
- REL 338 - Internship Preparation for Interior Design 1(Spec)
- IND 339 - Interior Design Studio III: Residential 3(1-4)
- IND 339 - Internship Preparation for Interior Design 1(Spec)
- IND 339 - Interior Design Studio III: Special User Groups 3(1-4)
- IND 432 - Seminar in Interior Design 3(3-0)
- IND 433 - Professional Practices in Interior Design 3(3-0)
- IND 434 - Advanced CAD for Interiors 3(2-2)
- IND 436 - Lighting and Other Mechanical Systems 3(2-2)
- IND 437 - Interior Design Studio IV: Contract 3(1-4)
- IND 438 - Interior Design Internship 2(Spec)
- IND 439 - Interior Design Studio V: Senior Thesis 3(1-4)
- Other courses as approved by program advisor.

Note: You may select either HSC 519 or REL 334, not both.

Total: 24 semester hours

Interior Design

Interior Design Major
B.A.; B.A.A.; B.S. degrees

The Interior Design Program involves the detailed design of interiors, drawing on diverse knowledge from various disciplines emphasizing an integrated approach that relates interior design to society and personal interests in the field of design. This minor is for students who want to develop fundamental knowledge and skills in drafting, visual communications, CAD, materials/components, design history and studio design applications. Students will document their work in a portfolio at the conclusion of their final studio course in IND 338.

Admission Requirements, Retention & Termination Standards

1. A portfolio of visual work including 2-d design, 3-d design and freehand drawing; OR twelve credit hours in Art including ART 106 (3); ART 231 (3); ART 119 (3); and ART 283 OR 285 (3); OR a combination of portfolio work and art coursework prior to enrollment in IND 337 in the Interior Design Program.
2. An Interior Design Program Application form plus: 1) a portfolio of visual work; OR 2) transcript showing completion of ART course requirements; OR 3) a transcript and portfolio must be submitted to the Department of Human Environmental Studies in EHS 228 for review. Deadline for submission is Friday of the eighth week of the semester before formal admission takes effect.
3. Students will be notified of their admissions status by Interior Design faculty and must be formally admitted to the program before taking studio courses (IND 337, 339, 437) or any course requiring studio courses as prerequisites.
4. Students are permitted to begin selected courses in the Interior Design Program including: IND 131, 138, 328, 336 prior to formal admission into the program.
5. A limit of 12 credit hours of 100 and 200 level courses in Interior Design may be transferred to CMU. A visual review of student work is required.
6. Students must achieve a C or better in all courses required for program admission and all required courses to graduate with this major.
7. Students must achieve a cumulative 2.7 program GPA or better to graduate with this major.

Required Courses (25 hours)
- IND 131 - Interior Design Studio I: Introduction 3(1-4)
- IND 138 - Visual Communication for Interior Design 3(2-2)
- IND 139 - Interior Design Drafting 3(2-2)
- IND 155 - Introduction to Textiles 3(2-2)
- IND 238 - Design History and precedent 3(2-2)
- IND 328 - Design History and Criticism 3(3-0)
- IND 332 - Human Shelter and Environment 3(3-0)
- IND 334 - Computer-Aided Design for Interiors 3(2-2)
- IND 335 - Contract Documents 3(2-2)
- IND 336 - Materials and Components of Interior Design 3(3-0)
- IND 337 - Interior Design Studio II: Residential 3(1-4)
- IND 338 - Internship Preparation for Interior Design 1(Spec)
- IND 339 - Interior Design Studio III: Special User Groups 3(1-4)
- IND 340 - Seminar in Interior Design 3(3-0)
- IND 343 - Professional Practices in Interior Design 3(3-0)
- IND 348 - Interior Design Internship 2(Spec)
- IND 349 - Interior Design Studio V: Senior Thesis 3(1-4)
- IND 357 - Interior Design Studio II: Residential 3(1-4)
- IND 438 - Interior Design Internship 2(Spec)
- IND 439 - Interior Design Studio V: Senior Thesis 3(1-4)

Total: 25 semester hours
Recreation, Parks, and Leisure Services Administration (RPL)

For information, please contact the chairperson, 989-774-3858, 214 Finch; 
https://www.cmich.edu/colleges/ehs/dept/rpl/

Why Study Recreation, Parks, and Leisure Services Administration?

Americans spend approximately one-third of their lives enjoying some type of leisure experience. With increasing life spans, shorter work weeks and longer and more intensive vacations, the amount of time spent in leisure continues to increase.

The dollars spent on leisure make a substantial contribution to the economy. It is predicted that in the years to come, recreation/travel/tourism may comprise the largest expenditure of our economy, larger than either defense or health care. Professionals in recreation, parks, and leisure service administration are trained to help others utilize leisure time intelligently. As recreation and park administration personnel, they contribute immeasurably to an improved quality of life for others through creative and well-planned use of leisure time.

Recreation, Parks, and Leisure Services Administration at CMU

Accredited by the Council on Accreditation of Parks, Recreation, Tourism, and Related Professions, CMU offers the first professionally accredited major in the field of recreation, parks, and leisure services administration in the state of Michigan. Students may select one of three areas of concentration offered by the Department; these include recreation and event management, outdoor and environmental recreation, and therapeutic recreation. The recreation and event management concentration would prepare students for recreation programming, and event management across a spectrum of public, nonprofit, and commercial settings and environments. Students with an outdoor and environmental recreation concentration would be prepared for employment in camp administration, nature interpretation, and county, state, and/or national parks. The therapeutic recreation option prepares students to work with persons with illness or disability utilizing recreation activity as a therapeutic or treatment intervention. Students obtaining degrees in therapeutic recreation may be employed within hospitals (rehabilitation, psychiatric, substance abuse), residential facilities, geriatric agencies and/or community recreation and parks departments.

Regardless of the concentration selected, students majoring in recreation will be required to enroll in a common core of courses that will emphasize the philosophical framework of the profession. Students will acquire professional competencies to effectively design, organize, implement, manage, administer, and/or evaluate recreational programming assuring it effectively meets the diverse needs of the individuals or community serviced. The department places a strong emphasis on the practical aspects of students’ training by offering an extensive internship program which is completed following the completion of professional coursework. The combination of the professional internship and our curriculum provides the student with the competencies necessary to direct and/or administer leisure services supporting individual, family, and community wellness assuring an enhanced quality of life for all.

The Faculty
Jill Almasi-Dole, Laura Beattie, Jordan Bruursema, Lynn Dominguez, Robert Dvorak, James Allen Ellard, Robert Frost, Suzanne Gareiss, Lori Irwin, Jun Hyoung (JP) Kim, Timothy Otteman, Dean Pybus, Darcie Schafer, Mary Lou Schilling, Robert Schumacker, Christopher Wakeman, Dean Wallin

Recreation Major

Select one of the following concentrations:

Recreation and Event Management Concentration

B.A.A. degree

An internship and a minor are required on this concentration. Specific minors are preferred and indicated with each emphasis area. Other minors may be considered only through consultation and approval from the department advisor.

Admission Requirements, Retention & Termination Standards

1. All students with recreation majors are required to have a minimum GPA of 2.25 to sign a major in RPL.
2. All students with a recreation major are required to earn a minimum of a C (2.0) or better in all RPL major courses to graduate.

Required Professional Core Courses (53 hours)
RPL 118 - Introduction to Recreation, Parks, and Leisure Services 2(2-0)
RPL 209 - Inclusive Recreation with Diverse Populations 2(2-0)
RPL 310 - Pre-Internship in Leisure Services 1(1-0)
RPL 320 - Professional Internship in Recreation 1-30(Spec)
RPL 438 - Meeting and Exposition Planning 3(3-0)
RPL 440 - Special Event Administration 3(3-0)
RPL 508QR - Budgeting for Leisure Service Agencies 3(3-0)
RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)
RPL 518 - Research & Philosophy in RPL 3(3-0)
RPL 545 - Marketing of Leisure Services 3(3-0)

Note: RPL 310 must be taken two semesters prior to internship; RPL 518 must be taken one semester prior to internship; RPL 320 must be taken as a 30 credit hour internship.

Emphasis Area (12-13 hours)
Select one of the following emphasis areas:

Commercial Recreation (12 hours)
RPL 261 - Introduction to Private and Commercial Recreation 3(3-0)
RPL 307 - Management Skills in Leisure Services 3(3-0)
RPL 343/HSA 343 - Tourism 3(3-0)
RPL 430 - Planning Recreation Programs and Events 3(3-0)

Preferred Minors:
Advertising, Business Administration, Entrepreneurship, Hospitality Services Administration, Management, Marketing, Professional Sales and Retailing. Other minors may be considered only through consultation and approval from the department advisor. The Event Management minor cannot be taken as a minor with this concentration.
Recreation, Parks, and Leisure Services Administration

Community Recreation (13 hours)
RPL 204 - Introduction to Community Recreation Administration 3(3-0)
RPL 307 - Management Skills in Leisure Services 3(3-0)
RPL 431 - Planning Community Recreation Programs & Events 3(3-0)
RPL 436 - Facility Operations and Maintenance 3(3-0)
RPL 470 - Park and Natural Resource Management 3(3-0)
RPL 497 - Community Recreation Professional Seminar 1(1-0)

Note: Choose one of RPL 307 OR 470, not both.

Preferred Minors:
American Sign Language, Child Development, Communications, Gerontology, Public Administration, Religion, Sport Management, Youth Studies, or any Language minor.

Other minors may be considered only through consultation and approval from the department advisor. The Event Management minor cannot be taken as a minor with this concentration.

Total: 65-66 semester hours

Outdoor and Environmental Recreation Concentration
B.A.; B.S.; B.A.A. degrees

An internship and a minor are required on this concentration. A minor or equivalent in Natural Resources, Earth Science, Geology, Museum Studies, or Environmental Studies (B.A.A. degree only) is preferred; other appropriate minors may be considered only through consultation and approval from a departmental advisor.

Admission Requirements, Retention & Termination Standards
1. All students with recreation majors are required to have a minimum GPA of 2.25 to sign a major in RPL.
2. All students with a recreation major are required to earn a minimum of a C (2.0) or better in all RPL major courses to graduate.

Required Professional Core Courses (42-57 hours)
RPL 118 - Introduction to Recreation, Parks, and Leisure Services 2(2-0)
RPL 205 - Outdoor Leadership 3(2-2)
RPL 209 - Inclusive Recreation with Diverse Populations 2(2-0)
RPL 216 - Introduction to Outdoor Recreation 3(3-0)
RPL 310 - Pre-Internship in Leisure Services 1(1-0)
RPL 320 - Professional Internship in Recreation 1-30(Spec)
RPL 358 - Foundations of Outdoor and Environmental Education 3(3-0)
RPL 370 - Leave No Trace Ethics 1(1-0)
RPL 470 - Park and Natural Resource Management 3(3-0)
RPL 508QR - Budgeting for Leisure Service Agencies 3(3-0)
RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)
RPL 516 - Research & Philosophy in RPL 3(3-0)
RPL 581 - Therapeutic Recreation: Issues and Trends 3(3-0)
RPL 210 - Introduction to Therapeutic Recreation 3(3-0)
RPL 301 - Pre-Internship in Leisure Services 1(1-0)
RPL 340 - Therapeutic Recreation: Developmental Disabilities 3(3-0)
RPL 341 - Therapeutic Recreation: Physical Disabilities 3(3-0)
RPL 342 - Therapeutic Recreation: Behavioral Health 3(3-0)
RPL 345 - Therapeutic Recreation: Gerontology 3(3-0)
RPL 349 - Facilitation Techniques in Therapeutic Recreation 3(3-0)
RPL 351 - Pharmacology for Therapeutic Recreation 2(2-0)
RPL 518 - Research & Philosophy in RPL 3(3-0)
RPL 580 - Programming for Therapeutic Recreation 3(3-0)
RPL 581 - Therapeutic Recreation: Issues and Trends 3(3-0)

Required Courses I (43 hours)
HSC 214 - Human Anatomy 4(3-3)
HSC 215 - Human Physiology 4(3-2)
PSY 250 - Abnormal Psychology 3(3-0)
RPL 118 - Introduction to Recreation, Parks, and Leisure Services 2(2-0)
RPL 210 - Introduction to Therapeutic Recreation 3(3-0)
RPL 310 - Pre-Internship in Leisure Services 1(1-0)
RPL 340 - Therapeutic Recreation: Developmental Disabilities 3(3-0)
RPL 341 - Therapeutic Recreation: Physical Disabilities 3(3-0)
RPL 342 - Therapeutic Recreation: Behavioral Health 3(3-0)
RPL 345 - Therapeutic Recreation: Gerontology 3(3-0)
RPL 349 - Facilitation Techniques in Therapeutic Recreation 3(3-0)
RPL 351 - Pharmacology for Therapeutic Recreation 2(2-0)
RPL 518 - Research & Philosophy in RPL 3(3-0)
RPL 580 - Programming for Therapeutic Recreation 3(3-0)
RPL 581 - Therapeutic Recreation: Issues and Trends 3(3-0)

Required Courses II (3 hours)
Select one of the following:
HDF 100 - Lifespan Development 3(3-0)
PSY 220 - Developmental Psychology 3(3-0)

Therapeutic Recreation Concentration
B.A.; B.A.A.; B.S. degrees

The goal of the Therapeutic Recreation concentration is to prepare students to serve as competent practitioners in the role of Certified Therapeutic Recreation Specialists. Students in this program develop skills to work with a variety of special populations in diverse health care settings.

In addition to structured coursework a strong emphasis is placed on practical training via numerous volunteer placements and a full-time clinical internship under a certified therapeutic recreation specialist. Upon completion of all coursework and professional internship, the student is eligible to sit for the national certifying examination administered by the National Council for Therapeutic Recreation Certification.

Academic advisors work closely with students in the selection and scheduling of courses to assure timely completion of degree and major requirements.

Admission Requirements, Admission and Termination Standards
1. All students with recreation majors are required to have a minimum GPA of 2.25 to sign a major in RPL.
2. All students with a recreation major are required to earn a minimum of a C (2.0) or better in all RPL major courses to graduate.
3. Students must have a current CPR and First Aid Certification prior to internship.

Required Courses I (43 hours)
HSC 214 - Human Anatomy 4(3-3)
HSC 215 - Human Physiology 4(3-2)
PSY 250 - Abnormal Psychology 3(3-0)
RPL 118 - Introduction to Recreation, Parks, and Leisure Services 2(2-0)
RPL 210 - Introduction to Therapeutic Recreation 3(3-0)
RPL 310 - Pre-Internship in Leisure Services 1(1-0)
RPL 340 - Therapeutic Recreation: Developmental Disabilities 3(3-0)
RPL 341 - Therapeutic Recreation: Physical Disabilities 3(3-0)
RPL 342 - Therapeutic Recreation: Behavioral Health 3(3-0)
RPL 345 - Therapeutic Recreation: Gerontology 3(3-0)
RPL 349 - Facilitation Techniques in Therapeutic Recreation 3(3-0)
RPL 351 - Pharmacology for Therapeutic Recreation 2(2-0)
RPL 518 - Research & Philosophy in RPL 3(3-0)
RPL 580 - Programming for Therapeutic Recreation 3(3-0)
RPL 581 - Therapeutic Recreation: Issues and Trends 3(3-0)

Required Courses II (3 hours)
Select one of the following:
HDF 100 - Lifespan Development 3(3-0)
PSY 220 - Developmental Psychology 3(3-0)

Required Courses III (15-30 hours)
RPL 320 - Professional Internship in Recreation 1-30(Spec)

Note: RPL 320 - Students seeking a B.S. or B.A. degree will complete a one semester 15 credit hour internship in a clinical setting. Students seeking a B.A.A. degree will complete a 30 hour internship (in two unique settings, one of which must be clinical).

Total: 61-76 semester hours

Additional Requirements (6 hours)
Through consultation with an advisor, the student will select from the following classes for a total of six (6) credits:
RPL 218 - Teaching of Outdoor Skills 3(3-0)
RPL 435 - Leadership in Adventure Education Programming 3(3-0)
RPL 552 - Environmental Interpretation 3(3-0)
RPL 570 - Wilderness Issues and Policy 3(3-0)

Electives (3 hours)
Select any RPL course.

Total: 51-66 semester hours
Minors

A minimum 2.7 GPA (B-) must be earned in all teaching minors.

Recreation Minor
B.A.; B.A.A.; B.S. degrees

Required Courses I (5 hours)
RPL 118 - Introduction to Recreation, Parks, and Leisure Services 2(2-0)
RPL 206 - Recreation Activities Leadership 3(3-0)

Required Courses II (3 hours)
Select one of the following:
RPL 204 - Introduction to Community Recreation Administration 3(3-0)
RPL 210 - Recreation for Diverse Populations 3(3-0)
RPL 216 - Introduction to Outdoor Recreation 3(3-0)
RPL 261 - Introduction to Private and Commercial Recreation 3(3-0)

Required Courses III (3 hours)
Three credit hours of field coursework from the following:
RPL 318 - Field Course in Recreation Specialization 1-15(Spec)

Electives (10 hours)
Select any RPL course.

Total: 21 semester hours

Note: Credit/No credit courses may be applied up to a total of ten semester hours on a major or minor. All Credit/No Credit classes must be 100 or 200 level except those offered on a Credit/No Credit only basis at the 300, 400, or 500 level.

Outdoor and Environmental Education Minor
B.A.; B.A.A.; B.S. degrees

Required Courses (15 hours)
RPL 216 - Introduction to Outdoor Recreation 3(3-0)
RPL 218 - Teaching of Outdoor Skills 3(3-0)
RPL 318 - Field Course in Recreation Specialization 1-15(Spec)
RPL 358 - Foundations of Outdoor and Environmental Education 3(3-0)
RPL 552 - Environmental Interpretation 3(3-0)

Electives (6 hours)
Select any RPL course.

Total: 21 semester hours

Credit/No credit courses may be applied up to a total of ten semester hours on a major or minor. All Credit/No Credit classes must be 100 or 200 level except those offered on a Credit/No Credit only basis at the 300, 400, or 500 level.

Event Management Minor
B.A., B.A.A., B.S., B.S. in B.A. degrees

The program provides students with the combination of skills and knowledge needed to be successful as an event manager in a range of event planning settings. Event managers are found in education, government, private business and industry, and the non-profit sectors. Skills and knowledge derived from this minor will enhance a student’s marketability and employability in numerous settings. The program consists of a core of 17 semester hours including coursework in recreation programming, special event administration, meeting and exposition planning, along with an introduction to lodging operations and foods. All minors complete a 2 credit hour field experience in which they work with an organization or agency to plan and implement an event. Students also select 6 semester hours of elective coursework from a list of approved electives.

Core Courses (17 hours)

Note: All minors must complete a 2 credit hour field experience –
RPL 318
FNS 261 - Foodservice Catering for Events 3(3-0)
HSA 350 - Lodging Operations 3(3-0)
RPL 318 - Field Course in Recreation Specialization 1-15(Spec)
RPL 430 - Planning Recreation Programs and Events 3(3-0)
RPL 431 - Planning Community Recreation Programs & Events 3(3-0)
RPL 438 - Meeting and Exposition Planning 3(3-0)
RPL 440 - Special Event Administration 3(3-0)

Note: You may select only one of RPL 430 OR 431, not both.

Electives (6 hours)
Select from the following:
FMD 357 - Fashion Show Production & Promotion 3-6(Spec)
HSA 445 - Advanced Food and Beverage Systems Management 3(3-0)
IND 331 - The Art of Event Planning 3(3-0)
JRN 350 - Public Relations Principles and Practices 3(3-0)
PES 550 - Sport Fundraising 3(3-0)
RPL 343/HSA 343 - Tourism 3(3-0)
RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)
PPL 545 - Marketing of Leisure Services 3(3-0)

Total: 23 credit hours

Leadership Minor

This is an interdisciplinary minor. Please check the index for the page number.
Teacher Education and Professional Development
(EDU, MLE)

For information, please contact the chairperson, 989-774-3976, EHS 421; www.tepd.cmich.edu
For specific questions concerning the teacher education program, please see the Teacher Education Program Information web page at www.tepd.cmich.edu

The Study of Education at CMU
Central Michigan University’s teacher education program seeks to provide the preparation required to establish a professional practice which is knowledge-driven, learner-centered, and relevant to the multiple contexts in which the modern educator must function: the classroom, the multi-disciplinary school-based team, and the broader community. The Department of Teacher Education and Professional Development contributes to this mission through courses and programs with the following specific objectives:
1. To provide the professional education coursework needed by students preparing to teach in the K-12 classrooms in Michigan.
2. To advise undergraduate and graduate students in the selection of programs and courses.
3. To provide coursework for graduate students seeking a master’s degree.
4. To direct graduate students in independent studies, readings, field studies, and theses.

The departmental programs are composed of elementary education, secondary education, early childhood and elementary education, middle level education, reading in elementary grades. The department also offers coursework in several interdisciplinary/interdepartmental majors and minors, including child development and the language arts major and minor.

The Faculty

Departmental Programs

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

Advising
Students interested in teaching in the elementary and secondary grades may contact the College of Education and Human Service Center for Student Services (EHS 421) for pre-admission advising. This service assists students in determining the appropriateness of their career plans and provides information about admission to the teacher education program. The Teacher Education Student Handbook, which answers many student questions about the program, may be found on the Center for Student Services’ website at www.ehs.cmich.edu/css.

Application
The three cycles of candidacy may be found in the Standards Leading to Teacher Certification. Students must apply for admission into the Teacher Education Program before becoming eligible to enroll in professional education courses. After being admitted into teacher education, a student has five years in which to complete requirements for graduation; otherwise he or she must reapply for the program. The application for teacher education is available on the Center for Student Services website (www.ehs.cmich.edu/css).

Student Teaching
The Department of Teacher Education and Professional Development offers the field-based professional education courses required for the State of Michigan’s Elementary and Secondary Provisional Teaching Certificates. Student teachers are placed in one of the CMU Student Teaching Centers within the state. There are also opportunities to student teach in an international placement during a portion of the student teaching field experience.

For additional information, contact the Director of Student Teaching at 989-774-4411. Student teaching information is also available on the TEPD website at www.tepd.cmich.edu.

Application. The application process begins with a Student Teaching Application Meeting during the first week of the semester prior to the student teaching semester. The application is completed online. Once approved to student teach, students are assigned to a student teaching center. An interview takes place with a University Coordinator from the center who will secure the field placement. Students may NOT secure their own placement.

Requirements. Students must complete the requirements as posted in the Teacher Education Handbook, before student teaching placements are secured. These include departmental approval for each major and minor, a 2.7 or higher GPA in each major and minor, an overall GPA of 2.70 or higher, and a C+ or higher in all methods and professional education classes. “Incompletes” are NOT acceptable in any methods or professional education course. Students register themselves for EDU 432 and 458 during open registration. Students pursuing special education endorsements should contact the Counseling and Special Education Department for information regarding special education student teaching.

Elementary: EDU 107, 330, 380, 393, 432, 458; HDF 100; SPE 504; and all major and minor requirements listed in the bulletin; and all major and minor requirements listed in the bulletin.

Elementary students must complete the general elementary education MTTC examination and complete extra examinations in their major and minor for endorsements in those areas.

Secondary: EDU 107, 290 (except for music majors), 310, 325 (except for music majors), 432, 450, 458, 495; SPE 504; and all major and minor requirements listed in the bulletin (additional requirements for Special Education Majors).

Secondary students must successfully complete the Michigan Test of Teacher Certification (MTTC) in their major and minor areas.

(continued)
Teacher Certification

Students must fulfill all requirements listed for Admission to Teacher Education Programs as specified in the Standards Leading to Teacher Certification section of this Bulletin. Students interested in certification regulations should contact the College of Education and Human Services Center for Student Services immediately. As of April, 1987 “General Elementary Certification Endorsement” means an authorization to teach in grades kindergarten to and including grade five in all subjects and in major and minor areas of preparation in grades six through eight and K-8, if in a self-contained classroom. The Michigan Secondary Provisional Teacher’s Certificate qualifies the graduates to teach in their major and minor fields in grades six through twelve.

Secondary Education

B.S. in Ed. degree leading to Provisional Secondary Certification

The Secondary Education Undergraduate Program offers professional education courses applicable to State of Michigan requirements for the Secondary Provisional Certificate. You will need to follow the requirements of the Bachelor of Science in Education degree with provisional secondary certification.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information at the beginning of this section.

Professional education requirements for students who intend to teach in grades six to twelve are detailed in the Bachelor of Science in Education (B.S. in Ed) degree.

You should seek advising help from the Center for Student Services. Admission requirements are detailed in the Teacher Education Student Handbook at www.ehs.cmich.edu/css/.

Elementary Education

B.S. in Ed. degree leading to Provisional Elementary Certification

The Elementary Education Undergraduate Program offers professional education courses applicable to State of Michigan requirements for the Elementary Provisional Certificate. You will need to follow the requirements of the Bachelor of Science in Education degree with provisional elementary certification.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

See the information at the beginning of this section.

Professional education requirements for students who intend to teach in kindergarten through eighth grade are detailed in the Bachelor of Science in Education (B.S. in Ed) degree.

You should seek advising help from the Center for Student Services. Admission requirements are detailed in the Teacher Education Student Handbook at www.ehs.cmich.edu/css/.

Additional Endorsement Programs

Early Childhood and Elementary Education

Professional education requirements for students of early childhood and elementary education are detailed under the Bachelor of Science in Education (B.S. in Ed) degree. You should seek advising help from the Center for Student Services, EHS 421. Admission requirements are detailed in the Teacher Education Student Handbook or at www.ehs.cmich.edu/css/.

Reading in the Elementary Grades Minor

B.S. in Ed. degree, Provisional Elementary Certification or Provisional Elementary Certification with Emotional or Cognitive Impairment Endorsement

This minor may be used by students following the B.S. in Ed. degree, provisional elementary certification. It consists of 24 hours of course work in reading and related disciplines.

This minor is a multidisciplinary selection of courses intended to prepare the student to teach reading in elementary and intermediate grades. It provides a working knowledge of developmental, remedial, and corrective reading. This minor may not be combined with a language arts major or minor.

The Reading minor is offered by the Department of Teacher Education and Professional Development and the minor is signed by an advisor in the department. A minimum 2.7 GPA (B-) must be earned in all teaching minors. In addition, 75 percent of the minor (18 hours) must be completed prior to student teaching.

Required Courses (15 hours)

EDU 330 - Reading in the Elementary School 3(3-0)
EDU 431 - Corrective Reading in the Classroom 3(3-0)
EDU 532 - Reading in the Content Areas 3(3-0)
EDU 533 - Diagnosis and Treatment of Reading Difficulties 3(2-3)
EDU 538 - Coordination of the Language Arts with Reading 3(3-0)

Notes regarding EDU 533:

- Requires 30 hours of tutoring during the course.
- Has prerequisites of EDU 431 and 532, and a pre- or co-requisite of EDU 538.
- Taking the reading subject matter test after EDU 533 is recommended.

Electives (9 hours)

Select 9 hours total from the following elective groups in consultation with the advisor:

Electives I (0-3 hours)

Language Development

Select no more than one of the following:

CDO 130 - Normal Speech and Language Acquisition 3(3-0)
ENG 175 - The Nature of Language 3(3-0)
ENG 375 - Introduction to Linguistics 3(3-0)

Electives II (0-3 hours)

Literature

Select no more than one of the following:

ENG 481 - International Literature for Children and Young Adults 3(3-0)
ENG 580 - Literature for Young Adults 3(3-0)
ENG 582 - Cultural Pluralism in Young Adult and Children's Literature 3(3-0)

Electives III (0-6 hours)

Meeting Special Needs

Select no more than two of the following:

CDO 230 - Introduction to Speech, Language, and Hearing Disorders 3(3-0)
EDU 506 - Principles and Techniques for Individualizing Instruction 3(3-0)
SPE 504 - Teaching Students in Inclusive Settings 3(3-0)
SPE 550 - Teaching Culturally Diverse Students 3(3-0)
SPE 577 - Introduction to Specific Learning Disability 3(3-0)

Electives IV (0-6 hours)

Theory and Practice

Select no more than two of the following:

EDU 528 - Emergent Literacy: Theory and Practice 3(3-0)
EDU 540 - Literacy Education: Theory and Practice 3(3-0)
MLE 570 - Issues in Middle Level Education 1-3(Spec)
TAI 373 - Oral Interpretation for Children 3(3-0)

Total: 24 semester hours
Middle Level Education Minor
B.S. in Ed. degree, Provisional Elementary or Secondary Certification, or Provisional Secondary Certification leading to a middle level endorsement

**Note:** This minor may be used by students following the B.S. in Ed. Degree, provisional elementary or provisional secondary certification. It consists of 24 hours of course work in middle level education and related disciplines. Students must select two curriculum areas (subject to advisor approval) which are broad and multidisciplinary, and encompass the major areas within those fields.

Students on the Bachelor of Science in Education, provisional elementary certification, who choose this minor, must also select two curriculum area minors or a curriculum area major and a minor in addition to this minor.

Students on the Bachelor of Science in Education, provisional secondary certification program must select this minor in addition to their curriculum area major and minor.

Completing the Middle Level Education Minor will also qualify the student for a Michigan Middle Level Endorsement on a Provisional Elementary or Secondary Teaching Certificate.

**Required Courses (15 hours)**
MLE 381 - Needs and Characteristics of Young Adolescents 3(3-0)
MLE 382 - Middle Level School Concept, Structures, and Programs 3(3-0)
MLE 383 - Student Diversity in the Middle Level Classroom 3(3-0)
MLE 384 - Meeting the Diverse Needs of Learners in the Middle Level Classroom 3(3-0)
MLE 385 - Curriculum in the Middle Level School 3(3-0)

**Required Courses II (3 hours)**
Select one of the following:
SPE 126 - Introduction to Special Education 3(3-0)
SPE 504 - Teaching Students in Inclusive Settings 3(3-0)

**Electives (6 hours)**
Select two of the following:
EDU 290 - Technology in Education 3(1-4)
EDU 532 - Reading in the Content Areas 3(3-0)
ENG 481 - International Literature for Children and Young Adults 3(3-0)
ENG 580 - Literature for Young Adults 3(3-0)
ENG 582 - Cultural Pluralism in Young Adult and Children's Literature 3(3-0)
MLE 570 - Issues in Middle Level Education 1-3(Spec)

**Total: 24 semester hours**

Interdisciplinary Majors and Minors
Language Arts Major
The Language Arts Major prepares you to teach this integral component of the elementary classroom. Requirements are outlined in the Interdisciplinary Majors and Minors Section. Confer with an advisor in elementary education.

Language Arts Minor
The Language Arts Minor offers skills and understanding of the role of language arts in the elementary classroom. Requirements are outlined in the Interdisciplinary Majors and Minors Section. Confer with an advisor in elementary education.
The Herbert H. and Grace A. Dow College of Health Professions

Thomas Masterson, Ph.D., Interim Dean
Denise Webster, M.S., AT, ATC, Interim Associate Dean
HP 2217, 989-774-1850

**College Mission**

The Herbert H. and Grace A. Dow College of Health Professions is dedicated to the development of professionals who contribute to a healthy society through practice, leadership, education, and service. This will be accomplished through:

- maximizing student success;
- integration of teaching, scholarship, practice, and service;
- partnering with the community.

**Introduction**

The health professions continue to be one of the fastest growing segments of the job market. There is an increasing demand for additional health care professionals to meet the current and projected health care needs of a growing and increasingly more diverse population. Through its undergraduate and graduate educational programs, the College is committed to providing learning opportunities to students aspiring to careers in professions that serve the contemporary health care needs of society. Service to disadvantaged segments of society most in need of care across age, cultural, and socioeconomic spectrums are central to the mission of the College's educational programs. To this end, the College is committed to fostering community-centered education and to educating and training future health care professionals who are knowledgeable, competent, ethical, and caring, with a strong commitment to human service.

**Health-Related Programs**

The Herbert H. and Grace A. Dow College of Health Professions comprises four departments: Communication Disorders, Physical Education and Sport, the School of Rehabilitation and Medical Sciences and the School of Health Sciences. The professional education programs are designed to be comprehensive and include all the academic and clinical educational components needed to promote high quality health care delivery. The educational programs include training in liberal arts and humanities, basic sciences, social sciences, clinical skills, and professional behaviors. Internships and service learning opportunities are integral components of the health professions programs. A variety of health-related programs at CMU are offered on both an undergraduate and graduate level with most courses available on campus.

The College of Health Professions has many programs that require certification or licensure upon graduation. Internship/clinical placement is a requirement of CHP program curriculum and often involves students having to report any criminal history. It is the student’s responsibility to insure that any legal issues (civil infractions, misdemeanors, and felony charges) are avoided that may prevent them from: internship/clinical placement, graduation, certification and/or licensure.

**Undergraduate Programs**

**Majors.** Athletic Training, Communication Disorders, Community Health Education, Exercise Science, Health Administration, Physical Education, School Health Education, Sport Management.

**Minors.** Athletic Coaching, American Sign Language, Communication Disorders, Community Health, Health Fitness, Elementary and Secondary Physical Education, School Health Education, Special Physical Education, Sports Management, and Substance Abuse Education.

**Pre-Professional Studies.** CMU offers some pre-professional studies in which you take foundation courses for transfer to universities offering such specialties as: dentistry, medicine and osteopathy, occupational therapy, optometry, pharmacy, physical therapy, physician assistant, medical and health sciences, and veterinary medicine. (See listing of pre-professional advising.)

**Graduate Programs**

The College offers doctoral programs in Audiology (Au.D), Health Administration (DHA), and Physical Therapy (DPT), and master’s degrees in Speech-Language Pathology, Exercise Physiology, Public Health, Sport Administration, and Physician Assistant. A health services administration concentration is also available on the Master of Science in Administration degree. Graduate Certificates are offered in Health Systems Leadership and International Health.

**Residential College**

The Health Professions Residential College, located in Emmons Hall, provides unique opportunities for students to carefully examine their interests and career options utilizing tremendous on-site resources. The residential college program offers these distinctive opportunities:

- Educational programs that enhance your classroom learning and facilitate your professional goals;
- Opportunity to live with others who have similar career aspirations;
- A freshman year experience course, HPS 101 Introduction to the Health Professions, offering interdisciplinary topics;
- Increased opportunity for career information, advising, internships, professional networking, and information about graduate programs;
- Formal and informal out of class interactions with faculty;
- Supplemental instruction sessions and study groups;
- Co-curricular experiences.

**Student Organizations**

Numerous organizations exist on campus to support students interested in the health professions. These groups provide students with opportunities to network, gain additional information on specific disciplines, and experience professional growth. Students are encouraged to contact individual departments for specific information.
Communication Disorders (CDO, ASL)

For information, please contact the chairperson, 989-774-1323, 2186 Health Professions Building; https://www.cmich.edu/colleges/CHP/hp_academics/communications_disorders/

Why Study Communication Disorders?
One of every ten people has a speech, language, or hearing problem. Communication disorders generally do not occur in isolation—they can be related to other problems as well. Social, emotional, educational, and vocational problems may stem from or be aggravated by communication disorders. Speech-language pathologists and audiologists are educated to prevent, identify, and treat communication disorders. They work primarily in educational settings, medical and health facilities, and private practice.

Communication Disorders at CMU
To work as a speech-language pathologist or audiologist, you are required to meet the professional qualifications of the state in which you are employed. This will require a graduate degree at the Master’s or Doctoral level. Your study of communication disorders at the undergraduate level must be carefully tailored to lead into study at the graduate level.

The department offers a major in communication disorders, which specifically prepares students for entry into graduate speech-language pathology and audiology programs and for other career opportunities. The minor in communication disorders prepares students for career opportunities particularly related to health and education as well as for advanced educational opportunities. The minor in American Sign Language complements many majors, and helps students acquire conversational skills in American Sign Language and develop an appreciation and understanding of the way in which people in the Deaf community live, think, and communicate.

The Department of Communication Disorders offers the Doctor of Audiology (Au.D) degree for audiologists and the Master of Arts (M.A.) degree in speech-language pathology. The undergraduate and graduate level programs are designed to complement one another and to lead to eligibility to apply for American Speech-Language-Hearing Association’s (ASHA) Certificate of Clinical Competence (CCC) for students who complete the graduate degree programs. CMU’s academic programs in audiology and speech-language pathology are accredited by ASHA’s Council on Academic Accreditation (CAA). The audiology program is also accredited by the Accreditation Commission for Audiology Education (ACAE).

Early advisement of students considering a major in communication disorders is recommended. If you are interested in a career as a speech-language pathologist or audiologist, call the Department of Communication Disorders (989-774-3471) and request advisement assistance.

The Faculty

Major

Communication Disorders Major
B.A.A.; B.S. degrees

With the exception of CDO 494, courses taken Credit/No Credit do not count toward a major

Admission Requirements, Retention & Termination Standards

Admission Requirements

Admission to the CDO major is a competitive process in which a student’s academic performance in the four preadmission major courses is evaluated. The average four-course GPA for admission to the major is 3.70. The Department of Communication Disorders (CDO) accepts 40 students into the CDO major each fall and spring semester. Generally, 70-80 students apply for admission to the major in each round. To apply to the CDO major, a student must complete an Application for Admission to the Undergraduate Major form and submit it along with an unofficial transcript to the department office in HP 2161 no later than November 1 for spring admission or April 1 for fall admission. Students can be enrolled in and completing CDO prerequisites at the time of application. Admission decisions will be made by CDO faculty at the end of each semester, after final grades have been posted.

To be considered for admission a student must meet the following criteria:
1. An overall GPA of 2.50 or higher.
2. A CDO GPA of 3.25 or higher AND a grade of C or better in each of the CDO preadmission major courses (CDO 278, 330, 331, and 335). Students may retake any of these first four courses one time only. (See Item 5 below regarding an appeal.) Students may not register for CDO courses higher than 335 without acceptance into the major.
3. Completion of at least 40 semester hours of college coursework.

Retention & Termination Standards

1. Students must adhere to the Essential Functions and Technical Standards for Admission and Continued Enrollment in the CDO Major. This document can be accessed at: https://www.cmich.edu/colleges/CHP/hp_academics/communications_disorders/academic_programs/Pages/default.aspx.
2. Students must maintain a major GPA of 3.25 or higher.
3. Students must earn a grade of C or better in each major course.
4. Students must select courses in consultation with an advisor.

(continued)
5. Students will not be allowed to retake any course on the CDO major beyond CDO 335. Under extraordinary circumstances, students may request an exception to this policy through a written appeal to the CDO Department Chairperson, elaborating on his or her rationale for exception to this no-repeat policy.

6. Students must complete a speech-language-hearing screening.

7. If a student's overall GPA drops below 2.50, he or she will be encouraged to take courses outside the department until the overall GPA is brought back up to 2.50 or higher.

8. If a student does not continue to meet the Admission/Retention criteria, he or she may be asked to withdraw from the major. The Department maintains the right to terminate a student from the major if he or she is not progressing satisfactorily.

Required Courses (40 hours)
CDO 278 - Normal Speech Developmental/Descriptive Phonetics 3(3-0)
CDO 330 - Language Development 3(3-0)
CDO 331 - Introduction to Audiology 3(3-0)
CDO 335 - The Anatomy and Physiology of Speech and Hearing 3(3-0)
CDO 338 - Introduction to Speech Sound Disorders 3(3-0)
CDO 340 - Child Language Assessment and Intervention 3(3-0)
CDO 417 - Introduction to Adult Communication Disorders 3(3-0)
CDO 431 - Audiologic Rehabilitation 3(3-0)
CDO 439 - Diagnostic and Intervention Methods in Speech Language Pathology 3(3-0)
CDO 463 - Introduction to Acoustic Phonetics 3(3-0)
CDO 490 - Independent Study 1-4(Spec)

Total: 40 hours

Additional requirements for American Speech-Language-Hearing Association (ASHA) clinical certification:

1. Completion of an accredited master's in speech-language pathology or a doctoral degree in audiology.
2. Completion of the academic and clinical requirements for the Certificate of Clinical Competence as delineated on ASHA's Knowledge and Skills Acquisition (KASA) form.
3. A course in each of the following areas:
   a. Statistics
   b. Research Design
   c. Biology
   d. Physical Science, preferably Chemistry or Physics
   e. Social/Behavioral Sciences

For details, see the Department of Communication Disorders in the Graduate Bulletin.

Minors

Communication Disorders Minor
B.A.; B.A.A.; B.S. degrees

This minor will provide the student with background in communication disorders; however, it may not be considered a minor for classroom teaching, and is not certifiable. Courses taken Credit/No Credit do not count toward a minor.

Required Courses (12 hours)
CDO 130 - Normal Speech and Language Acquisition 3(3-0)
CDO 230 - Introduction to Speech, Language, and Hearing Disorders 3(3-0)
CDO 331 - Introduction to Audiology 3(3-0)
CDO 438 - Language Disorders in Special Education Populations 3(3-0)

Elective Courses (8-10 hours)
Select from the following:
ASL 101 - American Sign Language, Level I 3(3-0)
CDO 278 - Normal Speech Developmental/Descriptive Phonetics 3(3-0)
CDO 330 - Language Development 3(3-0)
CDO 335 - The Anatomy and Physiology of Speech and Hearing 3(3-0)
CDO 338 - Introduction to Speech Sound Disorders 3(3-0)
CDO 340 - Child Language Assessment and Intervention 3(3-0)
CDO 431 - Audiologic Rehabilitation 3(3-0)
CDO 463 - Introduction to Acoustic Phonetics 3(3-0)
CDO 490 - Independent Study 1-4(Spec)

Total: 20-22 semester hours

American Sign Language Minor
B.A.; B.A.A.; B.S. degrees

The minor in American Sign Language (ASL) will enable students to acquire conversational skills in American Sign Language and to develop an appreciation and understanding of the way in which people in the Deaf community live, think, and communicate. The ASL minor is designed for students who wish to expand their language skills and cultural knowledge to enhance other majors such as linguistics, communication disorders (speech-language pathology and audiology), journalism, business, education, theater, social work, psychology, health sciences, or other areas of study.

Required Courses (18 hours)
ASL 100 - Introduction to the Deaf Community and Deaf Culture 3(3-0)
ASL 101 - American Sign Language, Level I 3(3-0)
ASL 102 - American Sign Language, Level II 3(3-0)
ASL 201 - American Sign Language, Level III 3(3-0)
ASL 202 - American Sign Language, Level IV 3(3-0)
ASL 390 - Sociocultural History of the American Deaf Community 3(3-0)

Electives (6 hours)
Select 6 hours in consultation with an advisor.
ASL 401 - American Sign Language Level V 3(3-0)
ASL 402 - American Sign Language Level VI 3(3-0)
ASL 404 - Advanced Fingerspelling and Numbers 3(3-0)
ASL 510 - ASL Linguistics 3(3-0)
ASL 590 - Independent Study 1-4(Spec)
ASL 594 - ASL in Elementary Education 3(Spec)
ASL 595 - Community Placements with Deaf Children and Adults 3(1-3)
ASL 599 - Special Topics 1-6(Spec)

Total: 24 semester hours
School of Health Sciences (HSC, HSL, MPH, MHA)

For information, please contact the chairperson 989-774-3541, 2219 Health Professions Building; https://www.cmich.edu/colleges/echp/hp_academics/health_sciences/

Why Study Health Sciences?
There is mounting evidence that our lifestyles dramatically affect our health, well-being and longevity, as well as the dollar cost of health care. The realization that prevention is paramount to healthy living and to health care cost containment has created an interest in health education and health promotion in various public and private health settings, such as clinics, fitness centers, agencies and schools. Professionals in the health sciences are trained to help individuals improve the quality of their life by practicing healthy lifestyles.

Health Sciences at CMU
Undergraduate majors and minors offered through the School of Health Sciences focus on preparing professionals to: 1) become fitness and exercise specialists in preventative and rehabilitative programs; 2) function in the public setting as health educators and health promotion specialists; 3) work as educators and programs specialists in the field of substance abuse prevention, substance abuse intervention, and treatment; 4) work in an administrative capacity in various health settings; and 5) be teachers of health education in school settings. The school offers the following graduate degree programs: Health Service Administration concentration on a Master of Science in Administration degree, Master of Arts in Physical Education: Exercise Science Concentration, and the Doctor of Health Administration. Further information is available in the College of Graduate Studies Bulletin.

The Faculty

Majors
The following majors are available through this department: 1) Health Administration, 2) Exercise Science, 3) Community Health Education and 4) School Health Education.

Health Administration Major
B.A.A.; B.S. degrees
This major prepares students for entry level administrative positions in a variety of health settings. It also prepares individuals who have preparation in an allied health field for middle management positions such as department head or supervisor.

Admission Requirements, Retention & Termination Standards
Admission Requirements
To be considered for admission to the Health Administration Major, a student must meet the following criteria:
1. An overall GPA of 2.50 or higher.
2. A grade of B- or better in each of the six Health Administration preadmission courses (ACC 201 or 250, STA 282QR or PSY 211QR, HSC 203, COM 267 or COM 357, ENG 101 and ENG 201). Students may not register for other HSC Health Administration courses on the major without first being accepted into the major.
3. Written evidence of consulting with a Health Administration advisor.
4. Completion of at least 30 semester hours of college coursework.

Retention & Termination Standards
1. Students must maintain a Major GPA of 2.67 or higher.
2. Students must earn a grade of C+ or higher in each major course. Credit/no credit coursework will not count on any course on this major, except for the internship experience, HSC 595.
3. Students must maintain an overall GPA of 2.50 or higher.

Required Courses (42 hours)
HSC 317 - Community Health 3(3-0)
HSC 333 - Managing the Health of Populations 3(3-0)
HSC 500 - Health Informatics 3(3-0)
HSC 507 - Introduction to Health Service Organizations and Systems 3(3-0)
HSC 520 - Health Services Administration 3(3-0)
HSC 538 - Development of Proposals and Reports in Health Administration 3(3-0)
HSC 544 - Biostatistics 3(2-1)
HSC 545 - Health Planning 3(3-0)
HSC 570 - Financial Aspects of Health Services Organizations 3(3-0)
HSC 571 - Legal Aspects of Health Services Organizations 3(3-0)
HSC 572 - Quality Improvement in Health Services 3(3-0)
HSC 595 - Health Administration Internship 6(6-0)
MKT 300 - Introduction to Marketing 3(3-0)

Other Requirement I (3 hours)
Select one of the following:
ACC 201 - Concepts of Financial Accounting 3(3-0)
ACC 250 - Introduction to Financial Accounting 3(3-0)

Other Requirement II (3 hours)
Select one of the following:
ECO 201 - Principles of Macroeconomics 3(3-0)
ECO 202 - Principles of Microeconomics 3(3-0)
ECO 203 - Microeconomic Principles for Business 3(3-0)
Total: 48 hours
Exercise Science Major
B.A., B.A.A., B.S. degrees

Admissions Requirements, Retention & Termination Standards
Admission into the major is competitive. Interested students are encouraged to obtain advising and admission information early during pre-admission coursework by contacting the School of Health Sciences Office. In order to apply for admission into the major, applicants must do the following:

1. Complete a minimum of 36 semester hours of coursework with a minimum GPA of 2.5.
2. Complete CHM 120 and CHM 127 (or CHM 131 and CHM 132), HSC 190, HSC 205, HSC 214, and HSC 215, with no grade lower than C in these courses.
3. Satisfy the university Mathematics Competency requirement as described under the General Education Requirements section of the Bulletin.
4. Meet specific program Technical Standards (a copy of the Technical Standards is available from the School of Health Sciences Office or the School of Health Sciences website).
5. Complete an application (available from the School of Health Sciences Office or the School of Health Sciences website) and turn in the completed application along with a copy of the applicant's grade record (unofficial transcript or academic history) to the School of Health Sciences Office.

Once admitted into the program students must continue to meet specific program Technical Standards as well as the following criteria:

1. Maintain an overall GPA of at least 2.5.
2. Achieve a grade of C (2.0) or better for each graded HSC course on the major.

Options
Select one of the following three options:

Clinical Exercise Science Option
The Clinical Exercise Science option is for students intending to pursue a career in the clinical aspects of exercise science: cardiopulmonary rehabilitation, diagnostic testing, or other related field.

Core Courses I (17 hours)
HSC 190 - Introduction to Exercise Science 1(1-0)
HSC 205 - Responding to Emergencies 2(1-2)
HSC 214 - Human Anatomy 4(3-3)
HSC 215 - Human Physiology 4(3-2)
HSC 216 - Biomechanics and Kinesiology 3(2-2)
HSC 308/PES 308 - Physiology of Sport and Exercise 3(3-0)

Core Courses II (5-8 hours)
Select one of the following options:

Option A (8 hours)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)

Option B (5 hours)
CHM 120 - Survey of Chemistry 4(4-0)
CHM 127 - Introductory Chemistry Laboratory 1(0-2)

Required Courses (27 hours)
HSC 220 - Basics in Health Fitness 3(2-2)
HSC 310 - ECG Assessment 2(2-1)
HSC 411 - Pathophysiology 3(3-0)
HSC 547 - Health Risk Identification and Management 3(3-0)
HSC 550 - Stress Test Administration 3(2-2)
HSC 551 - Stress Testing Interpretation 3(3-1)
HSC 553 - Cardiac Medications 2(2-0)
HSC 575 - Exercise Science Clinical Internship 8(Spec)

Electives (5-6 hours)
Select from the following:

BIO 590 - Cardiovascular Physiology 3(3-0)
FNS 370 - Nutrition 3(3-0)
HSC 201 - Medical Terminology 2(2-0)
HSC 219 - Exercise Conditioning for Health Fitness Professionals 2(0-3)
HSC 503 - Health Implications of Obesity 3(3-0)
HSC 534 - Workshop in Principles of Cardiovascular Health and Disease 1(Spec)
HSC 586 - Cardiovascular Disease Risk Factors in Children 3(1-4)

Total: 54-58 semester hours

Health Fitness Option
The Health Fitness option is for students intending to pursue a career as a health fitness professional, personal trainer, or strength and conditioning coach.

Note: Students pursuing this option cannot sign the Health Fitness Minor.

Core Courses I (17 hours)
HSC 190 - Introduction to Exercise Science 1(1-0)
HSC 205 - Responding to Emergencies 2(1-2)
HSC 214 - Human Anatomy 4(3-3)
HSC 215 - Human Physiology 4(3-2)
HSC 216 - Biomechanics and Kinesiology 3(2-2)
HSC 308/PES 308 - Physiology of Sport and Exercise 3(3-0)

Core Courses II (5-8 hours)
Select one of the following options:

Option A (8 hours)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)

Option B (5 hours)
CHM 120 - Survey of Chemistry 4(4-0)
CHM 127 - Introductory Chemistry Laboratory 1(0-2)

Required Courses (21 hours)
HSC 219 - Exercise Conditioning for Health Fitness Professionals 2(0-3)
HSC 420 - Health Fitness Assessment 3(2-3)
HSC 421 - Personal Training 3(2-3)
HSC 423 - Practicum in Personal Training 2(1-3)
HSC 425 - Health Fitness Program Administration/Management 3(0-3)
HSC 576 - Exercise Science Fitness Internship 8(Spec)

Electives (10-12 hours)
Select from the following:

FNS 370 - Nutrition 3(3-0)
FNS 375 - Nutrition and Performance 3(3-0)
HSC 424 - Practicum in Health Fitness 2(0-6)
HSC 503 - Health Implications of Obesity 3(3-0)
HSC 505 - Work Injury Prevention 3(3-0)
HSC 547 - Health Risk Identification and Management 3(3-0)
MKT 221/ENT 221 - Marketing Strategies for Entrepreneurs 3(3-0)
PES 338 - Teaching Aerobics 2(0-2)
PES 485 - Theoretical Foundations of Strength and Conditioning 3(3-0)

Total: 53-58 semester hours
Kinesiology Option

The Kinesiology option is a broad-based exercise science option for students interested in pursuing a graduate or professional degree in exercise physiology, kinesiology, physical therapy, physician assistant, medical and health sciences, occupational therapy, chiropractic, or other allied health field.

Please note that many graduate and professional programs require prerequisite courses in addition to those included in this option. It is the responsibility of the student to determine which prerequisite courses are required for their program of interest.

Core Courses I (17 hours)

- HSC 190 - Introduction to Exercise Science 1(1-0)
- HSC 205 - Responding to Emergencies 2(1-2)
- HSC 214 - Human Anatomy 4(3-3)
- HSC 215 - Human Physiology 4(3-2)
- HSC 216 - Biomechanics and Kinesiology 3(2-2)
- HSC 308/PES 308 - Physiology of Sport and Exercise 3(3-0)

Core Courses II (8-9 hours)

Select one of the following options:

Option A (8 hours)

- CHM 131 - General Chemistry I 4(3-3)
- CHM 132 - General Chemistry II 4(3-3)

Option B (9 hours)

- CHM 120 - Survey of Chemistry 4(4-0)
- CHM 127 - Introductory Chemistry Laboratory 1(0-2)
- CHM 342 - Survey of Organic Chemistry 4(3-3)

Required Courses (9 hours)

- HSC 220 - Basics In Health Fitness 3(2-2)
- HSC 411 - Pathophysiology 3(3-0)
- HSC 547 - Health Risk Identification and Management 3(3-0)

Other Requirements I (3 hours)

Select one of the following:

- BIO 315 - Human Genetics 3(3-0)
- CHM 421 - Survey of Biochemistry 3(3-0)
- FNS 370 - Nutrition 3(3-0)

Other Requirements II (2 hours)

Select one of the following:

- BIO 500 - Biological Statistics 3(2-2)
- HSC 544 - Biostatistics 3(2-1)
- PSY 211QR - Introduction to Psychological Statistics 3(3-0)

Electives (12-15 hours)

Select from the following:

- BIO 208 - Microbiology 3(2-3)
- BIO 590 - Cardiovascular Physiology 3(3-0)
- FNS 375 - Nutrition and Performance 3(3-0)
- HSC 201 - Medical Terminology 2(2-0)
- HSC 219 - Exercise Conditioning for Health Fitness Professionals 2(0-3)
- HSC 503 - Health Implications of Obesity 3(3-0)
- HSC 586 - Cardiovascular Disease Risk Factors in Children 3(1-4)
- PES 401 - Fundamentals of Motor Learning 3(3-0)

Total: 52-56 semester hours

Community Health Education Major

B.A.; B.A.A.; and B.S. degrees

The purpose of this major is to prepare students for careers in a variety of official, voluntary, community-based organizations, private health agencies and hospitals. Some career possibilities include, but are not limited to: the education of the public regarding chronic and communicable disease prevention; the promotion of wellness; assessing, planning and implementing programs within communities; and organizing communities regarding health issues.

Admission Requirements, Retention & Termination Standards

Prerequisites to be completed prior to declaring this major: Completion of at least 30 credit hours and the following courses with a grade of B- or better, plus an overall GPA of 2.50 or higher: HSC 106QR, PSY 211QR or STA 282QR, ENG 101, ENG 201.

Students must earn a grade of C or higher in each HSC course in the major. Credit/no credit coursework will not count on any course on this major, except for the internship experience, HSC 422.

Students must maintain a GPA of 2.50 or higher in the major.

Students will sign an agreement of Technical Standards for the major. If a student does not meet the Admission Requirements or does not continue to meet the Retention and/or Technical Standards, he/she may be dismissed from the major. Appeals will be considered.

Required Courses I (23 hours)

- HSC 106QR - Healthy Lifestyles 3(2-1)
- HSC 205 - Responding to Emergencies 2(1-2)
- HSC 211 - Human Anatomy and Physiology 3(3-0)
- HSC 317 - Community Health 3(3-0)
- HSC 352 - Environmental Health 3(3-0)
- HSC 404 - Epidemiology 3(3-0)
- HSC 520 - Health Services Administration 3(3-0)
- HSC 544 - Biostatistics 3(2-1)

Required Courses II (26 hours)

Select one of the following options:

Option A (9 hours)

- CHM 127 - Introductory Chemistry Laboratory 1(0-2)
- CHM 342 - Survey of Organic Chemistry 4(3-3)

Option B (10 hours)

- CHM 342 - Survey of Organic Chemistry 4(3-3)

Option C (11 hours)

Select one of the following:

- CHM 342 - Survey of Organic Chemistry 4(3-3)

Electives (9 hours)

- Select from the following:
  - BIO 315 - Human Genetics 3(3-0)
  - CHM 421 - Survey of Biochemistry 3(3-0)
  - FNS 370 - Nutrition 3(3-0)
  - CHM 544 - Biostatistics 3(2-1)

Other Requirements I (15 hours)

- Select one of the following:
  - BIO 315 - Human Genetics 3(3-0)
  - CHM 421 - Survey of Biochemistry 3(3-0)
  - FNS 370 - Nutrition 3(3-0)

Other Requirements II (3 hours)

- Select one of the following:
  - BIO 500 - Biological Statistics 3(2-2)
  - CHM 120 - Survey of Chemistry 4(4-0)
  - CHM 127 - Introductory Chemistry Laboratory 1(0-2)

Total: 58 semester hours
School Health Education Major

B.S. in Ed. degree, Provisional Secondary Certification, or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

Admission Requirements, Retention & Termination Standards

The major in School Health Education leads to certification to teach health education in grades K-12. The student must meet the following requirements:

1. Prior to signing the major/minor authorization, the student must have an overall 2.5 GPA, a 2.6 GPA for a minimum of six semester credit hours in HSC classes.
2. Must maintain a 2.7 GPA for all classes on major and minor.
3. Must have successfully completed, or be concurrently taking, HSC 222 OR 223 OR 224, or FNS 370 before taking HSC 340.
4. Have a combined GPA of 2.6 for HSC 340 and 346 before student teaching.
5. Achieve a grade of C (2.0), or better, for each HSC class.

Required Courses (40 hours)

BIO 101 - General Biology 3(2-2)
FNS 370 - Nutrition 3(3-0)
HSC 106QR - Healthy Lifestyles 3(2-1)
HSC 205 - Responding to Emergencies 2(1-2)
HSC 222 - Sexuality In Health Education 3(3-0)
HSC 223 - Basic Health Concepts I 3(3-0)
HSC 224 - Basic Health Concepts II 3(3-0)
HSC 313 - Field Experience in School Health Education 1(Spec)
HSC 340 - Curriculum in Health Education 3(3-0)
HSC 343 - Health Education in the Elementary School 2(2-0)
HSC 346 - Methods and Resources in Teaching Health 3(3-1)
HSC 418 - Professional Aspects of Health Education 2(2-0)
HSC 526 - Behavioral Health 3(3-0)
HSC 536 - Health Education Assessment 3(3-0)
PSY 100 - Introduction to Psychology 3(3-0)

Electives (2-4 hours)

Select 2-4 hours in consultation with an advisor:

CHM 120 - Survey of Chemistry 4(4-0)
HSC 211 - Human Anatomy and Physiology 3(3-0)
HSC 235 - Psychoactive Drugs 3(3-0)
HSC 317 - Community Health 3(3-0)
HSC 352 - Environmental Health 3(3-0)
HSC 411 - Pathophysiology 3(3-0)
HSC 503 - Health Implications of Obesity 3(3-0)
HSC 519 - Death Education and Suicide Prevention 3(3-0)
HSC 522 - Consumer Health Education 2(2-0)
HSC 534 - Workshop in Principles of Cardiovascular Health and Disease 1(Spec)
HSC 537 - Stress Reduction Workshop 1(Spec)
HSC 547 - Health Risk Identification and Management 3(3-0)
SOC 100 - Introductory Sociology 3(3-0)

Total: 42-44 semester hours

Minors

Health Fitness Minor

B.A., B.A.A., B.S., and B.S.A.T. degrees

This minor is designed for the Exercise Science major (Clinical Exercise Science or Kinesiology options), or Athletic Training/Sports Medicine or Athletic Training (BSAT) majors preparing to work in the fitness or sports performance industry, and intending to obtain certifications available in the field of health fitness, e.g., personal training, health fitness professional and strength and conditioning.

Note: Exercise Science majors selecting the Health Fitness Option may not minor in Health Fitness.

Admission Requirements, Retention & Termination Standards

Students intending to minor in Health Fitness must meet the following requirements:

1. Achieve a grade of C (2.0), or better, for each graded HSC course on the minor;
2. Maintain an overall GPA of 2.5, and a GPA of 2.8 for all classes on the minor.

Required Courses (13 hours)

HSC 219 - Exercise Conditioning for Health Fitness Professionals 2(0-3)
HSC 420 - Health Fitness Assessment 3(2-3)
HSC 421 - Personal Training 3(2-3)
HSC 423 - Practicum in Personal Training 2(1-3)
HSC 425 - Health Fitness Program Administration/Management 3(3-0)

Electives (11 hours)

Select in consultation with an advisor:

FNS 375 - Nutrition and Performance 3(3-0)
HSC 424 - Practicum in Health Fitness 2(0-6)
HSC 503 - Health Implications of Obesity 3(3-0)
HSC 505 - Work Injury Prevention 3(3-0)
MKT 221/ENT 221 - Marketing Strategies for Entrepreneurs 3(3-0)
PES 338 - Teaching Aerobics 2(2-0)
PES 485 - Theoretical Foundations of Strength and Conditioning 3(3-0)

Total: 24 semester hours
Community Health Minor
B.A.; B.A.A.; B.S. degrees

Required Courses (9 hours)
HSC 106QR - Healthy Lifestyles 3(3-0)
HSC 211 - Human Anatomy and Physiology 3(3-0)
HSC 317 - Community Health 3(3-0)

Electives (15 hours)
Selected with an advisor from a list of approved courses.

Total: 24 semester hours

Note: There is considerable overlap of health content courses with the present major in Community Health. For this reason, students may not both major and minor in Community Health.

School Health Education Minor
B.S. in Ed., Provisional Secondary Certification or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

This minor will lead to recommendation for certification in health education grades 6-12. The student must meet the following requirements:

Admission Requirements, Retention & Termination Standards
1. Prior to signing the major/minor authorization, the student must have an overall 2.5 GPA, a 2.6 GPA for a minimum of six semester credit hours in HSC classes.
2. Must maintain a 2.7 GPA for all classes on major and minor.
3. Must have successfully completed, or be concurrently taking, HSC 222 OR 223 OR 224 before taking HSC 340.
4. Have a combined GPA of 2.6 for HSC 340 and 346 before student teaching.
5. Achieve a grade of C (2.0), or better, for each HSC class.

Required Courses (25 hours)
HSC 106QR - Healthy Lifestyles 3(3-0)
HSC 205 - Responding to Emergencies 2(1-2)
HSC 222 - Sexuality In Health Education 3(3-0)
HSC 223 - Basic Health Concepts I 3(3-0)
HSC 224 - Basic Health Concepts II 3(3-0)
HSC 340 - Curriculum in Health Education 3(3-0)
HSC 346 - Methods and Resources in Teaching Health 3(3-1)
HSC 418 - Professional Aspects of Health Education 2(2-0)
HSC 536 - Health Education Assessment 3(3-0)

Total: 25 semester hours

Substance Abuse Education: Prevention, Intervention, and Treatment Minor
B.A.; B.A.A.; B.S. degrees

This minor is designed for professionals wishing to work in roles or settings requiring knowledge and intervention skills relative to alcohol and other drugs.

Admission Requirements, Retention & Termination Standards
Students must achieve a grade of C (2.0) or better for each HSC course.

Required Courses (18 hours)
HSC 235 - Psychoactive Drugs 3(3-0)
HSC 236 - Substance Abuse Intervention Programming 3(3-0)
HSC 317 - Community Health 3(3-0)
HSC 526 - Behavioral Health 3(3-0)
HSC 532 - Diversity Issues in the Health Professions 3(3-0)
HSC 598 - Nature and Dynamics of Destructive Health Habits 3(3-0)

Electives (6 hours)
Select from the following list with approval of an advisor.
FNS 370 - Nutrition 3(3-0)
HDF 411 - Families in Social, Legal, & Political Contexts 3(3-0)
HSC 106QR - Healthy Lifestyles 3(3-0)
HSC 211 - Human Anatomy and Physiology 3(3-0)
HSC 319 - Methods and Materials in Community Health Education 3(3-0)
HSC 350 - Community Service in the Health Educators 2(2-0)
HSC 510 - Independent Reading Experience 1-4(Spec)
HSC 512 - Special Topics in Health Education 1-12(Spec)
HSC 523 - AIDS Education 1(1-0)
HSC 537 - Stress Reduction Workshop 1(Spec)
PSY 220 - Developmental Psychology 3(3-0)
PSY 250 - Abnormal Psychology 3(3-0)
PSY 350 - Clinical Interviewing and Counseling 3(3-0)
SOC 221 - Social Problems 3(3-0)
SOC 324 - Criminology 3(3-0)
SOC 411 - The Family 3(3-0)
SWK 250 - Social Welfare Policies and Services I 3(3-0)

Total: 24 semester hours
Physical Education and Sport
(PES, PED)

For information, please contact the chairperson, 989-774-2859, 2234 Health Professions Building; https://www.cmich.edu/colleges/CHP/hp_academics/physical_education_sport/

Why Study Physical Education and Sport?
In your daily life, you regularly utilize human movement. In fact, if your physical abilities are compromised at all, on either a temporary or permanent basis, your dependence on physical movement is readily apparent.

You can study physical education and sport no matter what your interest level - from thorough study of kinesiology (the study of physiology and human movement) to participation in a particular sport for the purpose of personal enjoyment. If you are interested in developing your fullest potential through the unique medium of human movement, you are interested in physical education and sport.

Physical Education and Sport at CMU
Programs in physical education and sport at CMU focus on: (1) the preparation of students to allow them to pursue careers in physical education, sport and related professions; (2) the in-depth study of physical education and sport; and (3) the teaching of basic skills in a wide range of activities.

Curricular offerings lead to the Bachelor of Science, Bachelor of Science in Education, Bachelor of Arts, Bachelor of Applied Arts, and Master of Arts in Sport Administration. The degree programs can prepare you for a career in physical education, athletic coaching, and sport management. Interdisciplinary programs may meet your needs if you have sport-related career goals. Many classes involve active participation in sport and fitness activities.

PED Limitation
PED-designated courses are subject to a limitation of six hours toward curricular requirements for graduation.

The Faculty
Steven E. Adler, H. Ray Allen, Judy P. Chandler, Andrew S. Criswell, Scott R. Hirko, Margaret Keiper, Marcia J. Mackey, Vincent E. Mumford, Tracy W. Olrich, Benjamin R. Rollenhagen, Janet L. Smith, Scott J. Smith, Stephen M. Thompson

Majors

Physical Education Major
(K-12 Certification)

B.S. in Ed. degree, Provisional Secondary Certification, or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

Admission Requirements, Retention & Termination Standards
1. Students seeking this major must successfully complete the Sport Skill Competency Assessment Program. This assessment program is competency based and required before enrolling in PES 315. Additional information concerning this program can be obtained from the departmental office or the PES webpage.
2. To gain approval to student teach, each student must:
   a. have an overall GPA of 2.7
   b. have received a grade of C+ or better in PES 315, 386, and 415
   c. have current CPR and First Aid Certification
3. At least 15 hours of this major must be completed at CMU.
4. Up to 3 hours may be taken as credit/no credit.
5. A minimum 2.7 GPA (B-) must be earned in all teaching majors.

Required Courses I (45 hours)
HSC 211 - Human Anatomy and Physiology 3(3-0)
PES 105 - Introduction to Physical Education & Skill Development 2(2-1)
PES 115 - Motor Development 2(2-0)
PES 186/PED 186 - Physical Fitness for Life 2(2-0)
PES 215 - K-12 Physical Education Programming 3(3-0)
PES 313 - Elementary Physical Education Methods and Materials 2(2-0)
PES 315 - Methods in Teaching Physical Education 3(3-0)
PES 322 - Applied Skills & Methods - Team Sports 2(2-0)
PES 323 - Applied Skills & Methods - Individual Sports 2(2-0)
PES 324 - Applied Skills & Methods - Rhythmic Activities 2(2-0)
PES 325 - Applied Skills & Methods - Resistance Training 2(2-0)
PES 330 - Human Movement Studies 3(3-0)
PES 338 - Teaching Aerobics 2(2-0)
PES 386 - Special Physical Education 3(3-0)
PES 395 - Pre-Student Teaching Field Experience 1(Spec)
PES 401 - Fundamentals of Motor Learning 3(3-0)
PES 405 - Physical Education Peer-Tutor Teaching 2(1-1)
PES 406 - Evaluation in Physical Education and Sport 2(2-0)
PES 415 - Planning, Teaching, and Assessing: Practical Applications 3(3-0)
PES 495 - Senior Seminar in Physical Education 1(1-0)

Electives (3 hours)
To be selected in consultation with an advisor.

Total: 48 semester hours
Sport Management Major
B.A.; B.S.; B.A.A. degrees

Selection of this major is to prepare students for a career in sport management. Career options include high school, collegiate, amateur, and professional sport management, sport business management, coaching, or employment with non-profit sport agencies. Coordinated major/minor programs are available on an interdepartmental basis to broaden the employment opportunities in sport retail, merchandising, journalism, broadcasting, or exercise science. Such coordinated programs require early advisement. Students who desire to pursue one of the career opportunities should contact the department of physical education and sport for early advisement.

This major is accredited by the Commission on Sport Management Accreditation (COSMA).

Required Courses I (26-37 hours)
ECO 211 - Economics of Professional Team Sports 3(3-0)
PES 118 - Sport in America 3(3-0)
PES 190 - Introduction to Sport Management 3(3-0)
PES 318 - Social, Historical, and Global Issues in Sport 3(3-0)
PES 320 - Foundations of Sport Management 3(3-0)
PES 393 - Field Study in Sport Management 1-4(Spec)
PES 499 - Internship in Sport Management 2-12(Spec)
PES 550 - Sport Fundraising 3(3-0)
PES 564 - Sport Governance: Ethics, Morals, and Values 3(3-0)

Note: A minimum of 4 hours of PES 499 must be completed.

Required Courses II (3 hours)
Select one of the following:
ACC 201 - Concepts of Financial Accounting 3(3-0)
ACC 210/ENT 210 - Accounting Information for Entrepreneurial Decision Making 3(3-0)

Required Courses III (3 hours)
Select one of the following:
MKT 151 - Marketing and Society 3(3-0)
MKT 300 - Introduction to Marketing 3(3-0)

Electives (0-8 hours)
May select any of the following:
ART 231 - Introduction to Graphic Design 3(0-6)
BLR 202 - Legal Environment of Business 3(3-0)
COM 361 - Interpersonal Communication 3(3-0)
JRN 350 - Public Relations Principles and Practices 3(3-0)
RPL 420 - Planning and Facility Design for Leisure 3(3-0)

Total: 40 semester hours

Additional Requirements:
1. At least 12 hours of credit must be completed at CMU.
2. Students may elect up to 10 hours of course work on a credit/no credit basis.

Minors

Physical Education Minor, Secondary or Non-Teaching
B.A., B.S. degrees; B.S. in Ed. degree, Provisional Secondary Certification, or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

Admission Requirements, Retention & Termination Standards
1. Students seeking this minor must successfully complete the Sports Skill Competency Assessment Program. This assessment program is competency based and required before enrolling in PES 215. Additional information concerning this program can be obtained from the departmental office or the PES webpage.
2. To gain approval to student teach, each student must:
   a. have an overall GPA of 2.7;
   b. have received a grade of C+ or better in PES 215, PES 386 and PES 415;
   c. have current CPR and First Aid Certification.
3. Up to 3 hours may be taken as credit/no credit.
4. A minimum 2.7 GPA (B-) must be earned on all teaching minors.

Required Courses (22 hours)
PES 105 - Introduction to Physical Education and Skill Development 2(2-1)
PES 115 - Motor Development 2(2-0)
PES 186 - Physical Fitness for Life 2(2-0)
PES 215 - K-12 Physical Education Programming 3(3-0)
PES 315 - Methods in Teaching Physical Education 3(3-0)
PES 325 - Applied Skills and Methods - Resistance Training 2(2-0)
PES 386 - Special Physical Education 3(3-0)
PES 406 - Evaluation in Physical Education and Sport 2(2-0)
PES 415 - Planning, Teaching, and Assessing: Practical Applications 3(3-0)

Electives (2 hours)
Select one of the following:
PES 322 - Applied Skills and Methods - Team Sports 2(2-0)
PES 323 - Applied Skills and Methods - Individual Sports 2(2-0)
PES 338 - Teaching Aerobics 2(2-1)

Total: 24 semester hours

Physical Education Minor, Elementary or Non-Teaching
B.A.; B.S. in Ed. degrees

Admission Requirements, Retention & Termination Standards
1. Students seeking this minor must successfully complete the Sport Skill Competency Assessment Program. This assessment program is competency based and required before enrolling in PES 215. Additional information concerning this program can be obtained from the departmental office or the PES webpage.
2. To gain approval to student teach, each student must:
   • have an overall GPA of 2.7;
   • have received a grade of C+ or better in PES 215, 386 and 415;
   • have current CPR and First Aid Certification.
3. Up to 3 hours may be taken as credit/no credit.
4. A minimum 2.7 GPA (B-) must be earned on all teaching minors.

Required Courses (22 hours)
PES 105 - Introduction to Physical Education and Skills Development 2(2-1)
PES 115 - Motor Development 2(2-0)
PES 186 - Physical Fitness for Life 2(2-0)
PES 215 - K-12 Physical Education Programming 3(3-0)
PES 315 - Methods in Teaching Physical Education 3(3-0)
PES 386 - Special Physical Education 3(3-0)
PES 406 - Evaluation in Physical Education and Sport 2(2-0)
PES 415 - Planning, Teaching, and Assessing: Practical Applications 3(3-0)

Electives (2 hours)
Select one of the following:
PES 322 - Applied Skills and Methods - Team Sports 2(2-0)
PES 323 - Applied Skills and Methods - Individual Sports 2(2-0)
PES 338 - Teaching Aerobics 2(2-0)

Total: 24 semester hours
Sport Management Minor
B.A.; B.S.; B.A.A.; B.S. in B.A. degrees

The minor is designed for students who wish to pursue a career in one of the areas of sport management or related professions. Students are advised that coordinated major/minor programs are available on an interdepartmental basis to provide the student with the background necessary to enter such fields as sports business management, sports retailing and merchandising, sports journalism, sports broadcasting, athletic administration, and coaching. Students who desire to pursue one of these career opportunities should contact the department of physical education and sport for early assignment to an advisor.

This minor is accredited by the Commission on Sport Management Accreditation (COSMA).

Required Courses (19-22 hours)
PES 118 - Sport in America 3(3-0)
PES 190 - Introduction to Sport Management 3(3-0)
PES 318 - Social, Historical, and Global Issues in Sport 3(3-0)
PES 320 - Foundations of Sport Management 3(3-0)
PES 393 - Field Study in Sport Management 1-4(Spec)
PES 550 - Sport Fundraising 3(3-0)
PES 564 - Sport Governance: Ethics, Morals, and Values 3(3-0)
1. At least 12 hours of credit must be completed at CMU.
2. Students may include up to 10 hours of coursework on a credit/ no credit basis.

Electives (2-5 hours)
Select from the following:
ACC 201 - Concepts of Financial Accounting 3(3-0)
ACC 210/ENT 210 - Accounting Information for Entrepreneurial Decision Making 3(3-0)
ART 231 - Introduction to Graphic Design 3(0-6)
BLR 202 - Legal Environment of Business 3(3-0)
COM 357 - Public Speaking 3(3-0)
COM 361 - Interpersonal Communication 3(3-0)
ECO 211 - Economics of Professional Team Sports 3(3-0)
JRN 350 - Public Relations Principles and Practices 3(3-0)
MKT 151 - Marketing and Society 3(3-0)
MKT 300 - Introduction to Marketing 3(3-0)
PES 499 - Internship in Sport Management 2-12(Spec)

Total: 24 semester hours

Athletic Coaching Minor
B.A.; B.S.; B.A.A. degrees

The athletic coaching minor is recommended for students who do not have a major or minor in physical education but are interested in coaching in an athletic program sponsored by the Michigan High School Athletic Association or some other state athletic association.

Required Courses (16-18 hours)
HSC 205 - Responding to Emergencies 2(1-2)
HSC 211 - Human Anatomy and Physiology 3(3-0)
PES 186/PED 186 - Physical Fitness for Life 2(2-0)
PES 279 - Sport First Aid 2(2-0)
PES 311 - Psychology of Coaching 3(3-0)
PES 390 - Practicum in Physical Education and Coaching 1-3(Spec)
PES 560 - Principles and Foundations of Coaching 3(3-0)

Electives (2-4 hours)
Selected from the following to complete a minimum of 12 hours for the endorsement:
PES 372 - Coaching of Baseball 2(2-0)
PES 374 - Coaching of Football 2(2-0)
PES 375 - Coaching Fastpitch Softball 2(2-0)
PES 376 - Coaching Soccer 2(2-0)
PES 378 - Coaching Volleyball 2(2-0)
PES 401 - Fundamentals of Motor Learning 3(3-0)
PES 485 - Theoretical Foundations of Strength and Conditioning 3(3-0)
PES 570 - Advanced Coaching in Basketball 2(2-0)
PES 572 - Advanced Coaching in Baseball 2(2-0)
PES 574 - Advanced Coaching of Football 2(2-0)

Total: 20 semester hours

Athletic Coaching Endorsement

The athletic coaching endorsement consists of 12 hours as outlined below. The endorsement is recommended for students who do not have a major or minor in physical education but are interested in coaching in a public school, private school, recreation program or community athletic program.

Required Courses (8 hours)
HSC 205 - Responding to Emergencies 2(1-2)
PES 311 - Psychology of Coaching 3(3-0)
PES 560 - Principles and Foundations of Coaching 3(3-0)

Electives I (2-4 hours)
Select from the following:
PES 366 - Coaching of Track and Field 2(2-0)
PES 368 - Coaching and Officiating of Wrestling 2(1-2)
PES 370 - Coaching of Basketball 2(2-0)
PES 372 - Coaching of Baseball 2(2-0)
PES 374 - Coaching of Football 2(2-0)
PES 378 - Coaching Volleyball 2(2-0)
PES 390 - Practicum in Physical Education and Coaching 1-3(Spec)
PES 570 - Advanced Coaching in Basketball 2(2-0)
PES 572 - Advanced Coaching in Baseball 2(2-0)
PES 574 - Advanced Coaching of Football 2(2-0)

Electives II (0-2 hours)
Selected from above or from the following to complete a minimum of 12 hours for the endorsement:
PED 189 - Weight Training and Conditioning 2(Spec)
PES 167 - Track and Field - Running Events 1(Spec)
PES 170 - Fundamentals of Basketball 1(Spec)
PES 172 - Fundamentals of Baseball and Softball 1(Spec)
PES 174 - Fundamentals of Football 1(Spec)
PES 178 - Power Volleyball 1(Spec)
PES 224 - WSI-Swimming and Water Safety 3(2-2)
PES 245 - Gymnastics 3(Spec)
PES 279 - Sport First Aid 2(2-0)
PES 304 - Youth Sports 2(2-0)
PES 401 - Fundamentals of Motor Learning 3(3-0)
PES 485 - Theoretical Foundations of Strength and Conditioning 3(3-0)

Total: 12 semester hours
School of Rehabilitation and Medical Sciences

(PHA, PTH, ATR)

For information, please contact the Athletic Training Program, HPB 2212, 989-774-1054; Physician Assistant Program, HPB 1222, 989-774-2478 or the Physical Therapy Program, HPB 1232, 989-774-2347; https://www.cmich.edu/colleges/CHP/Pages/default.aspx

Programs at CMU

The School of Rehabilitation and Medical Science includes the undergraduate program in Athletic Training and graduate programs in Physical Therapy and Physician Assistant Studies. The graduate program in Physical Therapy is a three-year professional program that offers a Doctor of Physical Therapy in Physical Therapy. The Physician Assistant Studies program is a 27-month program that offers a Master of Science degree.

For a detailed description of admissions requirements, prerequisite coursework and the professional curriculum for graduate programs, please consult the Bulletin of the College of Graduate Studies. See also the Pre-Professional Studies section in the Undergraduate Bulletin for Pre-Physical Therapy and Pre-Physician Assistant programs or visit www.chp.cmich.edu.

The Faculty

John Andraka, Elaine Betts, Jessica Gardon-Rose, Karen Grossnickle, Ahmad Hakemi, Linda Hall, Molly A. Jennings, Lixin Li, Blaine Long, John Lopes, Peter Loubert, Beth A. McGuire, Kevin Miller, Elizabeth Mostrom, Janice Perkins, Jennifer Sansom, René Revis Shingles, Deborah Silkwood-Sherer, Erin Sherer, Ksenia Ustinova, Kristin Vanderark, Denise Webster, Emily Webster, J. Timothy Zipple

Athletic Training Major

B.S.A.T degree

The goal of the Athletic Training major is to prepare students to become Board of Certification (BOC) certified athletic trainers (ATC®). Accredited by the Commission on Accreditation of Athletic Training Education (CAATE), upon completion of this major and CMU’s graduation requirements students will be eligible to apply for the Board of Certification, Inc. (BOC) national certification examination for athletic trainers.

Students intending to pursue this major are encouraged to meet with an athletic training faculty advisor early in their academic career to assure they understand the requirements for selection, and the commitment and rigor of the professional phase. Additional information regarding the athletic training major can be viewed at the program’s web site.

Admission Requirements, Retention & Termination Standards

Pre-Professional Phase/Selection Criteria

All students must meet specific Selection Criteria and Technical Standards to be considered for selection and therefore continue to the professional phase. Selection into the professional phase of the major is competitive. A maximum of sixteen students are selected per semester. Students must achieve an overall minimum of 318.5 points in order to be considered for selection. Each student will have two opportunities to be considered for selection. Signing the major in athletic training is completed after the student is selected to the professional phase.

1. Practical Experience. Prior to entering ATR 280 and a component of the Selection Application Packet, students must complete a MINIMUM OF 120 HOURS of practical experience in an athletic training or sports medicine related setting. Examples of settings include, but are not limited to:
   - Sports Medicine or Rehabilitation Clinic
   - Corporate or Industrial Injury Care/Rehabilitation Facility,
   - High School
   - College or University.

   Note: Only 30 hours (of the minimum 120) may be counted from a college or university venue.

2. Application Packet. Selection Application Packets must be downloaded from the AT website.

   Submission Deadline: On or before the first class meeting as enrolled in ATR 280.

   Packets will not be accepted past the deadline. Students who have submitted late, incomplete, or improper packets will be administratively dropped from ATR 280 for that semester. A selection opportunity will not be counted against the student and the student will need to apply in a subsequent semester.

3. Grade of CR in ATR 280 Field Experience in Athletic Training.

   Students who receive a NC in this class are removed from the list of eligible candidates for that semester. The student is charged a selection opportunity.

4. Overall GPA. Maximum of 60 points (per 1/100th GPA). Calculated from all courses taken at Central Michigan University.

5. Pre-Professional Courses GPA. Maximum of 120 points (per 1/100th GPA). As calculated from all pre-professional phase courses. Pre-professional selection courses include: ATR 100, ATR 200, ATR 280, CHM 120 & 127, HSC 211, HSC/PE5 212, PHL 105, PSY 100, STA 282QR.

(continued)
6. Directed Observation Staff Evaluation. Maximum 120 points (60 points per evaluation). One staff evaluation is completed by the assigned certified athletic trainer and professional phase athletic training students per six week directed observation rotation during the ATR 280 semester. The student is assigned two different rotations during the semester, which will provide for two different staff evaluations.

7. Selection Interview. Maximum 60 points. The interview will assess traits such as professional motivation, interpersonal skills, integrity and orientation to the field as a future health care provider. The interview will be conducted at a specified appointment time between the 8th and 10th week of classes during the ATR 280 semester.

8. Proficiency Written Examination. Maximum 80 points. The student will take the written exam during the last week of classes during the ATR 280 semester.

9. Proficiency Skill Test. Maximum 50 points. The student will take the skills portion of the exam at a specified appointment time during the last week of classes during the ATR 280 semester.

Professional Phase/Retention & Termination Standards:
The professional phase is a 4-semester, cohort-based sequence of courses and clinical field experiences. Students must continue to meet program Retention Criteria and Technical Standards to maintain status in the professional phase. Consequences for non-compliance have been determined and could include probation, suspension or dismissal from the program.

1. Academic Standards.
   a. Maintain at least a 2.8 overall cumulative GPA.
   b. Maintain at least a 3.1 cumulative major GPA.


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**Required Courses (40 hours)**
- ATR 100 - Foundations of Athletic Training 3(3-0)
- ATR 200 - Functional Anatomy for Athletic Trainers 3(2-3)
- ATR 280 - Field Experience in Athletic Training 3(Spec)
- ATR 310 - Athletic Training Clinical I 1(Spec)
- ATR 315 - Injury Prevention 2(2-0)
- ATR 320 - Athletic Training Clinical II 1(Spec)
- ATR 380 - Athletic Training Assessment I 3(2-2)
- ATR 381 - Athletic Training Therapeutics I 3(2-2)
- ATR 382 - Athletic Training Assessment II 3(2-2)
- ATR 383 - Athletic Training Therapeutics II 3(2-2)
- ATR 384 - Athletic Training Assessment III 3(3-0)
- ATR 390 - Seminar in Athletic Training 2(2-0)
- ATR 394 - Pharmacology in Athletic Training 2(2-0)
- ATR 430 - Athletic Training Clinical III 1(Spec)
- ATR 440 - Athletic Training Clinical IV 1(Spec)
- ATR 480 - Health Care Administration in Athletic Training 3(3-0)
- FNS 375 - Nutrition and Performance in Athletic Training 3(3-0)

**Total: 40 semester hours**
Mission

The College of Humanities and Social & Behavioral Sciences is a community of individuals who share a dedication to the life of the mind. Its fundamental purpose is to invigorate the intellectual lives of its students, faculty, and staff, and to promote an intellectual orientation in the larger communities it serves. In this spirit, the College challenges everyone to confront new and disturbing ideas with open minds and to reexamine old ideas with fresh eyes. Within the university, the mission of this College is to pursue disciplined inquiry into ideas and values that grow out of human experience, as well as the forces that shape human behavior and interaction. Since these areas of study - together with the natural sciences and the fine arts - are fundamental to the liberal arts, the College plays a crucial role in liberal arts education. The College also teaches students to apply their knowledge to the resolution of human problems in the world at large, thereby preparing them for professions in which they will contribute to the well-being of others.

Goals

In order to fulfill all of these purposes, the College shall:
• provide high quality academic programs that develop the understandings and skills necessary for living in a complex and changing world;
• immerse the academic community in a multicultural and international environment;
• support programs of research and creative endeavors that add to our understanding of the human situation;
• share knowledge and skills with the larger community through service;
• attract and develop a diverse community of faculty, staff, and students;
• provide quality graduate programs whose graduates make important contributions to the discipline and to society.

Areas of Study

Departmental

The eight departments in the College offer a wide spectrum of degree programs at CMU. Most fields of study lead to a major or minor, many with emphases and concentrations. The departments and their primary fields of study are:
• English Language and Literature (English, Creative Writing, World Literature, Children and Young Adult Literature, English as a Second Language)
• Foreign Languages, Literatures and Cultures (French, German, Spanish, and coursework in Japanese, Latin, Russian, Ojibwe)
• History
• Military Science
• Philosophy and Religion
• Political Science and Public Administration (Political Science, International Relations, Public Administration)
• Psychology

See the index of this Bulletin for more information on each of the above programs. The staff of the College of Humanities and Social & Behavioral Sciences office can also help you locate the appropriate department and advisor (Anspach 106; 989-774-3341).

Programs for Education Degrees

Four departments in the College also offer majors or minors under the Bachelor of Science in Education degree. Majors with secondary certification include English, history, French, German, and Spanish. Other teacher education certifications can be earned in elementary education, elementary special education, secondary education, and secondary special education. Each of these programs has specific minor and major requirements, some of which are found in the College of Humanities and Social & Behavioral Sciences.

If you are interested in any of the programs leading to teacher certification, consult both the specific department of choice in the Bulletin and the sections on degree programs and teacher certification.
Interdisciplinary Studies
The College is home of several interdisciplinary majors and minors, including a cutting-edge major in neuroscience that combines coursework across the disciplines of psychology, biology, chemistry and health professions. Other interdisciplinary majors are Language Arts, Women's Studies, and Social Science. An interdisciplinary minor is available in Women's Studies.

Undergraduate Certificates in African and African Diaspora Studies, American Indian Studies, Cultural Competency, East Asian Studies, European Studies, and Middle East and Islamic Studies are also offered. See the index for more information.

Courses offered under the designators HUM, LAR, and SSC are also interdisciplinary in character. See their descriptions in the Course Description section of the Bulletin.

Pre-Professional Studies
Professional programs such as law require certain basic preparatory work for acceptance into law school. Students should select a program of study that is strong in oral and written expression and fosters critical thinking skills and a critical understanding of the human institutions and values with which the law deals. There is no specific pre-law major, but Central Michigan University’s College of Humanities and Social & Behavioral Sciences can provide much of the needed preparation for law school admissions.

Graduate Programs
Six departments in the college offer graduate programs at the masters and/or doctoral level. The English Department offers three masters level programs: M.A. in English Language and Literature (also with a concentrations in Creative Writing or Children's/Young Adult Literature), M.A. in Composition and Communication, and M.A. in Teaching English to Speakers of Other Languages (TESOL). Foreign Languages offers a unique M.A. program in Spanish designed to enhance fluency, foster interaction with Hispanic cultures, broaden knowledge, and promote professional development. Courses are offered on weekends and summers, and students experience two study abroad placements.

History offers a traditional M.A. and a joint M.A. and Ph.D. program offered in association with a partner institution abroad. Graduate programs in political science include the Masters of Public Administration and a traditional M.A. in political science. The department also offers courses contributing to a concentration in public administration in the Master of Science in Administration.

Psychology's graduate programs include two masters level programs, a specialist degree, and four doctoral programs. They are the Master of Science in General/Experimental Psychology, a Master of Arts in Industrial/Organizational Psychology, a Specialist in Psychological Services in School Psychology, and Ph.D. programs in Clinical Psychology, School Psychology, Industrial/Organizational Psychology, and Applied Experimental Psychology.

Accelerated Degrees
Master's degrees with accelerated programs for undergraduate students include the M.A. in History, Political Science, and Experimental Psychology for highly motivated students. Students in these programs accelerate their careers by undertaking graduate work toward the traditional Masters degree concurrently with undergraduate work, as specified in the program of study and approved by the department and College of Graduate Studies.

Student Organizations
Nearly three dozen student organizations are affiliated with programs in the College of Humanities and Social & Behavioral Sciences. Among those groups are honor societies in English, foreign languages, history, military science, and psychology.

Other groups open to interested students include a literary journal; French, German, Japanese, and Spanish culture clubs; a variety of groups affiliated with military science; a pre-law organization that assists students in preparing for the LSAT; history, political science, social work, sociology, and psychology interest groups. Organizations schedule speakers and workshops, host annual meetings and initiations, sponsor educational travel, and engage in social activities. Dues and membership requirements vary. Contact the particular department or the Dean's Office (Anspach 106) for a listing of organizations affiliated with the college. Additional information is also available on the college webpage at www.chsbs.cmich.edu.
General statements that apply to English Majors and Minors

1. The number of hours in special topics electives may not exceed six hours for English majors and three hours for English minors. Correspondence credit and independent study in English are restricted to nine hours for the major and six hours for the minor.

2. The department supports the concept of advanced placement as well as exemption from required courses and credit earned through approved university examination programs.

3. ENG 070 to ENG 100, ENG 101, ELI 198, ELI 199, ENG 103/099 and ENG 201 do not apply on a major or minor.

4. To be admitted to student teaching, English majors and minors earning a B5 in Education must have a cumulative GPA of 3.0 in all required English classes, as well as a cumulative GPA of 3.0 in four of the core courses: ENG 311, ENG 319, ENG 371, and ENG 580. All required coursework must be completed before student teaching, and any repeated coursework in English must be completed at CMU.
Majors and Minors

English Major

B.S. in Ed. degree, Provisional Secondary Certification or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

See the General statements that apply to English majors and minors at the beginning of this section.

Core Courses (9 hours)
ENG 175 - The Nature of Language 3(3-0)
ENG 234 - Introduction to Literary Analysis 3(3-0)
ENG 460 - Senior Seminar: Current Issues in English 3(3-0)

Required Courses I (16 hours)
ENG 311 - Teaching Literature in the Secondary School 3(3-0)
ENG 319 - Teaching Composition in the Secondary School 4(3-1)
ENG 349 - Shakespeare 3(3-0)
ENG 371 - Teaching Grammar 3(3-0)
ENG 580 - Literature for Young Adults 3(3-0)

Required Courses II (3 hours)
Select one from the following:
ENG 251 - American Literature: Colonial Through the Romantic Period 3(3-0)
ENG 252 - American Literature: Realistic Period to the Present 3(3-0)

Required Courses III (3 hours)
Select one from the following:
ENG 235 - English Literature: Beginning to Romantic Period 3(3-0)
ENG 236 - British Literature 3(3-0)
ENG 261 - Masterpieces of Ancient Literature 3(3-0)
ENG 262 - European Literatures 3(3-0)

Required Courses IV (3 hours)
Select one from the following:
ENG 321 - 20th Century British and American Poetry 3(3-0)
ENG 327/WS 327 - Women Writers 3(3-0)
ENG 332 - Contemporary Literature and Thought 3(3-0)
ENG 336 - Topics in Early Modern Literature 3(3-0)
ENG 337 - Topics in Romantic or Realist Literature 3(3-0)
ENG 339 - Victorian Literature and Thought 3(3-0)
ENG 340 - Modern British Literature 3(3-0)
ENG 351 - American Literature: Colonial and Early National Periods 3(3-0)
ENG 352 - American Literature: Romantic Period 3(3-0)
ENG 353 - American Literature: Realistic Period 3(3-0)
ENG 354 - American Literature: Modern Period 3(3-0)
ENG 362 - Literature of the Medieval World 3(3-0)
ENG 439 - English Romantic Poetry and Prose 3(3-0)
ENG 441 - Contemporary English Prose 3(3-0)
ENG 442 - The British Novel 3(3-0)
ENG 454 - Contemporary American Prose 3(3-0)
ENG 455 - The American Novel 3(3-0)

Required Courses V (3 hours)
Select one from the following:
ENG 328 - Native American Literature and Film 3(3-0)
ENG 329 - African American Literature 3(3-0)
ENG 333 - Literatures of Non-Western Cultures 3(3-0)

Required Courses VI (3 hours)
Select one from the following:
ENG 334 - Literary and Cultural Theory 3(3-0)
ENG 345 - Studies in Authors 3(3-0)
ENG 435 - Studies in Texts 3(3-0)

Electives (3 hours)
Choose 3 hours of ENG courses.

Total: 43 semester hours

English Minor

B.S. in Ed. degree, Provisional Secondary Certification or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

See the General statements that apply to English majors and minors at the beginning of this section.

Core Courses (9 hours)
ENG 175 - The Nature of Language 3(3-0)
ENG 234 - Introduction to Literary Analysis 3(3-0)
ENG 349 - Shakespeare 3(3-0)

Required Courses I (13 hours)
ENG 311 - Teaching Literature in the Secondary School 3(3-0)
ENG 319 - Teaching Composition in the Secondary School 4(3-1)
ENG 371 - Teaching Grammar 3(3-0)
ENG 580 - Literature for Young Adults 3(3-0)

Required Courses II (3 hours)
Select one of the following:
ENG 251 - American Literature: Colonial Through the Romantic Period 3(3-0)
ENG 252 - American Literature: Realistic Period to the Present 3(3-0)

Required Courses III (3 hours)
Select one of the following:
ENG 235 - English Literature: Beginning to Romantic Period 3(3-0)
ENG 236 - British Literature 3(3-0)
ENG 261 - Masterpieces of Ancient Literature 3(3-0)
ENG 262 - European Literatures 3(3-0)

Total: 28 semester hours

English Literatures, Language, and Writing Major

B.A., B.S. degrees

See the General statements that apply to English majors and minors at the beginning of this section.

Required Courses I (9 hours)
ENG 234 - Introduction to Literary Analysis 3(3-0)
ENG 334 - Literary and Cultural Theory 3(3-0)
ENG 435 - Studies in Texts 3(3-0)

Required Courses II (3 hours)
Select one of the following:
ENG 271 - Modern Grammar 3(3-0)
ENG 375 - Introduction to Linguistics 3(3-0)

Required Courses III (3 hours)
Select one of the following:
ENG 294 - Introduction to Creative Writing 3(3-0)
ENG 301 - Nonfiction Writing 3(3-0)
ENG 303 - Technical Writing 3(3-0)

Required Courses IV (12 hours)
Note: In Required Courses IV, students must take at least one course in each of the following traditions:
A = American  B = British  C = World

Courses in Category IV.a. will be offered in sections designated as A, B, or C; for example, ENG 336 Topics in Early Modern Literature may focus on American literature (section 336A), British literature (section 336B) or World literature (section 336C). Students may not satisfy the requirements for Category IV. by repeating the same course number with a different section (e.g., cannot use both ENG 336A and 336B). Repeated course numbers with sections may count as electives.

Courses in Category IV.b. will not have specific A, B, and C sections:
ENG 329 satisfies the A requirement (American); ENG 325, 328, 330, and 333 satisfy the C requirement (World); ENG 327 and 381 do not fulfill A, B, or C requirements.
IV. a. Historical Periods (9 hours)
- ENG 335 - Topics in Ancient or Medieval Literature 3-6(3-0)
- ENG 336 - Topics in Early Modern Literature 3-9(3-0)
- ENG 337 - Topics in Romantic or Realist Literature 3-9(3-0)
- ENG 338 - Topics in Modern or Contemporary Literature 3-9(3-0)

Note: ENG 335 offered only with sections labelled B or C.

IV. b. Comparative Cultural and Literary Traditions (3 hours)
Select one of the following:
- ENG 325 - Folktale 3(3-0)
- ENG 327/WST 327 - Women Writers 3(3-0)
- ENG 328 - Native American Literature and Film 3(3-0)
- ENG 329 - African American Literature 3(3-0)
- ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)
- ENG 333 - Literatures of Non-Western Cultures 3(3-0)
- ENG 381 - Children's Literature 3(3-0)

Electives (12 hours)
Select 12 hours of ENG courses, with at least 6 hours at the 400 or 500 level; no more than 3 hours of 100-level ENG courses may count toward electives.

OR
Students may specialize in a particular area by choosing one of the following specializations, with at least 6 hours at the 400 or 500 level.

Specialization 1: Creative Writing (12 hours)
Select ENG 294 (required) plus 9 additional hours from the following:
- ENG 294 - Introduction to Creative Writing 3(3-0)
- ENG 391 - Creative Writing: Fiction 3(3-0)
- ENG 392 - Creative Writing: Poetry 3(3-0)
- ENG 491 - Advanced Fiction Writing 3-6(3-0)
- ENG 492 - Advanced Poetry Writing 3-6(3-0)
- ENG 493 - Creative Nonfiction 3(3-0)

Specialization 2: Nonfiction Writing (12 hours)
Select 12 credit hours from:
- ENG 301 - Nonfiction Writing 3(3-0)
- ENG 303 - Technical Writing 3(3-0)
- ENG 402 - Argumentation and Expository Writing 3(3-0)
- ENG 407 - Expository Writing 3(3-0)
- ENG 503 - Document Design 3(3-0)
- ENG 504 - Technical Editing 3(3-0)
- ENG 514 - Language and Media Discourse 3(3-0)
- ENG 539 - Seminar in Nonfiction Writers 3(3-0)

Specialization 3: World Literature (12 hours)
Select ENG 333 (required) plus 9 additional hours from the following:
- ENG 325 - Folklore 3(3-0)
- ENG 327/WST 327 - Women Writers 3(3-0)
- ENG 328 - Native American Literature and Film 3(3-0)
- ENG 329 - African American Literature 3(3-0)
- ENG 330 - Gods, Monsters, and Immortality: Mythic Literature 3(3-0)
- ENG 333 - Literatures of Non-Western Cultures 3(3-0)
- ENG 335 - Topics in Ancient or Medieval Literature 3-6(3-0)
- ENG 336 - Topics in Early Modern Literature 3-9(3-0)
- ENG 337 - Topics in Romantic or Realist Literature 3-9(3-0)
- ENG 338 - Topics in Modern or Contemporary Literature 3-9(3-0)
- ENG 444 - In Her Own Words: Global Feminist Perspectives 3(3-0)
- ENG 561 - European Romanticism 3(3-0)
- ENG 566 - Human Rights in Literature, Art, and Film 3(3-0)
- ENG 569 - Seminar in Major World Writers 3-9(Spec)

Note: ENG 335, 336, 337, and 338 with sections labeled “C” fulfill the World Literature specialization.

Specialization 4: Children's and Young Adult Literature (12 hours)
Select ENG 381 (required) plus 9 additional hours from the following:
- ENG 381 - Children's Literature 3(3-0)
- ENG 481 - International Literature for Children and Young Adults 3(3-0)
- ENG 482 - Fantasy for Youth 3(3-0)
- ENG 485 - Poetry for Children and Young Adults 3(3-0)
- ENG 580 - Literature for Young Adults 3(3-0)
- ENG 581 - The History of Children's Literature 3(3-0)
- ENG 582 - Cultural Pluralism in Young Adult and Children's Literature 3(3-0)
- ENG 583 - The Heroic Tradition in Children's Literature 3(3-0)

Specialization 5: American and British Literature (12 hours)
Select 12 hours from the following:
- ENG 328 - Native American Literature and Film 3(3-0)
- ENG 329 - African American Literature 3(3-0)
- ENG 335 - Topics in Ancient or Medieval Literature 3-6(3-0)
- ENG 336 - Topics in Early Modern Literature 3-9(3-0)
- ENG 337 - Topics in Romantic or Realist Literature 3-9(3-0)
- ENG 338 - Topics in Modern or Contemporary Literature 3-9(3-0)
- ENG 349 - Shakespeare 3(3-0)
- ENG 442 - The British Novel 3(3-0)
- ENG 455 - The American Novel 3(3-0)
- ENG 545 - Chaucer 3(3-0)
- ENG 547 - Seminar in Major British Writers 3-9(Spec)
- ENG 549 - Advanced Shakespeare 3(3-0)
- ENG 559 - Seminar in Major American Writers 3-9(Spec)
- ENG 570 - Old English 3(3-0)

Note: ENG 335, 336, 337, and 338 with sections labeled A or B fulfill the American and British Literature specialization.

Specialization 6: Applied Linguistics (12 hours)
Select ENG 375 plus 9 additional hours from the following:
- ENG 375 - Introduction to Linguistics 3(3-0)
- ENG 510 - Writing Center Practicum 1-3(Spec)
- ENG 520 - Diachronic Linguistics and the History of English 3(3-0)
- ENG 570 - Old English 3(3-0)
- ENG 571 - Teaching of English to Speakers of Other Languages 3(3-0)
- ENG 574 - TESOL Materials, Assessment, Curriculum 3(3-0)
- ENG 577 - Introduction to Second Language Acquisition 3(3-0)
- ENG 578 - Applied Sociolinguistics 3(3-0)

Note: Two years of foreign language or equivalent recommended.

Total: 39 semester hours

English Minor
B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees

See the General statements that apply to English majors and minors at the beginning of this section.

Required Courses I (6 hours)
- ENG 234 - Introduction to Literary Analysis 3(3-0)
- ENG 349 - Shakespeare 3(3-0)

Required Courses II (3 hours)
Select one of the following:
- ENG 175 - The Nature of Language 3(3-0)
- ENG 234 - Introduction to Literary Analysis 3(3-0)
- ENG 349 - Shakespeare 3(3-0)
- ENG 570 - Old English 3(3-0)
Required Courses III (6 hours)
Two of the following:
- ENG 235 - English Literature: Beginning to Romantic Period (3-0)
- ENG 236 - British Literature (3-0)
- ENG 251 - American Literature: Colonial Through the Romantic Period (3-0)
- ENG 252 - American Literature: Realistic Period to the Present (3-0)
- ENG 261 - Masterpieces of Ancient Literature (3-0)
- ENG 262 - European Literatures (3-0)

Required Courses IV (3 hours)
Select one of the following:
- ENG 321 - 20th Century British and American Poetry (3-0)
- ENG 327/WST 327 - Women Writers (3-0)
- ENG 332 - Contemporary Literature and Thought (3-0)
- ENG 336 - Topics in Early Modern Literature (3-0)
- ENG 337 - Topics in Romantic or Realist Literature (3-0)
- ENG 339 - Victorian Literature and Thought (3-0)
- ENG 340 - Modern British Literature (3-0)
- ENG 351 - American Literature: Colonial and Early National Periods (3-0)
- ENG 352 - American Literature: Romantic Period (3-0)
- ENG 353 - American Literature: Realistic Period (3-0)
- ENG 354 - American Literature: Modern Period (3-0)
- ENG 362 - Literature of the Medieval World (3-0)
- ENG 439 - English Romantic Poetry and Prose (3-0)
- ENG 441 - Contemporary English Prose (3-0)
- ENG 442 - The British Novel (3-0)
- ENG 454 - Contemporary American Prose (3-0)
- ENG 455 - The American Novel (3-0)

Electives (6 hours)
Select six (6) hours of ENG courses.

Total: 24 semester hours

English as a Second Language Minor

Admission Requirements, Retention & Termination Standards

To receive an English as a Second Language Minor, students must complete a program of 24 credit hours. In addition, they must have two years (or the equivalent) of college level experience in learning a foreign language. For students who are nonnative speakers of English, evidence of language proficiency in English is required. This may be demonstrated by one of a-d below.

a. TOEFL score of IBT 79 and a TWE (or computer-based essay) score of 5.0,
b. Equivalency scores for TOEFL and TWE on the CMU ELI Placement Test Series,
c. Successful completion of a course of study (e.g., high school diploma) in which the language of instruction is English,
d. Successful completion of at least twelve credit hours of work in a recognized undergraduate program in which the language of instruction is English.

Nonnative speakers of English whose TOEFL scores are between 61 and 79 IBT and/or whose TWE (or computer-based essay) scores are between 4.0 and 5.0 may be admitted conditionally. All such applicants will be asked to take the CMU ELI Placement Test Series when they arrive at CMU, and may be asked to take courses in the English Language Institute depending on their performance on that test.

Required Courses I (15 hours)
- ENG 175 - The Nature of Language (3-0)
- ENG 375 - Introduction to Linguistics (3-0)
- ENG 571 - Teaching of English to Speakers of Other Languages (3-0)
- ENG 574 - TESOL Materials, Assessment, Curriculum (3-0)
- ENG 577 - Introduction to Second Language Acquisition (3-0)

Required Courses II (3 hours)
- ENG 578 - Applied Sociolinguistics (3-0)

Electives I (3 hours)
Select one of the following:
- CDO 130 - Normal Speech and Language Acquisition (3-0)
- ENG 573 - Linguistics and Reading (3-0)

Electives II (3 hours)
Select one of the following:
- COM 195 - Intercultural Communication (3-0)
- SPE 550 - Teaching Culturally Diverse Students (3-0)

Total: 24 semester hours

Undergraduate Certificate in Creative Writing

Minimum Totals for Graduation: 15 hours

This 15-credit-hour certificate is designed for undergraduate students who desire to gain greater competency in the writing of poetry, fiction, and/or creative nonfiction. It also prepares students to study creative writing at the graduate level. 15 hours chosen from the following:

Required Courses I (6 hours)
- ENG 234 - Introduction to Literary Analysis (3-0)
- ENG 294 - Introduction to Creative Writing (3-0)

Required Courses II (3-6 hours)
Students may focus in poetry, prose, or both by selecting 3-6 hours from the following:
- ENG 301 - Nonfiction Writing (3-0)
- ENG 391 - Creative Writing: Fiction (3-0)
- ENG 392 - Creative Writing: Poetry (3-0)

Required Courses III (3-6 hours)
Students may focus in poetry, prose, or both by selecting 3-6 hours from the following:
- ENG 491 - Advanced Fiction Writing (3-6)
- ENG 492 - Advanced Poetry Writing (3-6)
- ENG 493 - Creative Nonfiction (3-6)

Note: Take either ENG 491, 492, or 493; the selected course may be repeated up to six hours.

Total: 15 semester hours

Note: All creative writing courses have prerequisites.
Why Study Foreign Languages, Literatures, and Cultures?

Students who want to develop skills in foreign language teaching, interpreting, and translating will pursue studies in this area. These studies are also for students who want to use language as an auxiliary skill. Wider employment opportunities are available for those who combine knowledge of a foreign language with majors such as: anthropology, broadcast and cinematic arts, business and administration, counselor education, journalism, library science, political science, social work, travel, tourism, and hospitality. Foreign languages should also be considered by students who plan on attending graduate or professional schools, entering the Foreign Services, those wishing to gain a greater understanding of their cultural heritage, and those who want to enrich their leisure time pursuits.

Foreign Languages, Literatures, and Cultures at CMU

Students with no previous language experience in French, German, or Spanish should begin with a language course numbered 101. Students with previous language experience must take the placement exam. In each language the course sequence is 101, 102, 201, 202. If you have any questions regarding your placement, contact an advisor. Advisors are:

- for French: Brookes, Ennaïli, Ransom;
- for German: Jones, Lein, Richter;
- for Japanese: Richardson;
- for Spanish (Education): Knight, Murray, and Richardson;
- For Spanish (BA, BS): Chouza-Calo, Gutiérrez-Rivas, Hurtado, Jackson, Kulawik, Mendoza-Farías, Rengifo.

Study Abroad

Students can register at CMU to study abroad at the following institutions:

- **French** - in Rennes at the University of Haute-Bretagne; in Angers at the Centre International d’Etudes Françaises; in Montpellier at the Institut des Langues Étrangères; in Canada at the University of Quebec at Chicoutimi. CMU and the University of Quebec at Chicoutimi offer a joint scholarship of $600 for study during the five week immersion program. This grant is for majors or minors in French to study at UQAC.

- **German** - one semester-long program with USAC in Lüneburg, Germany, for 12 credits in German. During the spring semester only students may study in Bielefeld, Germany for 12 credits of German with a stay in German host families. There are summer programs available with FUBIS in Berlin and at various Goethe Institutes throughout Germany. In addition, we offer three exchange scholarships to eligible majors in German for a year’s study at a German university. The scholarship includes tuition, room and board, and spending money for the entire year.

- **Japanese** - in Hikone at the Japan Center for Michigan Universities, and in Nara at Nara University of Education.

- **Spanish** - in Spain: the University of Alicante, Cursos Americanos e Internacionales (Segovia); in the Dominican Republic: ISA (Santo Domingo); in Chile: the Pontificia Universidad Católica (Valparaíso); in México: ITESM (Querétaro); in Argentina: Universidad del Salvador, Universidad Torcuato di Tella, and the UADE (Buenos Aires); in Ecuador: the Universidad San Francisco de Quito; in Costa Rica: Conversa (Santa Ana) and Veritas (San José).

- **Arabic and Chinese**: Study abroad opportunities are also available for those studying Arabic and Chinese.

Credit for courses abroad is arranged in consultation with advisors from the foreign language faculty and the director of the Office of International Affairs. Guaranteed student loans, Pell grants and other financial aid plans are available for programs abroad.

The Faculty

N. Christine Brookes, Marí Chouza-Calo, Cynthia Davis, Leila Ennaïli, Adrian Flores-Barrera, Carolina Gutierrez-Rivas, Luz Marcela Hurtado, Mary-Garland Jackson, James Jones, Susan Knight, Krzysztof Kulawik, Janet D. Lein, Roberto Mendoza-Farias, Lorrie Murray, Amy Ransom, Alejandra Rengifo, Norma H. Richardson, Daniela Richter, Daniela Teoadorescu, Taryn Waters

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**French Language**

**Admission Requirements, Retention & Termination Standards**

The sequence 101–102-201–202 provides the basis for all advanced study in French. Without previous language experience, prospective majors and minors begin with 101. Students who have previously studied French must take the placement test. They are placed higher in the sequence based on previously attained skills in French. For placement questions contact the department.

**Notes:**

- All French majors are required to take nine hours of language at the 300 level or above on campus.
- One course at the 300 level or 400 level taken on a CR/NC basis may be counted toward a major or minor.
- **CLEP:** The department accepts up to four credit hours of CLEP credit per language.
- **Advanced Placement:** Credit is given for a score of three or above; a score of five requires a departmental review and an interview with the student.
International Baccalaureate: Credit is given for a score of three or above after a departmental review of each case and an interview with the student.

Transfer Students majoring in French must earn at least nine credit hours in their major at CMU; those minoring must earn at least six credit hours in their minor at CMU. These hours must be taken on campus.

Retroactive Credit: Students who enroll in an entry level course (102, 201, 202), or a course beyond 202 (FRN 315 or 316), and receive a B (3.0) or better are eligible for up to 8 hours of retroactive credit. To qualify, students must be enrolled at the level determined by their score on the placement test, or at a higher level. This must be the student’s first college-level course in this language. Earned credits count toward the University Program, but retroactive credits do not.

B.S.Ed. degree, Provisional Elementary or Secondary Certification or Provisional Elementary or Secondary Certification with Emotional or Cognitive Impairment Endorsement:

For admission to student teaching in French, the B.S. in Ed. degree option requires students to pass the ACTFL Oral Proficiency Interview in French at the Advanced-Low level and have a GPA of 3.0 in French. FRN 411, 412, 421, and 422 are not courses in language studies and are not considered in the GPA.

French Major

B.S. in Ed., Provisional Elementary or Secondary Certification

At least 34 hours of FRN courses at the 300 level or above.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
See the information at the beginning of the French section.

Core Courses (6 hours)
FRN 315 - Conversation and Composition I 3(3-0)
FRN 316 - Conversation & Composition II 3(3-0)

Required Courses I (15 hours)
Select courses in French and Francophone culture and/or literature from:
FRN 320 - French Civilization 3(3-0)
FRN 321 - France Today 3(3-0)
FRN 330 - Survey of French Literature (Beginning to 1800) 3(3-0)
FRN 331 - Survey of French Literature (1800 to Present) 3(3-0)
FRN 333 - Francophone Literature and Culture 3(3-0)
FRN 350 - French and Francophone Film 3(3-0)
FRN 353 - Youth Literature in French 3(3-0)
FRN 391 - Topics in French and Francophone Cultures 1-12(Spec)
FRN 420 - Literature and Culture of Quebec 3(3-0)
FRN 591 - Advanced Topics in French and Francophone Culture 1-6(Spec)

Required Courses II (3-6 hours)
Select one of the following for a minimum of 3 hours:
FRN 310 - Study Abroad 1-18(Spec)
FRN 410 - Study Abroad 1-12(Spec)

Note: Students unable to study abroad may substitute FRN 370 (3) and one other three credit French course at the 300 level or above, with the approval of a French faculty advisor.

Other Requirements
Select one of the following two options:

Option 1 - Secondary (4-9 hours)

Other Requirements (4 hours)

Required Courses for the B.S. in Ed. Degree, Provisional Secondary Certification
FRN 411 - Practicum in Teaching French 3(2-1)
FRN 412 - Practicum: Secondary Field Experience 1(Spec)

Other Requirements (K-12) (0-5 hours)
Required Courses only if student desires to add K-12 Certification to the B.S. in Ed. degree, Provisional Secondary Certification:
EDU 280 - Education of Children 3(3-0)
FRN 421 - Foreign Language in Elementary Schools 1(1-0)
FRN 422 - Practicum: Elementary Field Experience 1(Spec)

Option 2 - Elementary (5-9 hours)

Other Requirements (5 hours)

Required Courses for the B.S. in Ed. Degree, Provisional Elementary Certification
FRN 411 - Practicum in Teaching French 3(2-1)
FRN 421 - Foreign Language in Elementary Schools 1(1-0)
FRN 422 - Practicum: Elementary Field Experience 1(Spec)

Other Requirements (K-12) (0-4 hours)
Required Courses only if student desires to add K-12 Certification to the B.S. in Ed. degree, Provisional Elementary Certification:
EDU 310 - Psychological Foundations of Education 3(3-0)
FRN 412 - Practicum: Secondary Field Experience 1(Spec)

Electives (6 hours)
Select electives at 300 level or above.
Total: 34-38 semester hours
With additional requirements for K-12 certification (4-5 hours):
Total: 38-43 semester hours

French Major

B.A.; B.S. degrees

At least 30 hours of FRN courses at the 300 level or above.

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
See the information at the beginning of the French section.

Core Courses (6 hours)
FRN 315 - Conversation and Composition I 3(3-0)
FRN 316 - Conversation & Composition II 3(3-0)

Required Courses I (15 hours)
Select courses in French and Francophone culture and/or literature from:
FRN 320 - French Civilization 3(3-0)
FRN 321 - France Today 3(3-0)
FRN 330 - Survey of French Literature (Beginning to 1800) 3(3-0)
FRN 331 - Survey of French Literature (1800 to Present) 3(3-0)
FRN 333 - Francophone Literature and Culture 3(3-0)
FRN 350 - French and Francophone Film 3(3-0)
FRN 353 - Youth Literature in French 3(3-0)
FRN 391 - Topics in French and Francophone Cultures 1-12(Spec)
FRN 420 - Literature and Culture of Quebec 3(3-0)
FRN 591 - Advanced Topics in French and Francophone Culture 1-6(Spec)

Required Courses II (3-6 hours)
Select one of the following for a minimum of 3 hours:
FRN 310 - Study Abroad 1-18(Spec)
FRN 410 - Study Abroad 1-12(Spec)

Note: Students unable to study abroad may substitute FRN 370 (3) and one other three credit French course at the 300 level or above, with the approval of a French faculty advisor.

Other Requirements
Select one of the following two options:

Option 1 - Secondary (4-9 hours)

Other Requirements (4 hours)

Required Courses for the B.S. in Ed. Degree, Provisional Secondary Certification
FRN 411 - Practicum in Teaching French 3(2-1)
FRN 412 - Practicum: Secondary Field Experience 1(Spec)

Other Requirements (K-12) (0-5 hours)
Required Courses only if student desires to add K-12 Certification to the B.S. in Ed. degree, Provisional Secondary Certification:
EDU 280 - Education of Children 3(3-0)
FRN 421 - Foreign Language in Elementary Schools 1(1-0)
FRN 422 - Practicum: Elementary Field Experience 1(Spec)

Option 2 - Elementary (5-9 hours)

Other Requirements (5 hours)

Required Courses for the B.S. in Ed. Degree, Provisional Elementary Certification
FRN 411 - Practicum in Teaching French 3(2-1)
FRN 421 - Foreign Language in Elementary Schools 1(1-0)
FRN 422 - Practicum: Elementary Field Experience 1(Spec)

Other Requirements (K-12) (0-4 hours)
Required Courses only if student desires to add K-12 Certification to the B.S. in Ed. degree, Provisional Elementary Certification:
EDU 310 - Psychological Foundations of Education 3(3-0)
FRN 412 - Practicum: Secondary Field Experience 1(Spec)

Electives (6 hours)
Select electives at 300 level or above.
Total: 34-38 semester hours
With additional requirements for K-12 certification (4-5 hours):
Total: 38-43 semester hours
French Major

Professional French Concentration
B.A.; B.S. degrees

At least 30 hours at the 300 level or above.

The French Major: Professional French Concentration is designed for students of French who expect to use their French as an adjunct skill in their professional life outside academe. Ordinarily this will be students of business, but it also includes students planning to enter professions as wide-ranging as government work, journalism, the health professions, apparel design and merchandising, and others. Students enrolled in the program are required to spend a full semester abroad, during which time they will complete an internship in an appropriate and approved professional setting where French is the language of work.

Admission Requirements, Retention & Termination Standards
See the information at the beginning of the French section.

Core Courses (6 hours)
FRN 315 - Conversation and Composition I 3(3-0)
FRN 316 - Conversation & Composition II 3(3-0)

Required Courses I (9 hours)
Three courses from the following, to be selected in consultation with a French advisor:
FRN 320 - French Civilization 3(3-0)
FRN 321 - France Today 3(3-0)
FRN 335 - French for Business 3(3-0)
FRN 350 - French and Francophone Film 3(3-0)
FRN 353 - Youth Literature in French 3(3-0)
FRN 391 - Topics in French and Francophone Cultures 1-12(Spec)
FRN 420 - Literature and Culture of Quebec 3(3-0)

Required Courses II (12 hours)
Completion of this concentration requires one semester of study abroad during which the student will enroll for 12 credits (6 hours each of FRN 310 and FRN 410). The study abroad experience includes participation in an internship.
FRN 310 - Study Abroad 1-18(Spec)
FRN 410 - Study Abroad 1-12(Spec)

Electives (3 hours)
Select 3 hours at the 300 level or above in consultation with an advisor.

Total: 30 semester hours

French Minor

B.A., B.S. degrees

At least 21 hours of FRN courses at the 300 level or above.

Admission Requirements, Retention & Termination Standards
See the information at the beginning of the French section.

Core Courses (6 hours)
FRN 315 - Conversation and Composition I 3(3-0)
FRN 316 - Conversation & Composition II 3(3-0)

Required Courses I (9 hours)
Courses in French and Francophone culture and/or literature from:
FRN 320 - French Civilization 3(3-0)
FRN 321 - France Today 3(3-0)
FRN 330 - Survey of French Literature (Beginning to 1800) 3(3-0)
FRN 331 - Survey of French Literature (1800 to Present) 3(3-0)
FRN 333 - Francophone Literature and Culture 3(3-0)
FRN 350 - French and Francophone Film 3(3-0)
FRN 353 - Youth Literature in French 3(3-0)
FRN 391 - Topics in French and Francophone Cultures 1-12(Spec)
FRN 420 - Literature and Culture of Quebec 3(3-0)
FRN 591 - Advanced Topics in French and Francophone Culture 1-6(Spec)

Required Courses II (3-6 hours)
Select one of the following for a minimum of 3 hours:
FRN 310 - Study Abroad 1-18(Spec)
FRN 410 - Study Abroad 1-12 (Spec)

Note: Students unable to study abroad may substitute FRN 370 (3) and one other 3 credit French course at the 300 level or above, with the approval of a French faculty advisor.

Electives (3 hours)
Select electives at 300 level or above.

Total: 21-24 semester hours

German Language

Admission Requirements, Retention & Termination Standards
The sequence 101-102-201-202 provides the basis for all advanced study in German. Without previous language experience, prospective majors and minors begin with 101. Students who have previously studied German must take the placement test. They are placed higher in the sequence based on previously attained skills in German. For placement questions, contact the department.

Notes:

- All German majors are required to take nine hours of language at the 300 level or above on campus.
- One course at the 300 level or 400 level taken on a CR/NC basis may be counted toward a major or minor.

CLEP: The department accepts up to four credit hours of CLEP credit per language.

Advanced Placement: Credit is given for a score of three or above; a score of five requires a departmental review and an interview with the student.

International Baccalaureate: Credit is given for a score of three or above after a departmental review of each case and an interview with the student.

Transfer Students majoring in German must earn at least nine credit hours in their major at CMU; those minoring must earn at least six credit hours in their minor at CMU. These hours must be taken on campus.

Retroactive Credit: Students who enroll in an entry level course (102, 201, 202), or a course beyond 202 (GER 311 or 312), and receive a B (3.0) or better are eligible for up to 8 hours of retroactive credit. To qualify, students must be enrolled at the level determined by their score on the placement test, or at a higher level. This must be the student’s first college-level course in this language. Earned credits count toward the University Program and the German Minor, but retroactive credits do not.

B.S.Ed. degree, Provisional Elementary or Secondary Certification or Provisional Elementary or Secondary Certification with Emotional or Cognitive Impairment Endorsement:

For admission to student teaching in German, the B.S. in Ed. degree option requires students to pass the ACTFL Oral Proficiency Interview in German at the Advanced-Low level and have a GPA of 3.0 in German. GER 411, 412, 421, and 422 are not courses in language studies and are not considered in the GPA.

German Major

B.S. in Ed. degree, Provisional Elementary or Secondary Certification

At least 34 hours of GER courses at the 300 level or above.

Admission Requirements, Retention & Termination Standards
See information at the beginning of the German section.

Core Courses (9 hours)
GER 311 - Advanced German I 3(3-0)
GER 312 - Advanced German II 3(3-0)
GER 570 - Advanced Grammar and Composition 3(3-0)
Required Courses I (12 hours)
Select courses in German culture and/or literature from:
GER 325 - Modern German Literature in Translation (3-0)
GER 335 - The Culture of the German Economy (2-0)
GER 336 - The Culture of German Business (2-0)
GER 341 - German Cultural History I (3-0)
GER 342 - German Cultural History II (3-0)
GER 343 - Survey of German Literature I (3-0)
GER 344 - Survey of German Literature II (3-0)
GER 345 - Survey of German Literature III (3-0)
GER 347 - German Cultural History III (3-0)
GER 350 - Highlights of German Film (3-0)
GER 370 - Advanced Studies in German (1-24(Spec))
GER 410 - Study Abroad (1-24(Spec))
GER 310 - German Language Study Abroad (1-12(Spec))
GER 409 - German Literature of the Twentieth Century (3-0)
GER 407 - German Literature of the Nineteenth Century (3-0)
GER 405 - German Classicism (3-0)
GER 403 - German Literature to 1776 (3-0)
GER 470 - Advanced Studies in German (1-12(Spec))

Note: GER 370 and 470 can be taken more than once with permission of the advisor.

Required Courses II (3-6 hours)
Select one of the following for a minimum of 3 hours:
GER 310 - German Language Study Abroad 1-12(Spec)
GER 410 - Study Abroad 1-24(Spec)

Note: Students unable to study abroad must take an additional 6 hours of coursework on campus at the 300 level or above to be approved by an advisor.

Other Requirements
Select one of the following two options:
Option 1 - Secondary (4-9 hours)
Other Requirements (4 hours)
Required Courses for B.S. in Ed. Degree, Provisional Secondary Certification
GER 411 - Practicum in Teaching German (3-2-1)
GER 412 - Practicum: Secondary Field Experience (1(Spec))

Other Requirements (K-12) (0-5 hours)
Required Courses only if student desires to add K-12 Certification to the B.S. in Ed. Degree, Provisional Secondary Certification
EDU 280 - Education of Children (3-0)
GER 421 - Foreign Language in Elementary Schools 1(1-0)
GER 422 - Practicum: Elementary Field Experience (1(Spec))

Option 2 - Elementary (5-9 hours)
Other Requirements (5 hours)
Required Courses for B.S. in Ed. Degree, Provisional Elementary Certification
GER 411 - Practicum in Teaching German (3-2-1)
GER 421 - Foreign Language in Elementary Schools 1(1-0)
GER 422 - Practicum: Elementary Field Experience (1(Spec))

Other Requirements (K-12) (0-4 hours)
Required Courses only if student desires to add K-12 Certification to the B.S. in Ed. Degree, Provisional Elementary Certification
EDU 310 - Psychological Foundations of Education (3-0)
GER 412 - Practicum: Secondary Field Experience (1(Spec))

Electives (6 hours)
Electives at the 300 level or above.

Total: 34-38 semester hours
With additional requirements for K-12 certification on B.S. in Ed. degree options (4-5 hours):

Total: 39-42 semester hours

German Major
B.A.; B.S. degree
At least 30 hours of GER courses at the 300 level or above.

Admission Requirements, Retention & Termination Standards
See information at the beginning of the German section.

Core Courses (9 hours)
GER 311 - Advanced German I (3-0)
GER 312 - Advanced German II (3-0)
GER 570 - Advanced Grammar and Composition (3-0)

Required Courses I (12 hours)
Select courses in German culture and/or literature from:
GER 325 - Modern German Literature in Translation (3-0)
GER 335 - The Culture of the German Economy (2-0)
GER 336 - The Culture of German Business (2-0)
GER 341 - German Cultural History I (3-0)
GER 342 - German Cultural History II (3-0)
GER 350 - Highlights of German Film (3-0)
GER 370 - Advanced Studies in German (1-12(Spec))
GER 410 - Study Abroad (1-24(Spec))
GER 310 - German Language Study Abroad (1-12(Spec))
GER 409 - German Literature of the Twentieth Century (3-0)
GER 407 - German Literature of the Nineteenth Century (3-0)
GER 405 - German Classicism (3-0)
GER 403 - German Literature to 1776 (3-0)
GER 470 - Advanced Studies in German (1-12(Spec))

Note: GER 370 and 470 can be taken more than once with permission of the advisor.

Required Courses II (3-6 hours)
Select one of the following for a minimum of 3 hours:
GER 310 - German Language Study Abroad 1-12(Spec)
GER 410 - Study Abroad 1-24(Spec)

Note: Students unable to study abroad must take an additional 6 hours of coursework on campus at the 300 level or above to be approved by an advisor.

Electives (6 hours)
Choose electives at the 300 level or above.

Total: 30-33 semester hours

German Minor
B.A.; B.S. degree
Retroactive credits do not count on the German Minor.

Admission Requirements, Retention & Termination Standards
See information at the beginning of the German section.

Core Courses (14 hours)
GER 201 - Intermediate German I (4-4-0)
GER 202 - Intermediate German II (4-4-0)
GER 311 - Advanced German I (3-0)
GER 312 - Advanced German II (3-0)

Restricted Electives (6 hours)
Select hours from the following:
GER 325 - Modern German Literature in Translation (3-0)
GER 335 - The Culture of the German Economy (2-0)
GER 336 - The Culture of German Business (2-0)
GER 341 - German Cultural History I (3-0)
GER 342 - German Cultural History II (3-0)
GER 343 - Survey of German Literature I (3-0)
GER 344 - Survey of German Literature II (3-0)
GER 345 - Survey of German Literature III (3-0)
GER 347 - German Cultural History III (3-0)
GER 350 - Highlights of German Film (3-0)
GER 370 - Advanced Studies in German 1-12(Spec)
GER 403 - German Literature to 1776 (3-0)
Spanish Major
B.S. in Ed. degree, Provisional Elementary or Secondary Certification

At least 34 hours of SPN courses at the 300 level or above.

Admission Requirements, Retention & Termination Standards

See information at the beginning of the Spanish section.

Core Courses (15 hours)
- SPN 320 - Spanish Pronunciation 3(3-0)
- SPN 331 - Advanced Grammar and Composition 3(3-0)
- SPN 341 - Advanced Spanish Conversation 3(3-0)
- SPN 376 - Culture and Civilization of Spain 3(3-0)
- SPN 377 - Culture and Civilization of Latin America 3(3-0)

Required Courses II (3-6 hours)
- Select one course from the following, plus 3 SPN credits at the 300 level or above and 6 SPN credits at the 400 level or above:
  - SPN 300 - Advanced Studies in Spanish 1-12(Spec)
  - SPN 307 - Study Abroad 1-12(Spec)

Other Requirements (4-9 hours)
- Select one of the following two options:

Option 1 - Secondary (4-9 hours)

Required Courses for B.S. in Ed. Degree, Provisional Secondary Certification
- SPN 411 - Practicum in Teaching Spanish 3(2-1)
- SPN 412 - Practicum: Secondary Field Experience 1(Spec)

Other Requirements II (0-5 hours)
- Required Courses only if student desires to add K-12 Certification to the B.S. in Ed. degree, Provisional Secondary Certification
- EDU 280 - Education of Children 3(3-0)
- SPN 421 - Foreign Language in Elementary Schools 1(Spec)
- SPN 422 - Practicum: Elementary Field Experience 1(Spec)

Option 2 - Elementary (5-9 hours)

Other Requirements I (5 hours)

Required Courses for the B.S. in Ed. Degree, Provisional Elementary Certification
- SPN 411 - Practicum in Teaching Spanish 3(2-1)
- SPN 421 - Foreign Language in Elementary Schools 1(1-0)
- SPN 422 - Practicum: Elementary Field Experience 1(Spec)

Other Requirements II (0-4 hours)
- Required Courses only if student desires to add K-12 Certification to the B.S. in Ed. degree, Provisional Elementary Certification
- EDU 310 - Psychological Foundations of Education 3(3-0)
- SPN 412 - Practicum: Secondary Field Experience 1(Spec)

Total: 34-38 semester hours

Additional requirements for K-12 certification on B.S. in Ed. degree options (4-5 hours):

Total: 39-42 semester hours

Spanish Language

Admission Requirements, Retention & Termination Standards

The department offers majors and minors in Spanish. The sequence 101-102-201-202-214 provides the basis for all advanced study in Spanish. Without previous language experience, prospective majors and minors begin with 101. Students who have previously studied Spanish must take the placement test. They are placed higher in the sequence based on previously attained skills in Spanish. For placement questions, contact the department.

Notes:
- All Spanish majors are required to take nine hours of language at the 300 level or above on campus. One course at the 300 level or 400 level taken on a CR/NC basis may be counted toward a major or minor.
- CLEP: The department accepts up to four credit hours of CLEP credit per language.
- Advanced Placement: Credit is given for a score of three or above; a score of five requires a departmental review and an interview with the student.
- International Baccalaureate: Credit is given for a score of three or above after a departmental review of each case and an interview with the student.
- Transfer Students majoring in Spanish must earn at least nine credit hours in their major at CMU; those minorinig must earn at least six credit hours in their minor at CMU. These hours must be taken on campus.
- Retroactive Credit: Students who enroll in an entry level course (102, 201, 202), or a course beyond 202 (SPN 214 or 331), and receive a B (3.0 or better are eligible for up to 8 hours of retroactive credit. To qualify, students must be enrolled at the level determined by their score on the placement test, or at a higher level. This must be the student’s first college-level course in this language. Earned credits count toward the University Program, but retroactive credits do not.

B.S.Ed. degree, Provisional Elementary or Secondary Certification or Provisional Elementary or Secondary Certification with Emotional or Cognitive Impairment Endorsement:

For admission to student teaching in Spanish, the B.S. in Ed. degree option requires students to pass the ACTFL Oral Proficiency Interview in Spanish at the Advanced-Low level and have a GPA of 3.0 in Spanish. SPN 411, 412, 421, and 422 are not courses in language studies and are not considered in the GPA.

Spanish Language
Spanish Major
B.A.; B.S. degrees

At least 30 hours of SPN courses at the 300 level or above.

Admission Requirements, Retention & Termination Standards
See information at the beginning of the Spanish section.

Core Courses (12 hours)
- SPN 331 - Advanced Grammar and Composition 3(3-0)
- SPN 341 - Advanced Spanish Conversation 3(3-0)
- SPN 376 - Culture and Civilization of Spain 3(3-0)
- SPN 377 - Culture and Civilization of Latin America 3(3-0)

Required Courses I (15 hours)
- Select one course from the following, plus 6 SPN credits at the 300 level or above and 6 SPN credits at the 400 level or above.
- SPN 370 - Advanced Studies in Spanish 1-12(Spec)
- SPN 386 - Survey of Spanish Literature (Beginning to 1700) 3(3-0)
- SPN 387 - Survey of Spanish Literature (1700 to Present) 3(3-0)
- SPN 388 - Survey of Spanish-American Literature (Beginnings to Modernism) 3(3-0)
- SPN 389 - Survey of Spanish-American Literature (Modernism to Present) 3(3-0)

Note: SPN 370 may count for the required literature course when the topic deals with literature.

Required Courses II (3-6 hours)
- Select one of the following for a minimum of 3 hours:
  - SPN 310 - Study Abroad 1-12(Spec)
  - SPN 410 - Study Abroad 1-12(Spec)

Note: Students unable to study abroad will be required to take an additional six (6) hours of coursework on campus at the 300 level or above to be approved by an advisor.

Total: 30-33 semester hours

Spanish Minor
B.A.; B.S. degrees

At least 21 hours of SPN courses at the 300 level or above.

Admission Requirements, Retention & Termination Standards
See information at the beginning of the Spanish section.

Core Courses (12 hours)
- SPN 331 - Advanced Grammar and Composition 3(3-0)
- SPN 341 - Advanced Spanish Conversation 3(3-0)
- SPN 376 - Culture and Civilization of Spain 3(3-0)
- SPN 377 - Culture and Civilization of Latin America 3(3-0)

Required Courses I (6 hours)
- Select six (6) additional credit hours at the 300 level or above, chosen in consultation with a Spanish advisor.

Required Courses II (3-6 hours)
- Select one of the following for a minimum of 3 hours:
  - SPN 310 - Study Abroad 1-12(Spec)
  - SPN 410 - Study Abroad 1-12(Spec)

Note: Completion of this concentration requires the student to study abroad for one semester during which the student will enroll for 12 credits (6 hours of SPN 310 and 6 hours of SPN 410). At the 300 level, the student takes courses conducted in Spanish and related to business. At the 400 level, the student participates in an internship.

Electives (3 hours)
- Select a three (3) credit course at the 300 level or above.

Total: 21-24 semester hours

Spanish Major: Spanish for Business Concentration
B.A.; B.S. degrees

At least 30 hours of SPN courses at the 300 level or above.

Admission Requirements, Retention & Termination Standards
See information at the beginning of the Spanish section.

Core Courses (12 hours)
- SPN 331 - Advanced Grammar and Composition 3(3-0)
- SPN 341 - Advanced Spanish Conversation 3(3-0)
- SPN 376 - Culture and Civilization of Spain 3(3-0)
- SPN 377 - Culture and Civilization of Latin America 3(3-0)

Required Courses (15 hours)
- SPN 310 - Study Abroad 1-12(Spec)
- SPN 335 - Spanish for Business 3(3-0)
- SPN 410 - Study Abroad 1-12(Spec)

Note: Completion of this concentration requires the student to study abroad for one semester during which the student will enroll for 12 credits (6 hours of SPN 310 and 6 hours of SPN 410). At the 300 level, the student takes courses conducted in Spanish and related to business. At the 400 level, the student participates in an internship.

Electives (3 hours)
- Select a three (3) credit course at the 300 level or above.

Total: 30 semester hours
History (HST)

For information, please contact the chairperson, 989-774-3374, Powers Hall 106;
https://www.cmich.edu/colleges/chsbs/History/

Why Study History?
The study of history is an important part of a university education and an excellent preparation for a wide range of careers. History courses provide an understanding of the political, cultural, social, and economic life of past civilizations and help us understand the world in which we live. A history major or minor provides a broad education that informs and shapes the thinking of the entire person. A history minor, in particular, is an excellent balance to specialized vocational and pre-professional studies. Thus, the career opportunities for history graduates in teaching, the professions and public service, industry and commerce are exceedingly wide and varied. A history major or minor provides direct preparation for graduate study leading to an M.A. or Ph.D. degree and to careers in areas such as teaching, research, museum, library, or archival work. Historical knowledge and the skills in reading, writing, and analysis developed through historical study are excellent preparation for law school and for government employment. Particularly in conjunction with coursework in business, economics, sociology, political science, and mathematics, such knowledge and skills are also excellent undergraduate preparation for graduate work in business administration or journalism.

History at CMU
The Department of History offers a variety of courses in the University Program that introduce students to the multifaceted discipline of history as well as to American, African, European, Asian, Middle Eastern and Latin American civilizations. Courses on both the 100 and 200 levels are designed for freshmen and sophomores or for students wishing a broad overview of a particular country or civilization. The major or minor in history can be taken on a variety of teaching and nonteaching degrees. The department participates in an interdisciplinary major in social sciences and social studies, and in minors in military science and women’s studies. Additionally, the department offers a Master of Arts (with an option to be on an accelerated program beginning in the Junior year of undergraduate study) and Joint Master of Arts and Ph.D. degrees in history.

The Faculty

Admission Requirements, Retention & Termination Standards
1. Students planning or considering a major or minor in history are urged to consult with an advisor as early as possible in their college careers. Students may select any history faculty member to serve as advisor.
2. Six hours of Credit/No Credit in history courses will be accepted in the major or minor, but these hours may not be in 400 level or 500 level courses.
3. Survey or introductory courses (when transferred from another college or university) are accepted for no more than three hours per course on the major or minor.
4. History majors, particularly those planning to do graduate work in history, are strongly urged to include two years of foreign language study in their undergraduate programs.
5. History majors and minors planning to do graduate work in history are strongly urged to take both the general aptitude and advanced history tests of the Graduate Record Examination early in their senior year. These examinations are generally required for admission to graduate schools.
6. Credit Limitation. Courses in the department that are subject to graduate credit limitation under the policy covering unspecified content or variable credit include HST 532, 590, 595, 597, 601, 690, and 791.
7. The history department does not accept the CLEP examination for credit toward a major or minor.
8. Up to six hours of credit for AP examinations will be approved as follows: three credits for a score of four for History (American) in HST 111 or History (European) in HST 102; or six credits for a score of five for History (American) in HST 111 and HST 112 or History (European) in HST 101 and HST 102.
9. The History Department strongly urges all history majors and minors to study abroad, particularly those planning to teach history or to go on to graduate study. Students are encouraged to meet with a department study abroad faculty advisor or an Office of Study Abroad advisor as early as possible.

Accelerated Master of Arts in History
(Currently enrolled CMU Undergraduate students only)
The Accelerated M.A. degree allows highly motivated students to accelerate their academic careers by undertaking graduate work toward the traditional Master of Arts degree (not the Joint M.A. in History) concurrently with undergraduate work. This is not for students seeking teaching certification as part of their undergraduate degree work.

Admission Standards:
1. Written recommendation of a CMU history professor.
2. Six (6) hours of history coursework completed with at least a 3.25 GPA in those courses and a 3.25 overall GPA.

Retention Standards:
1. Maintenance of a 3.5 GPA in history courses.
2. Failure to maintain satisfactory work (3.0 GPA) in two successive semesters will result in removal from the accelerated program.

Degree Requirements
The degree requirements for the Accelerated M.A. combine the non- teaching major and the traditional M.A. as follows:
1. The student must meet with an advisor in the History Department and submit an Accelerated M.A. Program Plan to the History Department by the beginning of the second semester of his or her second year of study for the B.A. An accelerated Masters Program Approval Form must also be submitted to the College of Graduate Studies, along with an application for admission to the College of Graduate Studies.

(continued)
2. HST 496 must be taken in the junior (third) year.
3. In the student’s junior undergraduate year, he or she must apply to the CMU College of Graduate Studies for accelerated admission in the senior year and be admitted to accelerated graduate status.
4. Three to twelve (3–12) hours of M.A. graduate credit, including one graduate seminar or colloquium, may be taken once the student has achieved senior status (86 credit hours).
5. The accelerated plan is intended to encourage research and writing competency in a particular research field; therefore, the candidate is encouraged to elect Plan A, the Thesis Option of the M.A. program.
6. It is highly recommended that the student undertake a one-semester study abroad in history, preferably in the third year of the B.A. work. This can be arranged through the department.

History Major

Required Courses I (4 hours)
HST 301 - The Craft of History 4(4-0)

Required Courses II (3 hours)
HST 496 - Research Seminar 3(3-0)

Note: HST 496 or a substitute approved by an advisor.

Required Courses III (3 hours)
U.S. History
Select one of the following:
HST 110 - The American Experience 3(3-0)
HST 111 - The Quest for Liberty: The United States to 1865 3(3-0)
HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)
HST 221 - Growing Up in America 3(3-0)
HST 228 - American Business: A History 3(3-0)
HST 302 - Comparative Environmental History 3(3-0)
HST 303 - The American Revolution 3(3-0)
HST 312 - American Military Experience 3(3-0)
HST 315 - The Vietnam War 3(3-0)
HST 319 - The United States since World War II 3(3-0)
HST 320 - United States Social History to 1865 3(3-0)
HST 321 - United States Social History since 1865 3(3-0)
HST 322 - Westward Movement in America 3(3-0)
HST 323 - History of Native Americans 3(3-0)
HST 324 - African American History to 1877 3(3-0)
HST 325 - African American History, 1877-Present 3(3-0)
HST 326/WST 328 - Women in America 3(3-0)
HST 328 - Technology in American History 3(3-0)
HST 330 - U.S. Constitutional History 3(3-0)
HST 333 - History of Michigan 3(3-0)
HST 335 - History of the Rock and Roll Era 3(3-0)
HST 511 - Colonial British America 3(3-0)
HST 513 - Era of the Early Republic, 1789-1825 3(3-0)
HST 514 - Democracy, Expansion, and Reform in America, 1824-1848 3(3-0)
HST 515 - Civil War and Reconstruction 3(3-0)
HST 516 - Emergence of Modern America, 1877-1920 3(3-0)
HST 517 - U.S. Rise in World Leadership, 1917-1945 3(3-0)
HST 518 - African Americans and the Law: From Slavery to Civil Rights 3(3-0)
HST 523 - American Diplomatic History, 1775-1898 3(3-0)
HST 524 - American Diplomatic History Since 1898 3(3-0)
HST 525 - The Industrialization of America 3(3-0)
HST 526 - Modern American Political Culture, 1865-Present 3(3-0)
HST 532 - Michigan History Studies 1-3(Spec)
HST 562 - The Atlantic World in the Age of Empire 3(3-0)

Required Courses IV (3 hours)
Modern European History
Select one of the following:
HST 102 - The Development of Western Civilization: From 1700 to the Present 3(3-0)
HST 106 - Twentieth Century: Western World Issues 3(3-0)
HST 280 - Nazi Germany and the Holocaust 3(3-0)
HST 343 - History of Paris 3(3-0)
HST 344 - Modern Europe, 1815-1918 3(3-0)
HST 347 - The French Revolution and Napoleonic Period 3(3-0)
HST 349 - Russia in the Nineteenth and Twentieth Centuries 3(3-0)
HST 351 - Britain since 1869 3(3-0)
HST 352 - British Imperialism 3(3-0)
HST 353 - Germany since 1870 3(3-0)
HST 354/WST 354 - Women in European History 3(3-0)
HST 356 - Europe Since 1945 3(3-0)
HST 542 - The Enlightenment in Europe 3(3-0)
HST 543 - Napoleon 3(3-0)
HST 548 - Russian Thought 3(3-0)
HST 558 - Europe, 1914-1945 3(3-0)

Required Courses V (3 hours)
Non-Western History
Select one of the following:
HST 163 - The Latin American Experience 3(3-0)
HST 168 - Modern East Asia 3(3-0)
HST 176 - The African Experience 3(3-0)
HST 201 - World History to 1500 3(3-0)
HST 202 - World History since 1400 3(3-0)
HST 236 - Babylon and Beyond: Ancient Civilizations of the Near East 3(3-0)
HST 237 - Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)
HST 261 - Indigenous Peoples of Latin America: Precontact to 1821 3(3-0)
HST 292 - Global Perspectives on Non-Western History 3(3-0)
HST 336 - Iran and Iraq in History 3(3-0)
HST 361/REL 361 - Religion in Colonial Latin America 3(3-0)
HST 362 - Latin American Revolutions: Mexico, Cuba and Central America 3(3-0)
HST 369 - Traditional China 3(3-0)
HST 370 - Modern China 3(3-0)
HST 376 - East/Central Africa: Issues 3(3-0)
HST 377 - West Africa 3(3-0)
HST 378 - South Africa 3(3-0)
HST 379/HUM 340 - Race, Class and Power: South Africa in the 20th Century 3(3-0)
HST 382/REL 382 - History of Israel 3(3-0)
HST 535 - The Middle East in the Modern Era 3(3-0)
HST 576 - Colonialism in Africa, 1880s-1960s 3(3-0)

Note: HST 236, 237, and 369 may fill requirements for either Required Courses V or Required Courses VI, but cannot fill requirements for both categories.

Required Courses VI (3 hours)
Pre-Modern History
Select one of the following:
HST 101 - The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)
HST 200 - Medieval Civilization 3(3-0)
HST 201 - World History to 1500 3(3-0)
HST 236 - Babylon and Beyond: Ancient Civilizations of the Near East 3(3-0)
HST 237 - Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)
HST 238 - Ancient Greece and Rome 3(3-0)
HST 336 - Iran and Iraq in History 3(3-0)
HST 338 - The Decline and Fall of the Roman Empire 3(3-0)
HST 340 - The High Middle Ages 3(3-0)
HST 341 - Renaissance and Reformation 3(3-0)
HST 342 - The Culture of Renaissance Italy (Study Abroad) 3(Spec)
HST 348 - Russia through the Reign of Catherine the Great 3(3-0)
HST 350 - England to 1668 3(3-0)
HST 369 - Traditional China 3(3-0)
HST 505 - Tudor England 3(3-0)
HST 537 - The Age of Cicero 3(3-0)
HST 538 - Athens: Classical Period 3(3-0)

**Note:** HST 236, 237, AND 369 count for either non-Western or pre-Modern. No course, however, can fill requirements in more than one area.

**Required Courses VII (6 hours)**
Six additional hours of history courses numbered 100-599.

**Electives I (6 hours)**
Two additional courses at 300-500 level

**Electives II (3 hours)**
One additional course at 500 level - HST 590 cannot be used for this requirement

**Total: 34 semester hours**

**History Major**

*Teaching Secondary: B.S. in Ed. degree, Provisional Secondary Certification or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement*

**Admission Requirements, Retention & Termination Standards**

See information at the beginning of this section.

For majors who wish to teach on the secondary level:
1. A student must have completed at least 30 hours of his or her History major, including HST 300 and HST 400. Majors must complete HST 300 unless they have completed PSC 305 for a second major in Social Studies. To be exempt from HST 300, a student must have advisor approval. The student must have a minimum grade point average of 2.70 in those 30 hours of history courses.
2. Transfer credit will be accepted from regionally accredited institutions, but at least six of the hours must be CMU classes with a grade point average of 2.70. At least 12 of the required credits must have been received within 10 years of application for student teaching.
3. Both majors and minors must complete a department student teaching evaluation form. In addition, students must furnish transcripts showing all history course credits.
4. Students are urged to take HST 400 the semester before student teaching. Students are also urged to have taken as preparation for HST 400 at least five hours of secondary education coursework, including a course in psychological foundations of education.
5. Students must receive CR for HST 300 or a grade of C+ or higher in HST 400.
6. The department recommends that students planning to teach history in secondary schools major in history.

**Core Courses (22 hours)**

HST 111 - The Quest for Liberty: The United States 1865 3(3-0)
HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)
HST 201 - World History to 1500 3(3-0)
HST 202 - World History Since 1400 3(3-0)
HST 301 - The Craft of History 4(4-0)
HST 302 - Comparative Environmental History 3(3-0)
HST 496 - Research Seminar 3(3-0)

**Note:** Another seminar may be substituted for HST 496, but must be approved by advisor.

**Methods Courses (3-5 hours)**

HST 300 - A Mid-tier Experience for History Majors: Teaching History in Secondary 2(1-2)
HST 400 - History for Secondary Schools 3(3-0)

**Note:** Students may be exempt from HST 300 if they have completed PSC 305 or GEO 400.

**Restricted Electives (12 hours)**

Select one HST course at the 100-599 level.
Select one HST course at the 300-599 level.
Select one HST course at the 500-599 level.

**Public History Major**

*B.A. and B.S. degrees*

**Advisors:** Jay Martin, Timothy Hall

**Admission Requirements, Retention & Termination Standards**

1. Students planning or considering a major or minor in history are urged to consult with an advisor as early as possible in their college careers. Students may select any history faculty member to serve as advisor.
2. Six hours of Credit/No Credit in history courses will be accepted in the major or minor, but these hours may not be in 400 level or 500 level courses.
3. Survey or introductory courses (when transferred from another college or university) are accepted for no more than three hours per course on the major or minor.
4. History majors, particularly those planning to do graduate work in history, are strongly urged to include two years of foreign language study in their undergraduate programs.
5. History majors and minors planning to do graduate work in history are strongly urged to take both the general aptitude and advanced history tests of the Graduate Record Examination early in their senior year. These examinations are generally required for admission to graduate schools.
6. The history department does not accept the CLEP examination for credit toward a major or minor.
7. Up to six hours of credit for AP examinations will be approved as follows: three credits for a score of four for History (American) in HST 111 or History (European) in HST 102; or six credits for a score of five for History (American) in HST 111 and HST 112 or History (European) in HST 101 and HST 102.
8. The history department strongly urges all history majors and minors, particularly those planning to teach history or to go on to graduate study, to participate in the CMU Semester Abroad program. Interested students should see a department study abroad advisor or the International Education office as early as possible.

**Core Courses I (3 hours)**

Select one of the following:
PSC 100 - Introduction to Political Science 3(3-0)
PSC 105 - Introduction to American Government and Politics 3(3-0)

**Core Courses II (22-25 hours)**

ANT 175 - Archaeology of the Americas 3(3-0)
HST 301 - The Craft of History 4(4-0)
HST 580 - Public History 3(3-0)
HST 583 - Archival Administration 3(3-0)
HST 595 - Internship in Public History 1-6(Spec)
MST 310 - Introduction to Museums 3(3-0)
PSC 210 - Introduction to Public Administration 3(3-0)

**Note:** Must take at least 3 hours of HST 595.
Core Courses III (3 hours)
Select one of the following:
HST 111 - The Quest for Liberty: The United States 1865 3(3-0)
HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)

Electives I (3 hours)
Select one of the following:
ANT 320 - North American Indian Cultures 3(3-0)
ANT 344 - Michigan Archaeology 3(3-0)
ANT 426 - Method and Theory in Archaeology 3(3-0)
ANT 500 - Field School in Archaeology 3-6(Spec)
ANT 540 - Archaeological Field and Laboratory Methods 1-4(Spec)
HST 585 - Oral History 3(3-0)
RPL 470 - Park and Natural Resource Management 3(3-0)
RPL 521 - Fund Development & Grant Writing for Public & Non-profit Organizations 3(3-0)
RPL 552 - Environmental Interpretation 3(3-0)

Electives II (9-12 hours)
3 hours of U.S. History at the 300 level or above
6-9 hours of HST 100-599

Total: 40-46 hours

History Minor
Non-Teaching: B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
See information at the beginning of this section.

Required Courses (9 hours)
9 hours at the 300 level or above.

Electives (11-12 hours)
11 or more additional hours in history.

Total: 20-21 semester hours

History Minor
Teaching Secondary; B.S. in Ed. degree, Provisional Secondary Certification or Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
See information at the beginning of this section.

For minors who wish to teach on the secondary level:
1. A student must have completed at least 20 hours of his or her History minor, including HST 400. The student must have a minimum grade point average of 2.70 in those 20 hours of history courses. Transfer credit will be accepted from regionally accredited institutions, but at least six of the hours must be CMU classes with a grade point average of 2.70. At least 12 of the required credit hours must have been received within 10 years of application for student teaching.
2. Both majors and minors must complete a department student teaching evaluation form. In addition, students must furnish transcripts showing all history course credits.
3. Students are urged to take HST 400 the semester before student teaching. Students are also urged to have taken as preparation for HST 400 at least five hours of secondary education course work, including a course in psychological foundations of education.
4. Students must receive CR for HST 300 or a grade of C+ or higher in HST 400.
5. The department recommends that students planning to teach history in secondary schools major in history.

Core Courses (19 hours)
HST 111 - The Quest for Liberty: The United States 1865 3(3-0)
HST 112 - The Struggle for Equality: The United States, 1865-Present 3(3-0)
HST 201 - World History to 1500 3(3-0)
HST 202 - World History Since 1400 3(3-0)
HST 301 - The Craft of History 4(4-0)
HST 302 - Comparative Environmental History 3(3-0)

Restricted Electives (3 hours)
Select one of the following:
HST 320 - United States Social History to 1865 3(3-0)
HST 321 - United States Social History since 1865 3(3-0)
HST 323 - History of Native Americans 3(3-0)
HST 324 - African-American History to 1877 3(3-0)
HST 325 - African-American History, 1877-Present 3(3-0)
HST 326/WST 328 - Women in America 3(3-0)

Method Course (3 hours)
HST 400 - History for Secondary Schools 3(3-0)

Total: 25 semester hours
Military Science and Leadership (MSL, AFL)
For information, contact the chair, 989-774-3049, Finch 111; https://www.cmich.edu/colleges/chsbs/militaryscience/

Why Study Military Science and Leadership?

Every generation has leaders who stand above the rest. Today’s generation needs leaders who are knowledgeable, responsible and have a strong foundation of diverse global experiences. The U.S. Army officer path is one of the best ways to gain this distinct knowledge and experience.

Train as an Army Officer and you train for leadership in and outside the Army. Army Officers have used their careers not only to serve their country, but also the skills they developed in uniform have served them for success in a host of civilian careers. CEOs, business managers, scientists, entrepreneurs, mayors, police officers, teachers and professors have at one time worn officer rank, or still wear it with their participation in the Army Reserve or National Guard. Leadership counts in and outside the Army.

Army Officers can receive funds to further their education or pay off existing student loans. While hands-on skill training in the Army is a key priority, so is encouraging of officers to attend college for advanced degrees or continuing education.

Military Science at CMU

The Military Science/ROTC program is one of the best leadership development programs in the nation, committed to attaining a national ranking. The focus of the program is leadership development, the curriculum supports all degree programs at CMU. All organizations, in all career fields, are looking for proven leaders.

- Our curriculum is fun, challenging, exciting and relevant. Classroom instruction moves quickly from lecture to group discussions, practical exercises, and hands-on experiences that support learning.
- All classes include student-led Leadership Labs, which are hands-on and consist of training such as: rappelling, rock-climbing, high-ropes course, marksmanship, water survival, orienteering, map reading, first aid, weapons, drill, squad tactics, patrolling, and team-building exercises.
- Upper level courses include a leadership practicum where students apply the leadership lessons they learned in the classroom to real life, by filling leadership positions within the Corps of Cadets.
- The Military Science program offers leadership internships both in-state and around the world; basic and advanced leadership camps; leadership development training at the United States Military Academy and in the United Kingdom; leadership training at the Army’s most challenging schools, such as Airborne, Air Assault, SCUBA, Northern Warfare, and Mountain Warfare.

The majority of the program’s activities are planned, organized, prepared, executed and assessed by student leaders of the Corps of Cadets. The leadership potential of a student is developed through formal leadership assessments and feedback, mentorship, and whole-student counseling.

The Faculty

MAJ Robert May, MAJ Jake Cornett, MSG Tim File, SFC Jason Person, SFC Shawn Fries, SSG Andrew Rasmussen, Kevin Babcock

Career Options

Your experience in the Military Science program provides you with the skills that Fortune 500 companies aggressively seek – proven leadership. Besides your unmatched development as a leader, if you also choose to become an officer, you will expand your breadth and depth of acquired skills, opening up myriad opportunities for future employment.

- The Army has 16 exciting and high tech career fields to choose from that directly relate to the civilian sector, some of which are aviation, medical service, engineering, intelligence, security, law enforcement, information technology, human resources, finance and distribution management.
- Junior military officers are scouted by employment head-hunters. Officers have priority for hiring for government jobs, and many organizations and universities give preference to military officers.
- Nationwide, graduates of ROTC fill high positions in all branches of government (administrative, judicial and legislative), businesses, non-profit organizations, universities, and professional sports.
- The CMU program has produced numerous presidents/CEOs, vice-presidents of Dow Chemical and Merrill Lynch, justices, professors, general officers, and leaders in national security organizations.
- The program supports lateral entry into America’s most elite organizations, like the State Department, Federal Bureau of Investigation (FBI), Central Intelligence Agency (CIA) and the Secret Service.
- Students who choose to serve as officers in the active Army can rejoin the civilian sector after four years of service. Students who serve in the National Guard or Reserves have the ability to work anywhere they want, in whatever civilian profession they choose, or to pursue a graduate degree.
Academic Programs

Military Science instructors are committed to excellence in teaching and learning. The department has been recognized as one of the top programs at CMU in the area of assessment. Students receive credits for each Military Science course. The Military Science department offers two programs:

1. The Commissioning Program courses are taken along with your academic degree program courses. Students who desire to become Army Officers receive their commission upon completing both their degree requirements and the military science curriculum. The military science curriculum consists of one class and weekly Leadership Lab each semester for eight semesters in progressive order. Latecomers and graduating students may make up the first four semesters of the curriculum by attending the month-long Cadet Initial Entry Training (CIET) during the summer, or by making a commitment to the Army National Guard. All students seeking commissions as officers attend the month-long Cadet Leader Course (CLC), which is normally completed during the summer prior to a student's last year of school.

2. The Minor in Military Science is designed to provide an interdisciplinary education in military science and leadership. The foundations for this minor are the advanced military science courses and a course in military history. This foundation is supplemented by elective studies in cultures, politics, geography, constitutional history and law, public relations, international relations, foreign policy and religion.

Scholarships

Army ROTC Scholarships. Student scholarships and other financial aid packages range from $5,908 to $20,700 dollars per year. These financial benefits will allow you to focus on excellence in the classroom, as well as engage in extracurricular activities that are an important part of your overall college experience. Students have the option of using an ROTC scholarship towards tuition and fees or room and board costs, on and off campus.

- Incoming freshmen may compete for four-year scholarships worth $15,420 per year, which provide tuition, fees, book allowance and monthly spending money, by applying on-line at armyrotc.com, and then following up with an on-campus interview. Four-year scholarship students may also receive a matching room and board scholarship from CMU worth an additional $7,236 per year (see below).

- Students already on campus may compete for two-, three-, and four-year scholarships worth $15,420 per year, which provide tuition, fees, book allowance and monthly spending money, by applying at our office in Finch 111.

- Students may simultaneously enroll in both our program, and the Army National Guard or Army Reserves. There are substantial benefits to participating in this program, including Leadership Internships, obtaining training in one of 212 marketable job skills, the most lucrative financial aid packages worth $20,700 per year, and guaranteed duty in the Reserves.

- Students may compete for alumni scholarships worth up to $2000, made available through supporters of CMU's Army ROTC program.

- There are numerous other national-level scholarships made available through corporations and endowments available exclusively to participants of Army ROTC programs.

Reserve Officers' Training Corps (ROTC) Scholarship. CMU established six room and board scholarships in 1993. These are competitive awards given annually to both high school seniors winning four-year ROTC Scholarships and current students.

National Guard Simultaneous Membership Scholarship Program (SMP) allows students to earn up to 100% for your college tuition. While obtaining valuable leadership experience in an Army unit.

Additional ROTC scholarship information may be obtained by contacting personnel of the Military Science Department.

Military Science Minor

B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

The Military Science Minor is designed to provide students with an interdisciplinary approach to the study of the United States Military. Coursework includes a foundation in Military Science and Military History with electives concentrating on constitutional, international, and other issues. The Minor is open to all students; there is no military obligation.

Admission Requirements, Retention & Termination Standards

1. A minor in Military Science is available. Students must meet with a Military Science departmental advisor. Students must earn an overall cumulative GPA of 2.0 in Military Science courses in order to receive credit for the minor.

2. Students who are pursuing a commission as an Army Officer must earn an undergraduate degree and meet all of the requirements for their signed academic major and minor if a minor is required. Upon signing an Army ROTC Contract to commission, students must continue to meet all of the requirements of that Army ROTC contract in order to be retained in the commissioning program.

3. These requirements include meeting Army physical fitness standards, demonstrating good character, meeting the military science program's academic standards, and attaining the undergraduate degree prior to being commissioned.

Required Courses I (16 hours)

- MSL 301 - Adaptive Team Leadership 4(Spec)
- MSL 302 - Leadership in Changing Environments 4(Spec)
- MSL 401 - Mission Command and Army Profession 4(Spec)
- MSL 402 - Mission Command II and the Company Grade Officer 4(Spec)

Required Courses II (3 hours)

Select one of the following:
- HST 312 - American Military Experience 3(3-0)
- HST 315 - The Vietnam War 3(3-0)
- HST 515 - Civil War and Reconstruction 3(3-0)

Electives (9 hours)

Select from the following courses in consultation with minor advisor. Other electives may be substituted with advisor's approval.

- GEO 121 - Cultures of the World 3(3-0)
- GEO 345 - Political Geography 3(3-0)
- GEO 346 - Geography of the Developing World 3(3-0)
- HST 330 - U.S. Constitutional History 3(3-0)
- JRN 350 - Public Relations Principles and Practices 3(3-0)
- PSC 105 - Introduction to American Government and Politics 3(3-0)
- PSC 151 - The U.S. and the World 3(3-0)
- PSC 351 - International Relations 3(3-0)
- PSC 421 - Constitutional Law: Powers of Government 3(3-0)
- PSC 453 - American Foreign Policy 3(3-0)
- REL 101 - World Religions: An Introduction to the Study of Religion 3(3-0)
- REL 130 - Religion in America 3(3-0)

Total: 28 semester hours
Philosophy and Religion (PHL, REL)

For information, please contact the chairperson, 989-774-3444, 102 Anspach Hall;
https://www.cmich.edu/colleges/chsbs/phrel/

Philosophy & Religion

Philosophy and Religion are complementary disciplines which study human thought and culture from distinct points of view. Both disciplines study ethical and cultural issues and form part of the core of a liberal education. Each not only provides training for graduate study in its respective discipline, but provides an excellent basis for further professional training in fields which require critical and interpretive skills.

Why Study Philosophy?

Philosophy is the study of fundamental questions about the nature of reality, knowledge, and value. These are questions that everyone asks: What am I? Do I have free will? How can we distinguish good from bad or right from wrong? Can we be sure that any of our beliefs are true? Philosophers examine answers to these questions systematically and critically. Philosophy is also very effective in developing the student's ability to reason clearly, to distinguish good from bad arguments, to navigate through a complicated maze of questions, and to use intelligence and logic in situations often ruled by emotions. Students who have taken a large number of philosophy courses excel in entrance exams to graduate and professional schools. The thinking skills you will develop in your philosophy classes will give you the kind of analytic ability sought by employers in many professions.

Why Study Religion?

The academic study of religion is a comparative exploration of the beliefs, sacred stories, rituals, and community structures of the world's religions. It helps students analyze the relationships between religion and social issues. Students of religion also investigate the influence of religion in their own and other cultures and gain understanding of how people around the world confront ultimate problems (such as death and evil). Studying religion is a way to gain research skills, writing skills, and critical thinking skills that will serve you throughout your life in a wide variety of careers or in graduate school. A survey of CMU alumni with majors and minors in Religion revealed that 75% had pursued graduate education, and that half of these had earned one or more graduate degrees.

Philosophy at CMU

The Philosophy area offers a variety of courses that both make students aware of fundamental philosophical issues such as those about moral and other values, but at the same time strengthen their critical powers and enable them to evaluate better their own beliefs as well as those of other people. Some coursework in this area can benefit students no matter what their field of study.

A major in philosophy is recommended, not only for graduate work in this area, but also as an excellent preparation for law school. A minor in philosophy is recommended to complement many other majors. A number of philosophy courses are related to specific disciplines including: Philosophy of Science, Philosophy of Language, Philosophy of Art, Political Philosophy, Philosophy of Religion, Philosophy of Literature, Business Ethics, and Ethics in Health Professions. Courses in the history of philosophy provide a valuable supplement to courses in the History Department.

Religion at CMU

CMU's Religion courses are recommended for those seeking deeper insight into the culture of the United States and a wider familiarity with cultures around the world. The Religion area offers courses in Buddhism, Judaism, Christianity, and Islam; in the religious traditions of China, Japan, India, and the U.S.; and in biblical studies, ethics, and the relationship between religion and contemporary society. Most Religion courses fulfill a UP requirement.

A major in religion is recommended for any student seeking an area of concentration within the liberal arts, including those wishing to pursue graduate study in religion, theology, or a related field. A minor (or second major) in religion helps prepare students for careers in journalism, broadcasting, psychology, and other areas.

The Faculty

Majors

Philosophy Major
B.A.; B.S. degrees

Required Courses (18 hours)
PHL 100 - Introduction to Philosophy 3(3-0)
PHL 140 - Introduction to Logic 3(3-0)
PHL 200 - History of Philosophy: Classical Period 3(3-0)
PHL 218 - Ethical Theories 3(3-0)
PHL 302 - History of Philosophy: Modern Period 3(3-0)
PHL 490 - Senior Seminar in Philosophy 3(3-0)

Required Courses II (3 hours)
Select one of the following:
PHL 320 - Theory of Knowledge 3(3-0)
PHL 404 - History of Philosophy: Contemporary Period 3(3-0)

Electives (12 hours)
A total of at least 12 additional hours in PHL is required. At least six hours must be chosen from the following:
PHL 225/PSY 225 - Foundations of Cognitive Science 3(3-0)
PHL 320 - Theory of Knowledge 3(3-0)
PHL 325 - Philosophy of Mind 3(3-0)
PHL 340 - Intermediate Logic 3(3-0)
PHL 390 - Philosophy of Science 3(3-0)
PHL 403 - History of Philosophy: Nineteenth Century 3(3-0)
PHL 404 - History of Philosophy: Contemporary Period 3(3-0)
PHL 405 - Major Philosophers 3(3-0)
PHL 410 - Philosophy of Law 3(3-0)
PHL 418 - Advanced Moral Philosophy 3(3-0)
PHL 421 - Philosophy of Language 3(3-0)
PHL 422 - Political and Social Philosophy 3(3-0)
PHL 426/PSC 426/WST 426 - Feminist Theory 3(3-0)
PHL 480 - Philosophy of the Arts 3(3-0)

Note: PHL 320 or 404 may be used as an elective if not taken as Required Course II.

Philosophy majors are encouraged to consult with their advisors in selecting their electives. Philosophy majors planning to go to graduate school in philosophy are encouraged to take PHL 340.

Total: 33 semester hours

Religion Major
B.A.; B.S. degrees

Required Courses I (3 hours)
One course in the study of religion and contemporary society to be chosen from:
REL 140 - Religion, Race and Discrimination in America 3(3-0)
REL 207 - Women in Religion 3(3-0)
REL 235 - Religion and Social Issues 3(3-0)
REL 334 - Death and Dying 3(3-0)

Required Courses II (3 hours)
Select one from the following:
REL 220 - Religious Traditions of China 3(3-0)
REL 221 - Religious Traditions of Japan 3(3-0)
REL 222 - Religious Traditions of India 3(3-0)

Required Courses III (3 hours)
Select one from the following:
REL 314 - Islam 3(3-0)
REL 315 - Judaism 3(3-0)
REL 320 - The Buddhist Tradition 3(3-0)

Required Courses IV (3 hours)
One course on the Bible or Christianity, to be chosen from:
REL 250 - Creation, Conquest, and Chaos: Introduction to the Old Testament 3(3-0)
REL 260 - From Gospel to Apocalypse: Introduction to the New Testament 3(3-0)
REL 313 - Christianity 3(3-0)

Required Courses V (6 hours)
REL 501 - Seminar in the Study of Religion 3(3-0)
REL 505 - Research Seminar 3(3-0)

Electives (12 hours)
Select 12 additional hours of coursework in religion. Up to 9 of these elective hours may be counted from the cognate courses below. Students may petition to have other courses counted, as long as the 9-hour limit is not exceeded.

ANT 459 - Anthropology of Religion 3(3-0)
ENG 365 - The Bible as Literature 3(3-0)
HST 237 - The Middle East since Muhammad 3(3-0)
HST 341 - Renaissance and Reformation 3(3-0)
PHL 230 - Philosophy of Religion 3(3-0)

Total: 30 semester hours

Religion courses taken on a credit/no credit basis at the 100 and 200 levels may be counted on the major up to a maximum of three hours.
Minors

Ethics, Values, and Society Minor
B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

Core Courses I (9 hours)
PHL 118 - Moral Problems 3(3-0)
PHL 218 - Ethical Theories 3(3-0)
REL 235 - Religion and Social Issues 3(3-0)

Required Courses I (3 hours)
Advanced Value Theory
Select from the following:
PHL 410 - Philosophy of Law 3(3-0)
PHL 418 - Advanced Moral Philosophy 3(3-0)
PHL 422 - Political and Social Philosophy 3(3-0)

Required Courses II (3 hours)
Applied Value Theory
Select from the following:
PHL 318 - Business Ethics 3(3-0)
PHL 328 - Animal Ethics 3(3-0)
PHL 480 - Philosophy of the Arts 3(3-0)
PHL 518 - Professional Ethics 3(3-0)
REL 334 - Death and Dying 3(3-0)

Required Courses III (1-6 hours)
Capstone Experience
During or after the semester in which all other required and elective courses for the minor are completed, the student will arrange an independent study for at least one credit hour. Topic and format will be determined by the instructor in consultation with the student, but may include a research project which integrates material from across the minor or which applies material from the minor to the student's chosen field, a service learning project, or an internship experience.
PHL 498 - Independent Research 1-6(Spec)

Electives (6 hours)
Select two of the following courses. At least one course must be from a designator other than PHL or REL. (PHL 318 and PHL 422 may not be counted as electives if they were taken as required courses.)
ANT 365 - Current American Indian Issues 3(3-0)
BLR 222 - The Search for Racial Justice Through Law 3(3-0)
BLR 310 - Alternative Dispute Resolution in Business 3(3-0)
HST 326/WST 328 - Women in America 3(3-0)
LAR 145 - Racism and Discrimination in America through Dialogue 3(3-0)
PHL 318 - Business Ethics 3(3-0)
PHL 345/PSC 426/WST 426 - Feminist Theory 3(3-0)
PHL 426/PSC 426/WST 426 - Feminist Theory 3(3-0)
PS 326/WST 326 - Women and Politics 3(3-0)
PS 375 - Socialism, Fascism, and Liberalism 3(3-0)
PS 378 - Modern Democratic Theory 3(3-0)
PS 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)
PSY 334/WST 334 - Psychology of Women 3(3-0)
REL 140 - Religion, Race and Discrimination in America 3(3-0)
REL 207/WST 207 - Women in Religion 3(3-0)
SOC 221 - Social Problems 3(3-0)
SOC 302 - Social Inequality 3(3-0)
SOC 317/WST 317 - Sociology of Sex and Gender 3(3-0)
SOC 323 - Racism and Inequality 3(3-0)

Note: Students who are also taking either a major or minor in Philosophy may only double count PHL 218 and one 400-level PHL course.

Total: 22-27 semester hours

Philosophy Minor
B.A.; B.A.A.; B.A.; B.S.; B.S. in B.A. degrees

Required Courses (20 hours)
A minor in philosophy consists of 20 credit hours in philosophy. The program will be designed to fit the individual needs or interests of the student. Students are encouraged to consult a departmental advisor. Philosophy courses taken on a Credit/No Credit basis may be applied toward a philosophy minor.

Total: 20 semester hours

Religion Minor
B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

The Minor in Religion consists of at least 20 hours of coursework in religion.

Courses selected must take account of the range of a) content and b) method involved in the study of religion. An advisor can help students make appropriate course selections. Courses selected must include:

Required Course (3 hours)
REL 501 - Seminar in the Study of Religion 3(3-0)

Electives (17 hours)
At least two additional courses in REL (not including REL 501) numbered 300 or higher.
Up to 6 of the 20 hours in REL necessary for their minor may be counted from these cognate courses: PHL 230, HST 237, HST 341, ENG 365, ANT 459.
Students may petition to have other courses counted, as long as the 6-hour limit is not exceeded.

Total: 20 semester hours

Note: Religion courses taken on a credit/no credit basis at the 100 and 200 levels may be counted on the minor up to a maximum of three hours.
Political Science and Public Administration (PSC)
For information, please contact the chairperson, 989-774-3442, 247 Anspach Hall

Political Science
Political science is a social science concerned with describing and analyzing political institutions and processes. Political scientists study the origins of and preconditions for government, the rise and fall of governments, and the relations among nations of the world. Political scientists are interested in how governments are structured, how they make decisions, and how they manage social conflicts. Political scientists also study the behavior of individuals within political systems, both as individuals and as part of groups and organizations. Finally, political science encompasses normative inquiry into such larger questions as the best form of political order, the optimum relationship between the individual and government and the nature of the public good. Political scientists today study such phenomena as political parties and voting behavior, interest groups, bureaucratic organizations and administrative procedures, national security and international organizations, presidential and gubernatorial politics, legislative behavior, courts and the administration of justice, intergovernmental relations, political socialization, mass movements, revolution, ideologies, political philosophy, community organization and urban politics, and public policies.

Why Study Political Science?
Students studying political science have a wide variety of backgrounds, interests, and career goals. A political science major provides students with the opportunity to obtain a broad education in liberal arts and politics as well as training for specific career paths. Students with career goals in law, administrative or executive positions in state, local or federal government, teaching political science at the secondary school and college levels, foreign service, international agencies or private business overseas, the mass media, television, radio, newspaper, internet and polling organizations, would be well served by a political science major or minor. Additionally, a political science education provides students with a variety of skills they may use in all aspects of their lives. Coursework in political science teaches students to think critically, write well and speak with confidence. Students are exposed to a variety of methods of examining information, from textual analysis to the use of statistical software to analyze data. Finally, students studying political science develop a better understanding of the functioning of government in order to better prepare them for democratic citizenship.

Political Science at CMU
Faculty in the Department of Political Science and Public Administration at CMU specialize in a wide variety of topics, including but not limited to American national political institutions and processes, American state and local government, public administration, public policy, international relations, comparative politics, and political theory. The courses offered in the department reflect these research interests, allowing students to take courses on a wide variety of topics. The major is structured so that students may take courses in many areas of political science or they may focus their education by selecting a concentration in international relations/comparative politics or public administration. A political science minor is also complementary to large number of other majors at CMU, including management, foreign languages, history, military science, integrative public relations, journalism, philosophy, psychology, sociology, interpersonal and public communications, and recreation, parks and leisure services administration. The department participates in a number of interdisciplinary programs, such as those in public affairs, Latin American studies, women's studies, environmental studies and European studies. An Undergraduate Certificate in Citizen Engagement is also offered. The Department has a strong internship program, providing students with on-the-job training in real life settings throughout Michigan, at the national level and in international organizations. The department hosts the Griffin Endowed Chair in American Government. The Griffin Chair, a person with a distinguished record of public service and an extensive background in Michigan politics, teaches courses each year focusing on Michigan state politics and policy and provides students with a behind-the-scenes look at current state politics. The chair holder focuses on stimulating political interest among CMU students as well as preparing future Michigan political leaders.

Degrees in Political Science
The Department of Political Science and Public Administration offers B.A. and B.S. degrees in political science. Students may choose the general major or a concentration in International Relations/Comparative Politics or Public Administration. The Political Science minor and Public Administration minor are also offered at the undergraduate level. At the graduate level, the Department offers a Master of Arts degree in Political Science, a Master of Public Administration degree, and courses contributing to several other graduate programs.

The Faculty
Majors

Political Science Major

B.A.; B.S. degrees

A political science major consists of 33 hours. A minimum of 15 hours of PSC course work must be at the 300 level or above, with at least one PSC course at the 400-500 level. PSC 405 cannot be used to fulfill this requirement. Students must choose between the General Political Science Major, the Public Administration Concentration or the International Relations/Comparative Politics Concentration.

Courses taken on a Credit/No Credit basis may not be counted toward political science majors or political science minors. Majors and minors in political science should enroll in PSC 105 as freshmen (see course description). Transfer students majoring in political science will be expected to take at least 15 hours of coursework in the department; transfer minors, 12 hours.

The student is required to take a minimum of three hours in four of the following five fields:

Field I. American National Political Institutions and Processes;
Field II. American State and Local Government, Public Administration and Policy;
Field III. International Relations;
Field IV. Comparative Politics;
Field V. Political Theory.

Note: Field II is not applicable to the International Relations/Comparative Politics Concentration.

It is recommended that all political science majors enroll in PSC 280 during their sophomore year.

PSC 398 and PSC 598 are Special Topics courses which may be used to fulfill the area requirements for majors and minors. Permission to do this is based on the substantive content of the course, and requires the consent of the student’s major or minor advisor or the department chair. Any regular faculty member in the department can serve as the student’s advisor on a major or minor.

Internships: The department has established an internship program where students are provided relevant firsthand work experience. The duration of an internship can vary depending on the number of credit hours (1-12) taken. Students majoring in political science with a concentration in public administration, as well as the minors in public administration and public affairs, are allowed to count three internship credit hours toward their major or minor.

Select one of the following concentrations:

Political Science Major: General Concentration

Required Courses (9 hours)
PSC 100 - Introduction to Political Science 3(3-0)
PSC 105 - Introduction to American Government and Politics 3(3-0)
PSC 280 - Introduction to Empirical Methods of Political Research 3(3-0)

Other Requirements (12 hours)
Select one 3-credit hour course in four of the following five fields:

Field I
American National Political Institutions and Processes
PSC 101 - Political Behavior 3(3-0)
PSC 125 - African-American Politics 3(3-0)
PSC 320 - The American Legislative Process 3(3-0)
PSC 321 - The American Chief Executive 3(3-0)
PSC 322 - Judicial Process and Politics 3(3-0)
PSC 323 - American Parties and Politics 3(3-0)
PSC 325/PHL 345/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)
PSC 326/WST 326 - Women and Politics 3(3-0)
PSC 327 - Lobbying and Interest Group Behavior 3(3-0)
PSC 328 - Campaigns and Elections 3(3-0)
PSC 421 - Constitutional Law: Powers of Government 3(3-0)
PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)
PSC 520 - American National Government and Politics 3(3-0)

Field II
American State and Local Government, Public Administration and Policy
PSC 210 - Introduction to Public Administration 3(3-0)
PSC 261 - State and Local Government 3(3-0)
PSC 300 - Michigan Politics and Elections 3(3-0)
PSC 301 - Law and Policy in Michigan State Government 3(3-0)
PSC 313 - Public Budgeting Processes 3(3-0)
PSC 411 - Public Sector Human Resources 3(3-0)
PSC 514 - American Public Policy Making 3(3-0)
PSC 516 - Environmental Politics and Policy 3(3-0)
PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
PSC 563 - Politics and Policy in Urban Communities 3(3-0)
PSC 566 - Intergovernmental Relations in the United States 3(3-0)
PSC 585 - Public Sector Information Technology Management 3(3-0)

Field III
International Relations
PSC 150 - Introduction to International Relations 3(3-0)
PSC 151 - The U.S. and the World 3(3-0)
PSC 351 - International Relations 3(3-0)
PSC 352 - U.S. - Latin American Relations 3(3-0)
PSC 353 - Model United Nations 3(3-0)
PSC 453 - American Foreign Policy 3(3-0)
PSC 551 - Seminar in International Relations 3(3-0)
PSC 555 - International Law I 3(3-0)
PSC 556 - International Law II 3(3-0)

Field IV
Comparative Politics
PSC 242 - Introduction to Comparative Politics 3(3-0)
PSC 340 - African Political Systems and Processes 3(3-0)
PSC 341 - Comparative Politics: Eastern Europe 3(3-0)
PSC 343 - Southeast Asian Political Systems and Processes 3(3-0)
PSC 344 - East Asian Political Systems and Processes 3(3-0)
PSC 345 - Middle Eastern Political Systems 3(3-0)
PSC 346 - The Politics of Islam 3(3-0)
PSC 347 - Comparative Politics: Western Europe 3(3-0)
PSC 348 - Latin American Political Systems 3(3-0)
PSC 515 - Comparative Public Policy 3(3-0)
PSC 540 - Cultural Heritage and Politics of Eastern Europe 3(3-0)

Field V
Political Theory
PSC 275 - Great Political Thinkers 3(3-0)
PSC 371 - American Political Thought 3(3-0)
PSC 372 - American Radical Thought 3(3-0)
PSC 375 - Socialism, Fascism, and Liberalism 3(3-0)
PSC 378 - Modern Democratic Theory 3(3-0)
PSC 381 - Slavery, Tyranny, Democracy: Classical Origins of Modern Ideas 3(3-0)
PSC 382 - Modern Political Theory 3(3-0)
PSC 383 - Contemporary Political Theory 3(3-0)
PSC 426/PHL 426/WST 426 - Feminist Theory 3(3-0)
PSC 583 - Survey Research 3(3-0)

Electives (12 hours)
Hours selected from the five fields listed above.

Total: 33 semester hours

Note: A minimum of 15 hours of PSC course work must be at the 300 level or above, with at least one PSC course at the 400-500 level. PSC 405 cannot be used to fulfill this requirement.
Political Science Major: International Relations/Comparative Politics Concentration

Required Courses (15 hours)
- PSC 105 - Introduction to American Government and Politics 3(3-0)
- PSC 130 - Introduction to International Relations 3(3-0)
- PSC 242 - Introduction to Comparative Politics 3(3-0)
- PSC 280 - Introduction to Empirical Methods of Political Research 3(3-0)
- PSC 351 - International Relations 3(3-0)

Field I (6 hours)
**American National Political Institutions and Processes**
- Select two of the following courses:
  - PSC 320 - The American Legislative Process 3(3-0)
  - PSC 321 - The American Chief Executive 3(3-0)
  - PSC 322 - Judicial Process and Politics 3(3-0)
  - PSC 323 - American Parties and Politics 3(3-0)
  - PSC 325/PHL 345/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)
  - PSC 326/WST 326 - Women and Politics 3(3-0)
  - PSC 327 - Lobbying and Interest Group Behavior 3(3-0)
  - PSC 328 - Campaigns and Elections 3(3-0)
  - PSC 421 - Constitutional Law: Powers of Government 3(3-0)
  - PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)
  - PSC 520 - American National Government and Politics 3(3-0)

Field II (0-3 hours)
**Field II**
- Select from the following courses:
  - PSC 151 - The U.S. and the World 3(3-0)
  - PSC 352 - US - Latin American Relations 3(3-0)
  - PSC 353 - Model United Nations 3(3-0)
  - PSC 354 - Advanced Model United Nations 1(1-0)
  - PSC 453 - American Foreign Policy 3(3-0)
  - PSC 551 - Seminar in International Relations 3(3-0)
  - PSC 555 - International Law I 3(3-0)
  - PSC 556 - International Law II 3(3-0)

**Note:** If you select 3 from this group, you must select 6 from the Comparative Politics courses below.

Field III (3-6 hours)
**International Relations**
- Select from the following courses:
  - PSC 152 - US - Latin American Relations 3(3-0)
  - PSC 353 - Model United Nations 3(3-0)
  - PSC 354 - Advanced Model United Nations 1(1-0)
  - PSC 453 - American Foreign Policy 3(3-0)
  - PSC 551 - Seminar in International Relations 3(3-0)
  - PSC 555 - International Law I 3(3-0)
  - PSC 556 - International Law II 3(3-0)

**Note:** If you select 3 from this group, you must select 6 from the Comparative Politics courses above.

Field IV (3-6 hours)
**Comparative Politics**
- Select from the following courses:
  - PSC 340 - African Political Systems and Processes 3(3-0)
  - PSC 341 - Comparative Politics: Eastern Europe 3(3-0)
  - PSC 343 - Southeast Asian Political Systems and Processes 3(3-0)
  - PSC 344 - East Asian Political Systems and Processes 3(3-0)
  - PSC 345 - Middle Eastern Political Systems 3(3-0)
  - PSC 346 - The Politics of Islam 3(3-0)
  - PSC 347 - Comparative Politics: Western Europe 3(3-0)
  - PSC 348 - Latin American Political Systems 3(3-0)
  - PSC 515 - Comparative Public Policy 3(3-0)
  - PSC 540 - Cultural Heritage and Politics of Eastern Europe 3(3-0)

**Note:** If you select 3 from this group, you must select 6 from the International Relations courses above.

Field V (3 hours)
**Political Theory**
- Select one of the following courses:
  - PSC 275 - Great Political Thinkers 3(3-0)
  - PSC 375 - Socialism, Fascism, and Liberalism 3(3-0)
  - PSC 381 - Slavery, Tyranny, Democracy: Classical Origins of Modern Ideas 3(3-0)
  - PSC 382 - Modern Political Theory 3(3-0)
  - PSC 383 - Contemporary Political Theory 3(3-0)
  - PSC 280 - Introduction to Empirical Methods of Political Research 3(3-0)

**Total:** 33 semester hours

**Note:** A minimum of 15 hours of PSC course work must be at the 300 level or above, with at least one PSC course at the 400-500 level. PSC 405 cannot be used to fulfill this requirement.

Political Science Major: Public Administration Concentration

Required Courses (18 hours)
- PSC 100 - Introduction to Political Science 3(3-0)
- PSC 105 - Introduction to American Government and Politics 3(3-0)
- PSC 210 - Introduction to Public Administration 3(3-0)
- PSC 280 - Introduction to Empirical Methods of Political Research 3(3-0)
- PSC 313 - Public Budgeting Processes 3(3-0)
- PSC 411 - Public Sector Human Resources 3(3-0)

Other Requirements (3 hours)
- Select one of the following capstone experiences:
  - PSC 390 - Independent Study 1-6(Spec)
  - PSC 395 - Internship in Government and Politics 1-12(Spec)

**Note:** PSC 395 is required for students without any relevant PA experience. Student must have completed 56 hours or more. Students with previous relevant PA experience may select an Independent Study (PSC 390) with permission of the Internship Director.

Field I (0-3 hours)
**American National Political Institutions and Processes**
- Select from the following courses:
  - PSC 101 - Political Behavior 3(3-0)
  - PSC 125 - African-American Politics 3(3-0)
  - PSC 320 - The American Legislative Process 3(3-0)
  - PSC 321 - The American Chief Executive 3(3-0)
  - PSC 322 - Judicial Process and Politics 3(3-0)
  - PSC 323 - American Parties and Politics 3(3-0)
  - PSC 325/PHL 345/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)
  - PSC 326/WST 326 - Women and Politics 3(3-0)
  - PSC 327 - Lobbying and Interest Group Behavior 3(3-0)
  - PSC 328 - Campaigns and Elections 3(3-0)
  - PSC 421 - Constitutional Law: Powers of Government 3(3-0)
  - PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)
  - PSC 520 - American National Government and Politics 3(3-0)

**Note:** If you select 3 from this group, you do not need to select 3 from the American State and Local Government, Public Administration and Policy courses below.

Field II (0-3 hours)
**American State and Local Government, Public Administration and Policy**
- Select from the following courses:
  - PSC 261 - State and Local Government 3(3-0)
  - PSC 300 - Michigan Politics and Elections 3(3-0)
  - PSC 301 - Law and Policy in Michigan State Government 3(3-0)
  - PSC 514 - American Public Policy Making 3(3-0)
  - PSC 516 - Environmental Politics and Policy 3(3-0)
  - PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
  - PSC 563 - Politics and Policy in Urban Communities 3(3-0)
  - PSC 566 - Intergovernmental Relations in the United States 3(3-0)
  - PSC 585 - Public Sector Information Technology Management 3(3-0)

**Note:** If you select 3 from this group, you do not need to select 3 from the American National Political Institutions and Processes courses above.
Field II
American State and Local Government, Public Administration and Policy
PSC 210 - Introduction to Public Administration 3(3-0)
PSC 261 - State and Local Government 3(3-0)
PSC 300 - Michigan Politics and Elections 3(3-0)
PSC 301 - Law and Policy in Michigan State Government 3(3-0)
PSC 313 - Public Budgeting Processes 3(3-0)
PSC 411 - Public Sector Human Resources 3(3-0)
PSC 514 - American Public Policy Making 3(3-0)
PSC 516 - Environmental Politics and Policy 3(3-0)
PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
PSC 563 - Politics and Policy in Urban Communities 3(3-0)
PSC 566 - Intergovernmental Relations in the United States 3(3-0)
PSC 585 - Public Sector Information Technology Management 3(3-0)

Field III
International Relations
PSC 150 - Introduction to International Relations 3(3-0)
PSC 151 - The U.S. and the World 3(3-0)
PSC 351 - International Relations 3(3-0)
PSC 352 - US - Latin American Relations 3(3-0)
PSC 356 - Politics and Policy in Urban Communities 3(3-0)
PSC 453 - American Foreign Policy 3(3-0)
PSC 551 - Seminar in International Relations 3(3-0)
PSC 555 - International Law I 3(3-0)
PSC 556 - International Law II 3(3-0)

Field IV
Comparative Politics
PSC 242 - Introduction to Comparative Politics 3(3-0)
PSC 340 - African Political Systems and Processes 3(3-0)
PSC 341 - Comparative Politics: Eastern Europe 3(3-0)
PSC 343 - Southeast Asian Political Systems and Processes 3(3-0)
PSC 344 - East Asian Political Systems and Processes 3(3-0)
PSC 345 - Middle Eastern Political Systems 3(3-0)
PSC 346 - The Politics of Islam 3(3-0)
PSC 347 - Comparative Politics: Western Europe 3(3-0)
PSC 348 - Latin American Political Systems 3(3-0)
PSC 515 - Comparative Public Policy 3(3-0)
PSC 540 - Cultural Heritage and Politics of Eastern Europe 3(3-0)

Field V
Political Theory
Select one of the following courses:
PSC 275 - Great Political Thinkers 3(3-0)
PSC 371 - American Political Thought 3(3-0)
PSC 372 - American Radical Thought 3(3-0)
PSC 375 - Socialism, Fascism, and Liberalism 3(3-0)
PSC 378 - Modern Democratic Theory 3(3-0)
PSC 426/PHL 426/WST 426 - Feminist Theory 3(3-0)
PSC 583 - Survey Research 3(3-0)

Total: 33 semester hours

Note: A minimum of 15 hours of PSC course work must be at the 300 level or above, with at least one PSC course at the 400-500 level. PSC 405 cannot be used to fulfill this requirement.

Minors
Political Science Minor
B.A.; B.A.A.; B.S. degrees
A Political Science minor consists of 21 hours. Courses taken on a credit/no credit basis may not be counted toward this minor.

Required Course (3 hours)
PSC 105 - Introduction to American Government and Politics 3(3-0)

Other Requirements (12 hours)
Select one 3-credit hour course in four of the following five fields:

Field I
American National Political Institutions and Processes
PSC 101 - Political Behavior 3(3-0)
PSC 125 - African-American Politics 3(3-0)
PSC 320 - The American Legislative Process 3(3-0)
PSC 321 - The American Chief Executive 3(3-0)
PSC 322 - Judicial Process and Politics 3(3-0)
PSC 323 - American Parties and Politics 3(3-0)
PSC 325/PHL 345/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)
PSC 326/WST 326 - Women and Politics 3(3-0)
PSC 327 - Latin American Political Systems 3(3-0)
PSC 328 - Campaigns and Elections 3(3-0)
PSC 421 - Constitutional Law: Powers of Government 3(3-0)
PSC 422 - Constitutional Law: Civil Rights and Liberties 3(3-0)
PSC 520 - American National Government and Politics 3(3-0)
Public Administration Minor
B.A.; B.A.A.; B.S. degrees
A public administration minor consists of 21 hours.

Required Courses (15 hours)
PSC 105 - Introduction to American Government and Politics 3(3-0)
PSC 210 - Introduction to Public Administration 3(3-0)
PSC 280 - Introduction to Empirical Methods of Political Research 3(3-0)
PSC 313 - Public Budgeting Processes 3(3-0)
PSC 411 - Public Sector Human Resources 3(3-0)

Other Requirements (6 hours)
Select two of the following courses:
PSC 261 - State and Local Government 3(3-0)
PSC 300 - Michigan Politics and Elections 3(3-0)
PSC 301 - Law and Policy in Michigan State Government 3(3-0)
PSC 320 - The American Legislative Process 3(3-0)
PSC 395 - Internship in Government and Politics 1-12(Spec)
PSC 514 - American Public Policy Making 3(3-0)
PSC 516 - Environmental Politics and Policy 3(3-0)
PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
PSC 563 - Politics and Policy in Urban Communities 3(3-0)
PSC 566 - Intergovernmental Relations in the United States 3(3-0)
PSC 585 - Public Sector Information Technology Management 3(3-0)

Total: 21 semester hours

Public Affairs Minor
This is an interdepartmental minor. Please check the index for the page number.

Undergraduate Certificate - Citizen Engagement

Required Courses (9 hours)
PSC 105 - Introduction to American Government and Politics 3(3-0)
PSC 393 - Practicum in Citizen Engagement 1-12(Spec)
PSC 513 - Citizen Engagement in Public Life 3(3-0)

Note: 3 credits required for PSC 393.

Electives (6 hours)
Select two courses from one of the following categories:

Electives 1 - Public Opinion Polling
PSC 280 - Introduction to Empirical Methods of Political Research 3(3-0)
PSC 394 - Practicum in Public Polling 1-12(Spec)

Note: 3 credits required for PSC 394.

Electives 2 - Elected Institutions and Procedures
PSC 261 - State and Local Government 3(3-0)
PSC 300 - Michigan Politics and Elections 3(3-0)
PSC 320 - The American Legislative Process 3(3-0)
PSC 321 - The American Chief Executive 3(3-0)
PSC 323 - American Parties and Politics 3(3-0)
PSC 325/PHL 345/REL 345/SOC 345 - The Civil Rights Movement 3(3-0)
PSC 326/WST 326 - Women and Politics 3(3-0)
PSC 327 - Lobbying and Interest Group Behavior 3(3-0)
PSC 328 - Campaigns and Elections 3(3-0)

Electives 3 - Appointed Institutions and Procedures
PSC 210 - Introduction to Public Administration 3(3-0)
PSC 261 - State and Local Government 3(3-0)
PSC 313 - Public Budgeting Processes 3(3-0)
PSC 411 - Public Sector Human Resources 3(3-0)

Total: 15 semester hours
Psychology (PSY)

For information, please contact the office, 989-774-3001, 101 Sloan Hall; https://www.cmich.edu/colleges/chsbs/Psychology/

Why Study Psychology?
The study of psychology at the undergraduate level will develop your knowledge and understanding of behavior. There are three reasons why this knowledge will be beneficial to you. The first is that you will better understand yourself and your environment. In other words, the study of psychology will enhance your life. The second reason for studying psychology is to acquire skills that will improve your performance in the career of your choice. The third reason for studying psychology at the undergraduate level is to prepare for graduate study in psychology or related fields such as social work or counseling.

The three reasons for studying psychology are reflected in the three basic goals adopted by the Psychology Department. These goals are (a) to help students gain an awareness of the psychological processes operating within themselves and their environment; (b) to develop the technical competence for careers that require knowledge and skills in human development, mental health, behavior analysis, and other psychological areas; and (c) to provide students with a strong foundation in the basic knowledge and skills necessary to pursue graduate study in psychology or related fields.

Psychology at CMU
In order to achieve the goals listed above, the Psychology Department offers an extensive array of undergraduate course offerings. In addition, the department offers graduate programs leading to the master’s degree in applied experimental and industrial-organizational psychology, the specialist degree in school psychology, and the doctoral in philosophy (Ph.D.) in clinical, experimental, industrial-organizational, and school psychology. A more detailed description of the undergraduate program, including required and suggested courses for majors and minors can be found in the Undergraduate Handbook available for viewing and download at the website above. Additional information available for download includes guides regarding additional opportunities at CMU and career possibilities in psychology.

Advising.
If you are considering a major or minor in psychology, you will need to meet with a faculty advisor. Please call (989-774-3001) or come to the Psychology Department office (Sloan Hall 101) to be assigned a faculty advisor. Next schedule an appointment to meet with your advisor. Make sure to familiarize yourself with all the requirements for the major/minor (listed below) before meeting with your advisor.

To supplement faculty advising, Psi Chi, the International Honors Society in Psychology offers meetings during the academic year dealing with general issues for any student considering a psychology major or minor and describing volunteer opportunities in human service settings in the Mt. Pleasant area. Times and dates of Psi Chi meetings are posted in Sloan Hall.

Prerequisites.
PSY 100 (or an equivalent course transferred in from another school) is a prerequisite for all other psychology courses except PSY 334. Course descriptions later in this Bulletin list other prerequisites. Recommended courses are not required, but are listed in the course descriptions to provide information on important background materials.

Board Certified Assistant Behavior Analyst (BCaBA).
The Psychology Department offers a course sequence that meets the educational requirements of the Behavior Analyst Certification Board to become Board Certified Assistant Behavior Analysts (BCABA). Completion of the course sequence listed below, the experience requirements, and passing the BCABA certification exam are required for certification. The Behavior Analyst Certification Board, Inc., has approved the following course sequence as meeting the coursework requirements for eligibility to take the Board Certified Assistant Behavior Analyst Examination: PSY 370, 384, 570, and 586. Students interested in the BCABA course sequence should complete an advisor form at 180 Sloan Hall or contact BCBA@cmich.edu.

The Faculty
Jane Ashby, Richard Backs, Terry A. Beehr, Emily Bloesch, Neil Christiansen, Stephen Colarelli, Christopher Davoli, Daniel Drevon, Gary L. Dunbar, Bryan Gibson, Kyunghee Han, Timothy S. Hartshorne, Michael Hixson, Melvyn M. Jaffa, Kenneth Jenrow, Carl M. Johnson, Yannick Marchalant, Elizabeth Meadows, Sandra Morgan, Larissa Niec, Kimberly O’Brien, Hajime Otani, Kevin Park, Debra Poole, Matthew Prewett, Stuart Quirk, Mark Reilly, Katrina Rymer, George Ronan, Michael Sandstrom, Reid Skeel, K. Roger Van Horn, Nathan Weed
Psychology Major
B.A.; B.S. degrees

The psychology major is extremely flexible and is appropriate for anyone interested in psychology, regardless of post-graduation plans including graduate school. This major requires that you complete a minimum of 30 semester hours of PSY courses.

Required Courses I (9 hours)
PSY 100 - Introduction to Psychology 3(3-0)
PSY 285 - Research Methods 3(3-0)
PSY 385 - Applications of Research Methods 3(3-0)

Required Courses II (3 hours)
PSY 211QR - Introduction to Psychological Statistics 3(3-0)

Psychology Electives (18 hours)

Total: 30 semester hours

Note: You must complete a minimum of 15 hours of psychology course work at CMU.

Note: You must earn a grade of "C" or better in PSY 211 to enroll in PSY 285, and earn a "C" or better in PSY 285 and have completed ENG 201 to enroll in PSY 385. Consult individual course descriptions for prerequisites for other courses.

Note: Students who have already taken BIO 500 Biological Statistics (3) or HSC 544 Biostatistics (3) and received a grade of "C" or better in the course may substitute the requirement for PSY 211. In that case, an additional three (3) hours of Psychology must be taken.

Credit restrictions: Only PSY 100 may be taken on a CR/NC basis. No more than 9 hours may be counted from the following courses with unspecified content: PSY 200, 400, 496, 497, 498, 500, 501, and 502. Further, not more than 3 hours may be counted from any one unspecified content course.

Psychology Minor
B.A.; B.A.A.; B.F.A.; B.S.; B.S. in B.A. degrees

Required Course (3 hours)
PSY 100 - Introduction to Psychology 3(3-0)

Electives (18 hours)

A student must complete a minimum of 9 hours of psychology course work at CMU. If you are minoring in psychology and plan to attend graduate school in psychology, PSY 211QR is strongly recommended. The balance of your credits should be selected by you and your advisor working together to select the set of courses which is most appropriate for you. A minimum 2.7 GPA (B-) must be earned in all teaching minors.

Total: 21 semester hours

Note: Only 6 hours may be counted from courses of unspecified content: PSY 200, 400, 496, 497, 498, 500, 501, and 502. Further, not more than 3 hours may be counted from any one unspecified content course.

Neuroscience Major
B.S. degree

This is an interdisciplinary major. Please check the index for the page number.
Sociology Majors and Minors

**Sociology Major**
B.A.; B.S. degrees

**Admission Requirements, Retention & Termination Standards**
1. Students must earn a grade of C (2.0) or better in SOC 200 in order to continue with SOC 350. SOC 200 cannot be taken on a Credit/No Credit basis.
2. Students must earn a grade of C (2.0) or better in SOC 301. SOC 301 cannot be taken on a Credit/No Credit basis.
3. No more than three hours of coursework can be taken on a Credit/No Credit basis for the major, not including courses that are only offered with this grading option.
4. No more than 15 hours of coursework can transfer to the major from another institution.
5. Up to three hours of coursework with an ANT or SWK designator may be taken as part of the Sociology Major.

**Core Courses I (12 hours)**
- SOC 100 - Introductory Sociology 3(3-0)
- SOC 200 - Introduction to Social Research and Analysis 3(3-0)
- SOC 201 - Social Psychology 3(3-0)
- SOC 350 - Social Research Methodologies 3(3-0)

**Core Courses II (3 hours)**
Select one of the following:
- SOC 221 - Social Problems 3(3-0)
- SOC 302 - Social Inequality 3(3-0)

**Core Courses III (3 hours)**
Select one of the following:
- SOC 301 - Sociological Theory 3(3-0)
- SOC 501 - Development of Sociological Theory 3(3-0)

**Electives (15 hours)**
Courses that appear in more than one elective group below may be counted as satisfying requirements in both groups. Students may complete the 15 hours in electives by taking more than the minimum number of hours from Electives I, Electives II, and/or Electives III or by taking other courses with a SOC, ANT, or SWK designator. Note the limitation on the number of hours of ANT or SWK courses (found under Admissions Standards above) that can be taken as part of the Sociology Major.

(continued)
Electives I

Inequalities
At least one of the following:
SOC 302 - Social Inequality (3-0)
SOC 317 - Sociology of Sex and Gender (3-0)
SOC 323 - Racism and Inequality (3-0)
SOC 326 - Inequalities and Justice Processes: Race, Class and Gender (3-0)
SOC 502 - Theories of Race Relations in Sociology (3-0)

Electives II

Institutions
At least one of the following:
SOC 210 - Sociology of Science and Technology (3-0)
SOC 311 - Sociology of Education (3-0)
SOC 403 - Political Sociology (3-0)
SOC 411 - The Family (3-0)
SOC 413 - Sociology of Work (3-0)
SOC 512 - Industrial Sociology (3-0)
SOC 514 - Sociology of Health and Illness (3-0)
SOC 524 - Sociology of Law (3-0)

Electives III

Advanced Coursework with Theory and Methods as Prerequisites
Select one of the following:
SOC 304 - Collective Behavior (3-0)
SOC 403 - Political Sociology (3-0)
SOC 413 - Sociology of Work (3-0)
SOC 422/SWK 422 - Youth Welfare (3-0)
SOC 502 - Theories of Race Relations in Sociology (3-0)
SOC 507 - Class and Poverty in America (3-0)
SOC 512 - Industrial Sociology (3-0)
SOC 515 - Custodial Institutions (3-0)
SOC 521 - Advanced Study of Deviant Behavior (3-0)
SOC 523 - Community Corrections and Alternative Sentencing (3-0)
SOC 524 - Sociology of Law (3-0)
SOC 526 - Police and Community Relations (3-0)
SOC 527 - Community-Based Justice (3-0)

*SOC 399 may be applied only when the special topic pertains to a social and criminal justice area, with permission of advisor.

Total: 42 semester hours

Sociology Major: Social and Criminal Justice Concentration

B.A.; B.S. degrees

Admission Requirements, Retention & Termination Standards

1. Students must earn a grade of C (2.0) or better in SOC 200 in order to continue with SOC 350. SOC 200 cannot be taken on a Credit/No Credit basis.
2. Students must earn a grade of C (2.0) or better in SOC 301. SOC 301 cannot be taken on a Credit/No Credit basis.
3. No more than three hours of coursework can be taken on a Credit/No Credit basis for the major, not including courses that are only offered with this grading option.
4. No more than 15 hours of coursework can transfer to the major from another institution.

Required Courses I (12 hours)
SOC 100 - Introductory Sociology (3-0)
SOC 200 - Introduction to Social Research and Analysis (3-0)
SOC 221 - Social Problems (3-0)
SOC 302 - Social Inequality (3-0)
SOC 350 - Social Research Methodologies (3-0)

Required Courses II (15 hours)
SOC 301 - Sociological Theory (3-0)
SOC 302 - Development of Sociological Theory (3-0)

Required Courses III (21 hours)
SOC 220 - Introduction to Social and Criminal Justice (3-0)
SOC 222 - Juvenile Delinquency (3-0)
SOC 324 - Criminology (3-0)
SOC 326 - Inequalities and Justice Processes: Race, Class and Gender (3-0)
SOC 523 - Community Corrections and Alternative Sentencing (3-0)
SOC 525 - Internship in Social and Criminal Justice (6 Spec)

Electives (3 hours)
Select one of the following:
SOC 399 - Special Topics in Sociology 1-12 (Spec)
SOC 410 - Women, Crime and Deviance (3-0)
SOC 422/SWK 422 - Youth Welfare (3-0)
SOC 515 - Custodial Institutions (3-0)
SOC 521 - Advanced Study of Deviant Behavior (3-0)
SOC 524 - Sociology of Law (3-0)
SOC 526 - Police and Community Relations (3-0)
SOC 527 - Community-Based Justice (3-0)

Total: 42 semester hours

Sociology Major: Youth Studies Concentration

B.A.; B.S. degrees

Admission Requirements, Retention & Termination Standards

1. Students must earn a grade of C (2.0) or better in SOC 200 in order to continue with SOC 350. SOC 200 cannot be taken on a Credit/No Credit basis.
2. Students must earn a grade of C (2.0) or better in SOC 301. SOC 301 cannot be taken on a Credit/No Credit basis.
3. No more than three hours of coursework can be taken on a Credit/No Credit basis for the major, not including courses that are only offered with this grading option.
4. No more than 15 hours of coursework can transfer to the major from another institution.

Required Courses I (12 hours)
SOC 100 - Introductory Sociology (3-0)
SOC 200 - Introduction to Social Research and Analysis (3-0)
SOC 301 - Sociological Theory (3-0)
SOC 350 - Social Research Methodologies (3-0)

Required Courses II (15 hours)
Select one of the following:
SOC 221 - Social Problems (3-0)
SOC 302 - Social Inequality (3-0)

Required Courses III (15 hours)
SOC 215 - Youth, Deviance, and Institutions (3-0)
SOC 411 - The Family (3-0)
SOC 412 - Sociology of Adolescence (3-0)
SOC 422/SWK 422 - Youth Welfare (3-0)
SOC 425 - Sociology of Childhood (3-0)

Required Courses IV (3 hours)
Select one of the following:
ANT 200 - Education and Culture (3-0)
SOC 311 - Sociology of Education (3-0)
Anthropology Major and Minor

Courses in anthropology are offered in four subfields:

C. Archaeology: ANT 174, 175, 240, 340, 344, 348, 426, 500.
D. Linguistic Anthropology: ANT 276.

Anthropology Major

B.A.; B.S. degrees

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

1. The anthropology advisor must approve transfer credit for required courses for the Anthropology Major.
2. No more than 15 credits of transfer credit can count toward the Anthropology Major.
3. No more than 3 credits in the major can be taken as credit/no credit.
4. ANT 426 and ANT 451 for majors cannot be taken as credit/no credit.
5. No Anthropology course at the 500 level can be taken by majors for credit/no credit.
6. Anthropology majors are strongly encouraged to gain practical field and/or laboratory experiences as undergraduates in their chosen branch of anthropology and to consider a Study Abroad program and foreign language study as well.

**Required Courses I (10 hours)**

ANT 170 - Cultural Anthropology 3(3-0)
ANT 171 - Human Origins: Introduction to Physical Anthropology 3(3-0)
ANT 173 - Laboratory in Physical Anthropology 1(0-2)
ANT 465 - Capstone Experience in Anthropology 3(3-0)

**Required Courses II (3 hours)**

Select one of the following:

- ANT 174 - Introduction to Prehistoric Archaeology: From Stone Age to Civilization 3(3-0)
- ANT 175 - Archaeology of the Americas 3(3-0)

**Required Courses III (3 hours)**

Select one of the following:

- ANT 426 - Method and Theory in Archaeology 3(3-0)
- ANT 451 - History of Anthropological Thought 3(3-0)

**Electives I (3-12 hours)**

Cultural and Linguistic Anthropology

Select at least one of the following:

- ANT 200 - Education and Culture 3(3-0)
- ANT 276 - Language and Culture 3(3-0)
- ANT 320 - North American Indian Cultures 3(3-0)
- ANT 321 - Cultures of Latin America 3(3-0)
- ANT 322 - Cultures of Africa 3(3-0)
- ANT 324 - Cultures of the South Pacific 3(3-0)
- ANT 365 - Current American Indian Issues 3(3-0)
- ANT 370/SOC 370 - Global Environmental Issues 3(3-0)
- ANT 380 - Culture through Art 3(3-0)
- ANT 451 - History of Anthropological Thought 3(3-0)
- ANT 457/SOC 457 - Globalization and Society 3(3-0)
- ANT 459 - Anthropology of Religion 3(3-0)
- ANT 506/SOC 506 - Comparative Cultural Systems 3(3-0)
- ANT 520 - Medical Anthropology 3(3-0)
- ANT 532/SOC 532 - Global Aging: Cross-Cultural Aging in a Globalized World 3(3-0)
- ANT 590/SOC 590/WST 590 - Gender, Culture & Society 3(3-0)

(continued)
Electives II (3-12 hours)
*Physical Anthropology*
- Select at least one of the following:
  - ANT 342 - Principles of Forensic Anthropology 3(3-0)
  - ANT 347 - Human Evolution 3(3-0)
  - ANT 351 - The Race Concept and Human Variation 3(3-0)
  - ANT 356 - Primate Behavior 3(3-0)
  - ANT 358 - Diseases and Human Evolution 3(3-0)
  - ANT 542 - Methods in Forensic Anthropology: Osteology and Skeletal Analysis 4(3-2)

Electives III (3-12 hours)
*Archaeology*
- Select at least one of the following:
  - ANT 340 - South American Archaeology 3(3-0)
  - ANT 344 - Michigan Archaeology 3(3-0)
  - ANT 348 - Stone-Age Europe: Peoples and Cultures of the Distant Past 3(3-0)
  - ANT 426 - Method and Theory in Archaeology 3(3-0)
  - ANT 500 - Field School in Archaeology 3-6(Spec)
  - ANT 540 - Archaeological Field and Laboratory Methods 1-4(Spec)

Electives IV (0-9 hours)
- Up to 9 hours from this group may count toward the major, of which no more than 3 hours may come from ANT 498. With advisor approval and depending on course content, any of these courses may instead count within Electives I, II, or III. With advisor approval, up to 6 hours of courses in related disciplines may be counted within Electives IV.
  - ANT 388 - Special Topics in Anthropology 1-12(Spec)
  - ANT 430 - Applied Anthropology 3(3-0)
  - ANT 498 - Independent Studies In Anthropology 1-12(Spec)
  - ANT 588 - Special Topics in Anthropology 1-10(Spec)

Total: 34 semester hours

Anthropology Minor
*B.A.; B.A.A.; B.S.; B.S. in B.A. degrees*

**Admission Requirements, Retention & Termination Standards**
1. The anthropology advisor must approve transfer credit for required courses for the anthropology minor.
2. No more than 9 credits from other schools can count toward the Anthropology Minor.
3. No more than 3 credits in the minor can be taken as credit/no credit.
4. No Anthropology course at the 500 level can be taken by minors for credit/no credit.

**Required Courses I (6 hours)**
- ANT 170 - Cultural Anthropology 3(3-0)
- ANT 171 - Human Origins: Introduction to Physical Anthropology 3(3-0)

**Required Courses II (3 hours)**
- ANT 174 - Introduction to Prehistoric Archaeology: From Stone Age to Civilization 3(3-0)
- ANT 175 - Archaeology of the Americas 3(3-0)

**Electives (15 hours)**
- 15 hours of ANT courses at the 200 level or above. With advisor approval, up to 3 hours in a related field may be substituted for ANT electives.

Total: 24 semester hours

Social Work

**Social Work Major**
*B.S.W. Degree*

The social work major on the BSW degree plan prepares students for generalist practice in the field of social work. The core competencies are learned through a blend of theory, practice, research and policy courses and implemented during the 400 hour practicum that students complete in their final two semesters.

Students intending to apply to the social work program should make an appointment with a social work advisor early in their academic career to assure they understand the requirements for admissions. Application for admission to the program is typically completed in the spring semester of the traditional sophomore year. Students should consult their advisor about applying. Students should sign a major by the end of their sophomore year. Signing a major does not guarantee admission to the Bachelor of Social Work Program. A minor in Social Work is not available.

**Admission Requirements, Retention & Termination Standards**

1. **Application** - Students need to apply to the Social Work Program by the first Friday in March or the third Friday in October. The application must include the following:
   - Personal Interest Statement
   - Application
   - Two academic reference forms from non-social work faculty
   - One self-addressed envelope
   - Transcript from all schools attended

2. **Coursework** - Students need to complete the following coursework by the end of the semester in which they apply.
   - At least 50 credits with a cumulative GPA of 2.5 or better.
   - A minimum of 12 credits of major courses with an major GPA of 2.7 or better and no grade below a C in any required major course.
   - SWK 100 with a B or better.
   - SWK 250 with a B or better.

   **Note:** It is recommended that students complete SOC 200 or its equivalent by the end of the semester in which they apply.
   - Math competency with a C or better.
   - Freshman English Competency with a C or better
   - Oral English Competency with a C or better

3. **Volunteering** - Students must complete a minimum of 50 hours of approved volunteering by the end of the semester in which they apply. Volunteering is documented with the following forms:
   - Volunteer approval form
   - Volunteer reference form documenting completion of at least 50 hours.

   **Note:** 100 hours of volunteering is required prior to enrollment into SWK 321 (spring of junior year). This may be documented with an additional form(s) if not complete by the time of admission to the program.

The BSW Program Application, the Academic Reference Forms, and transcripts must be received in the Social Work Program office, 034 Anspach Hall, Mount Pleasant, MI 48859, on or before the first Friday in March for the annual Spring admissions cycle or on or before the third Friday in October for the Fall admissions cycle.

Faculty interviews may be part of the admissions process. Admissions decision will be made by the Admissions and Academic Progress Review Committee which reserves the right to admit students who may be deficient in requirements above. Applicants will be notified of decisions in writing. Additional information about the admissions process is available from the social work office in Anspach 034.
Note: Completion of all steps of the admissions process does not assure that the student will be admitted to the BSW Program. Depending on the number of students admitted during the spring admission cycle, the admission cycle for the following fall may be limited or suspended. Therefore, it is highly recommended that students apply in the spring.

Retention and Termination Standards
1. Students majoring in Social Work must follow the Social Work degree plan leading to a BSW degree as described in the current Bulletin.
2. Students must earn a minimum of a B-(2.7) or better in SWK 470 and SWK 480.
3. Students must achieve a 2.7 major GPA or better to graduate with this major.
4. Students must maintain a cumulative GPA of no less than a 2.5.
5. Students must be admitted to the social work program should consult the Student Handbook for the Retention and Termination Policy, which contains standards for continued academic performance following admission.

Required Courses I (42 hours)
SOC 100 - Introductory Sociology 3(3-0)
SWK 100 - Introduction to Social Work 3(3-0)
SWK 250 - Social Welfare Policies and Services I 3(3-0)
SWK 315 - Social Work Generalist Practice I: Social Work Communications 3(3-0)
SWK 321 - Social Work Generalist Practice II 3(3-0)
SWK 331 - Social Work Generalist Practice III 3(3-0)
SWK 350 - Social Work Research Methodologies 3(3-0)
SWK 374 - Social Work and Human Behavior I 3(3-0)
SWK 375 - Social Work and Human Behavior II 3(3-0)
SWK 450 - Social Welfare Policies and Services II 3(3-0)
SWK 470 - Social Work Practicum I 4(Spec)
SWK 471 - Social Work Practicum Seminar I 2(2-0)
SWK 480 - Social Work Practicum II 4(Spec)
SWK 481 - Social Work Practicum Seminar II 2(2-0)

Required Courses II (3 hours)
Select one of the following:
SOC 221 - Social Problems 3(3-0)
SOC 302 - Social Inequality 3(3-0)

Required Courses III (3 hours)
Select one of the following:
PSY 211QR - Introduction to Psychological Statistics 3(3-0)
SOC 200 - Introduction to Social Research and Analysis 3(3-0)
STA 282QR - Introduction to Statistics 3(3-0)

Total: 48 semester hours

Note: The student will enroll in SWK 470 AND SWK 480 consecutively within two years of completing the course prerequisites.

Youth Studies Minor
B.A.; B.S.; B.A.A.; B.S. in B.A., B.S.W. degrees
Sociological research and theories on middle school and high school aged youth. Explores the creation and recreation of youth as a social category, peer culture, social problems associated with youth, youth in social institutions, the impact of race, class, and gender on youth, and initiatives to promote social change.

Admission Requirements, Retention & Termination Standards
1. Students with a major in Sociology or a major in Sociology with a concentration in Social and Criminal Justice may NOT choose this minor.
2. Students with a Social Work major MAY choose this minor.

Required Courses I (3 hours)
Introduction
SOC 100 - Introductory Sociology 3(3-0)

Required Courses II (6 hours)
Socialization and Peer Culture Sequence
SOC 412 - Sociology of Adolescence 3(3-0)
SOC 425 - Sociology of Childhood 3(3-0)

Electives I (12 hours)
Institutional Focus
Select 12 hours from the following:
ANT 200 - Education and Culture 3(3-0)
SOC 215 - Youth, Deviance, and Institutions 3(3-0)
SOC 222 - Juvenile Delinquency 3(3-0)
SOC 311 - Sociology of Education 3(3-0)
SOC 411 - The Family 3(3-0)
SOC 422/SWK 422 - Youth Welfare 3(3-0)
SOC 530 - Capstone Experience in Youth Studies 3(3-0)

Note: You may choose only one of ANT 200 or SOC 311 and only one of SOC 215 or 222.

Note: SOC 530: with permission of instructor.

Electives II (3 hours)
Development Course
Select one of the following:
HDF 110 - Oppression: Roots and Impact on Human Development in the United States 3(3-0)
HDF 306 - Adolescent Development 3(3-0)
HST 221 - Growing Up in America 3(3-0)
PSY 220 - Developmental Psychology 3(3-0)
PSY 324 - Childhood and Adolescence 3(3-0)

Total: 24 semester hours
May include up to three (3) additional hours of prerequisite courses depending on the student’s choice of electives.
Introduction

Prepare for an exciting and rewarding career in science, technology, engineering or mathematics! The career outlook for students with degrees in science, mathematics, engineering and technology is outstanding. Graduates of our programs have well-developed skills in thinking analytically and solving problems. They are recruited for high-paying jobs in scientific, technical and administrative positions in industry, consulting services, universities, non-profit research organizations, and government agencies.

Academic programs that stress integrative learning and critical thinking skills distinguish the College of Science and Technology. Every student has many opportunities to interact with professors, both in and beyond the boundaries of the formal classroom. Whichever program you choose you’ll use advanced equipment and work closely with respected teachers and researchers.

Many students enter careers directly after graduating while others continue with advanced study in health-related professional schools or master’s and doctoral programs. The College offers several graduate degree programs through the College of Graduate Studies.

Mission Statement

Our mission is to provide the best possible educational opportunities in the fields of science, technology, engineering and mathematics to prepare students for rewarding and challenging careers or for further education.

CST’s degree programs help students hone critical thinking and communication skills as they master the fundamental principles and methods of their selected disciplines. Beyond the classroom students find multiple options for hands-on participation in research, design projects and internships, and the chance to develop new perspectives by studying abroad.

CST supports basic and applied research in science, technology, engineering and mathematics, allowing faculty and students to work closely together on cutting-edge investigations. CST research leads to important advances in knowledge and to practical outcomes such as scientific information for policy-makers to facilitate the sustainable use of natural resources, as well as supporting industries and economic development in Michigan and beyond.

Areas of Study

Departmental

The College of Science and Technology consists of eight departments and over 200 faculty members. Most fields of study lead to a major or minor, many with choices of emphasis or concentration. The departments and their primary fields of study are:

- **Biology** (Biology, Biomedical Sciences, Microscopy, Natural Resources)
- **Chemistry and Biochemistry** (Chemistry, Biochemistry)
- **Computer Science** (Computer Science, Information Technology)
- **Geography** (Geography, Geographic Information Science, Environmental and Land Use Planning, Geospatial Analysis of Environment, Global Studies, Environmental Studies)
- **Earth and Atmospheric Sciences** (Geology, Hydrogeology, Meteorology, Environmental Science)
- **Engineering and Technology** (Computer Engineering, Electrical Engineering, Mechanical Engineering, Mechanical Engineering Technology, Construction Management, Industrial Engineering Technology)
- **Mathematics** (Mathematics, Statistics, Actuarial Science)
- **Physics** (Astronomy, Physics)

Further information about the departments and their programs can be found on the following pages. The staff of the College office can also help you locate the appropriate department and advisor.

Teacher-Preparation Programs

Majors and minors under the Bachelor of Science in Education degree are offered through the departments and as interdisciplinary programs in Integrated Science and Earth Science. If you are interested in teacher certification, consult both the specific department or program of choice and the sections on teacher certification in this Bulletin. Information about CMU’s STEM Scholars program for students preparing to be mathematics or science teachers may be found at [https://www.cmich.edu/colleges/cst/stem-scholars/Pages/default.aspx](https://www.cmich.edu/colleges/cst/stem-scholars/Pages/default.aspx).

Pre-Professional Studies

Medical and dental schools as well as other health-related professional schools value an undergraduate degree in one of the natural or mathematical sciences as excellent pre-professional training. All professional schools require certain basic preparatory work for acceptance. The College of Science and Technology can provide much of that preparation. See the index of this Bulletin for information on pre-professional studies offered at CMU.
Accelerated and Combined Programs
   Several departments offer programs in a time-shortened format. For example, with proper advising and planning, a student can complete the major in Physics in three years. In addition, some departments offer accelerated master's programs that allow a student to complete both bachelor's and master's degrees in five years. Check with a department advisor about such options.

Undergraduate Certificate in Fermentation Science
   This is an interdisciplinary program. Please see Undergraduate Certificates in the Index for the page number.

Science and Technology Student Success Center
   Need help deciding on a major, selecting courses, finding a tutor, choosing a study-abroad program, finding an internship or identifying your ideal career? The College of Science and Technology Student Success Center offers academic advising, academic assistance and career services for students interested in science, mathematics, engineering and technology programs including teacher preparation and pre-health-professions. For more information contact the CST Director of Student Services, Heidi Mahon, at 989-774-7506 or h.k.mahon@cmich.edu.

Undergraduate Research, Internships and Study Abroad
   Independent research and career-related work experiences are important opportunities that you are encouraged to take advantage of whenever possible. Options include department-sponsored field studies, academic research, design projects, internships and summer employment. In addition, many departments offer study-abroad programs such as the Galápagos semester through the Universidad San Francisco de Quito. See your major or minor advisor to develop a plan of study that balances your course load with appropriate activities.

Science and Technology Residential College
   The College of Science and Technology and the Office of Residence Life offer a limited number of students the opportunity to participate in a living-learning community. Activities emphasize academics and making connections with your discipline. Contact the College or the Office of Residence Life (989-774-3111) for further information or visit the website http://www.cmich.edu/colleges/cst/Pages/residential.aspx.

Student Organizations
   In addition to university-wide extracurricular activities and honors organizations, the College supports many student chapters of professional organizations, honors societies, and service clubs. These organizations provide opportunities to understand the nature of a profession or the role of a professional society. Participation will help you prepare for a career and begin networking with other students, faculty, and working professionals. Information about activities and organizations is available in department offices.

Facilities
   The College departments occupy four buildings: Brooks, Dow, Pearce, and Engineering Technology. These buildings are connected to the campus-wide wireless computer network and departments provide computer services to their students for such things as computation-intensive modeling and data acquisition and analysis. College facilities also include the CMU Biological Station on Beaver Island in northern Lake Michigan and the new Bioscience Building that will be completed in fall 2016.

   Modern research facilities are available to students in each department. These include a wide variety of highly-specialized laboratories ranging from nuclear magnetic resonance spectroscopy to state-of-the-art X-ray diffraction instruments to DNA sequencing and analysis. These laboratories are routinely utilized by undergraduate students taking part in research programs.
Why Study Biology?
Biology is the science of life. Humans share life on Earth with up to 30 million other living forms, all of which belong to one complex and fragile ecosystem. The study of biology prepares the student to understand this complex ecosystem and our interactions with it. Biology is for those who are curious about living things and wish to learn scientific methods for observing and evaluating life processes. The student may eventually be involved in social and political decisions requiring biological understanding, as well as furthering scientific knowledge through occupations dealing with biological research, natural resource management, agriculture, human health, education and other endeavors. Undergraduate training in biology is good preparation for advanced study in subdisciplines of biology such as medicine, environmental science, physiology, microbiology, molecular biology, aquatic biology, conservation biology, ecology, animal behavior, and other areas of zoology and botany.

Biology at CMU
The Department of Biology at CMU offers programs which provide a core of instruction, followed by an opportunity to study in a more specialized area of biology. The department offers service courses in introductory and human biology, nature study, and conservation of natural resources for non-science students. The major and minor in biology can be applied to a variety of programs designed to serve career interests of students in elementary and secondary teaching, natural resources, medical technology, pre-medicine, pre-osteopathy, and pre-veterinary, as well as a program to prepare students for graduate studies in the biological sciences. Graduate programs include a Master of Science (M.S.) degree emphasizing thesis research or a non-thesis degree in biology for teachers. Requirements for the graduate programs are detailed in the College of Graduate Studies Bulletin. In addition to state-of-the-art laboratories, the Department of Biology operates excellent field and laboratory facilities at Neithercut Woodland in Farwell, Michigan and at the CMU Biological Station on Beaver Island. Several core biology courses as well as electives are offered during summer sessions at the CMU Biological Station on Beaver Island. Students participate in research and field experiences in a variety of natural habitats while residing in modern facilities along the beautiful shores of Lake Michigan. Visit https://www.cmich.edu/colleges/cst/cmubs/ for more information.

Notes:
It is essential that students interested in biology contact a member of the Department of Biology during the first year at CMU. Courses must be selected in consultation with and approved by a departmental advisor. Students may make individual arrangements with instructors for honors work. Generally, the biology programs require extensive laboratory experiences in which the students use specialized equipment (including microscopes), chemicals and glassware. Students are also required to work with cultures of microorganisms and to maintain aseptic conditions. The required field experiences will introduce the student to a variety of habitats, including woodlots, fields, streams, lakes and marshes. Courses requiring field trips will have expenses prorated among class members.

Science minors, Integrated Science majors and minors, and Neuroscience majors are found in the Bulletin section on Interdepartmental Majors and Minors.

Biology credit earned on a Credit/No Credit basis does not apply on majors and minors authorized by the Department of Biology.

The Faculty
Non-Teaching Majors and Minors

Biology Major
B.A.; B.S. degrees

Options
Select one of the following options:

General Option
General option is for students who do not plan to attend a professional graduate school upon graduation and are not planning to enter a field associated with natural resources. This option provides flexibility in the choice of electives. Students selecting this option are required to take the core courses (20 hours) and 22 hours of elective biology courses.

Core Courses (20 hours)
BIO 110 - Concepts of Biology 4(3-3)
BIO 203 - General Botany 3(2-3)
BIO 208 - Microbiology 3(2-3)
BIO 218 - General Zoology 3(2-3)
BIO 326 - Genetics 4(3-3)
BIO 340 - Ecology 3(2-3)

Other Requirements I (5-9 hours)
Select one of the following options:

Option A
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)

Option B
CHM 161 - Principles of Chemistry 5(4-4)
CHM 211QR - Quantitative Analysis 4(3-5)

Required Courses I (8-9 hours)
Select one of the following options

Option A (8 hours)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)

Option B (9 hours)
CHM 161 - Principles of Chemistry 5(4-4)
CHM 211QR - Quantitative Analysis 4(3-5)

Microscopy Option
Microscopy Option is for students who plan a career as a biological microscopist. Research laboratories, hospitals, pharmaceutical companies, chemical companies, food processing laboratories, and forensic laboratories are areas in which opportunities exist for microscopists.

Core Courses (20 hours)
BIO 110 - Concepts of Biology 4(3-3)
BIO 203 - General Botany 3(2-3)
BIO 208 - Microbiology 3(2-3)
BIO 218 - General Zoology 3(2-3)
BIO 326 - Genetics 4(3-3)
BIO 340 - Ecology 3(2-3)

Core Courses II (7 hours)
Students selecting the Pre-Graduate/Pre-Professional option are required to take 7 hours in addition to the required core courses.

Pre-Graduate/Pre-Professional Option
Pregraduate/Preprofessional option is for students who plan to enter a graduate or professional school after graduation from CMU.

Core Courses I (16 hours)
BIO 110 - Concepts of Biology 4(3-3)
BIO 203 - General Botany 3(2-3)
BIO 208 - Microbiology 3(2-3)
BIO 218 - General Zoology 3(2-3)
BIO 326 - Genetics 4(3-3)
BIO 340 - Ecology 3(2-3)

Core Courses II (7 hours)
Students selecting the Pre-Graduate/Pre-Professional option are required to take 7 hours in addition to the required core courses.

Choose from the options listed below:

Option A
BIO 324 - Cell Biology 3(3-0)
BIO 390 - Comparative Animal Physiology 4(3-3)

Option B
BIO 324 - Cell Biology 3(3-0)
BIO 391 - Plant Physiology 4(3-3)

Option C
BIO 324 - Cell Biology 3(3-0)
BIO 392 - Mammalian Physiology 4(3-3)

Required Courses I (8-9 hours)
Select one of the following options

Option A (8 hours)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)

Option B (9 hours)
CHM 161 - Principles of Chemistry 5(4-4)
CHM 211QR - Quantitative Analysis 4(3-5)

Required Courses II (20 hours)
CHM 345 - Organic Chemistry I 3(3-0)
CHM 346 - Organic Chemistry II 3(3-0)
CHM 349 - Organic Chemistry Laboratory 2(0-6)
MTH 132 - Calculus I 4(4-0)
PHY 130QR - College Physics I 4(0-4)
PHY 131 - College Physics II 4(0-4)

Electives (22 hours)
Biology electives to be selected in consultation with a biology advisor. BIO 403 is recommended as an elective course.

Total: 70-74 semester hours
Note: CHM 425 or 521, MTH 133, and CPS 110 OR CPS 150 are recommended courses.
Other Requirements II (7-8 hours)
Select one of the following options:

**Option A (8 hours)**
- CHM 345 - Organic Chemistry I 3(3-0)
- CHM 346 - Organic Chemistry II 3(3-0)
- CHM 349 - Organic Chemistry Laboratory 2(0-6)

**Option B (7 hours)**
- CHM 342 - Survey of Organic Chemistry 4(3-3)
- CHM 421 - Survey of Biochemistry 3(3-0)

Other Requirements III (10 hours)
Select one of the following options:

**Option A (10 hours)**
- PHY 130QR - College Physics I 4(4-0)
- PHY 131 - College Physics II 4(4-0)
- PHY 170 - College Physics Laboratory I 1(0-2)
- PHY 171 - College Physics Laboratory II 1(0-2)

**Option B (10 hours)**
- PHY 145QR - University Physics I 4(4-0)
- PHY 146 - University Physics II 4(4-0)
- PHY 175 - University Physics Laboratory I 1(0-2)
- PHY 176 - University Physics Laboratory II 1(0-2)

Other Requirements IV (3 hours)
MTH 109 - Plane Trigonometry 3(3-0)
A higher-level math course may be substituted for MTH 109.

Electives (1-2 hours)
Biology electives to be selected in consultation with a biology advisor.

**Total: 67-71 semester hours**

Note: A chemistry minor is suggested.

**Natural Resources Option**
Natural Resources option is for students who plan to enter an area of natural resource management, wildlife biology, nature interpretation, or museum science.

**Core Courses (20 hours)**
BIO 110 - Concepts of Biology 4(3-3)
BIO 203 - General Botany 3(2-3)
BIO 208 - Microbiology 3(2-3)
BIO 218 - General Zoology 3(2-3)
BIO 326 - Genetics 4(3-3)
BIO 340 - Ecology 3(2-3)

**Required Courses I (3 hours)**
BIO 240 - Conservation of Natural Resources 3(3-0)

**Required Courses II (4 hours)**
Select one of the following:
BIO 390 - Comparative Animal Physiology 4(3-3)
BIO 391 - Plant Physiology 4(3-3)
BIO 392 - Mammalian Physiology 4(3-3)

**Other Requirements I (5-9 hours)**
Select one of the following options:

**Option A (8 hours)**
- CHM 131 - General Chemistry I 4(3-3)
- CHM 132 - General Chemistry II 4(3-3)

**Option B (5 hours)**
- CHM 161 - Principles of Chemistry 5(4-4)

**Option C (9 hours)**
- CHM 120 - Survey of Chemistry 4(4-0)
- CHM 127 - Introductory Chemistry Laboratory 1(0-2)
- CHM 342 - Survey of Organic Chemistry 4(3-3)

Other Requirements II (3-4 hours)
Select one of the following:
PHS 101 - Survey of Physical Science 3(3-0)
PHY 130QR - College Physics I 4(4-0)

**Other Requirements III (3 hours)**
Select one of the following:
BIO 500 - Biological Statistics 3(2-2)
STA 382QR - Elementary Statistical Analysis 3(3-0)

**Note:** If BIO 500 is elected, it may count toward the 42 hours required in BIO.

**Electives (15 hours)**
Biology electives to be selected in consultation with a biology advisor. It is recommended that at least one class be taken at the CMU Biological Station on Beaver Island or another field station.

**Total: 53-58 semester hours**

**Biology/Biomedical Sciences Major**

**B.A., B.S. degrees**
The Biomedical Sciences Major is designed for students interested in pursuing professional programs in human and/or animal medicine or biomedical research. This course of study is designed to satisfy the prerequisites for admission into professional programs as well as provide students with the breadth and depth of scientific concepts in biology, chemistry and physics to perform well on required admission exams for professional programs, such as the MCAT, DAT or GRE.

**Required Courses I (24 hours)**
BIO 110 - Concepts of Biology 4(3-3)
BIO 208 - Microbiology 3(2-3)
BIO 218 - General Zoology 3(2-3)
BIO 324 - Cell Biology 3(3-0)
BIO 326 - Genetics 4(3-3)
BIO 392 - Mammalian Physiology 4(3-3)
BIO 500 - Biological Statistics 3(2-2)

**Required Courses II (12 hours)**
Twelve credits of advanced level elective biomedical courses from the list below are required. Students may substitute up to one course from the following: a 300 level or higher biology course (except those listed in Required Courses III) with permission of a biology advisor, or HSC 214, or HSC 411. At least 3 of the 12 credits must be at the 500 level. At least one of the courses must be a course with an accompanying lab from the list below.
BIO 320 - Biology of Bacteria 3(3-0)
BIO 325 - Biotechnology 3(1-5)
BIO 337 - Comparative Vertebrate Anatomy 4(3-3)
BIO 397 - Special Topics in Biology 1-9(Spec)
BIO 497 - Special Topics in Biology 1-9(Spec)
BIO 501 - Evolution 3(3-0)
BIO 524 - Molecular Biology 3(3-0)
BIO 534 - Endocrinology 3(3-0)
BIO 536 - Histology 3(2-3)
BIO 537 - Immunology 3(3-0)
BIO 539 - Virology 3(3-0)
BIO 544 - Developmental Biology 4(3-3)
BIO 545 - Molecular Genetics 3(3-0)
BIO 546 - Molecular Genetics Laboratory 1(0-3)
BIO 570 - Cellular Dynamics 3(3-0)
BIO 571 - Cellular Dynamics Laboratory 1(0-3)
BIO 576 - Animal Cell Culture 4(1-6)
BIO 580 - Medical Microbiology 4(2-4)
BIO 585 - Conservation Medicine 3(3-0)
BIO 590 - Cardiovascular Physiology 3(3-0)
BIO 591 - Neurophysiology 3(3-0)
BIO 597 - Special Topics in Biology 1-9(Spec)

**Note:** BIO 397, 497, and 597 may only be taken with permission of advisor.
Biology

Required Courses III (2 hours)
Select one of the following capstone experiences:
BIO 403 - Undergraduate Research 3-4(Spec)
BIO 490 - Biomedical Sciences Capstone Seminar 1-2(Spec)
BIO 495 - Undergraduate Internship in Biology 1-4(Spec)

Notes: BIO 490 may be repeated with a different topic for a total of
2 credits. BIO 495 must be taken for at least 2 credits.

Other Requirements I (4 hours)
Select one of the following courses:
MTH 130 - Pre-Calculus Mathematics 4(4-0)
MTH 132 - Calculus I 4(4-0)

Other Requirements II (8-9 hours)
Select one of the following options:
Option I (8 hours)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 3(3-0)
Option II (9 hours)
CHM 161 - Principles of Chemistry 5(4-4)
CHM 211QR - Quantitative Analysis 4(3-5)

Other Requirements III (8 hours)
CHM 345 - Organic Chemistry I 3(3-0)
CHM 346 - Organic Chemistry II 3(3-0)
CHM 349 - Organic Chemistry Laboratory 2(0-6)

Other Requirements IV (3-6 hours)
Select one of the following options:
Option I (3 hours)
CHM 425 - Introductory Biochemistry 3(3-0)
Option II (6 hours)
CHM 521 - Fundamentals of Biochemistry 3(3-0)
CHM 522 - Intermediate Biochemistry 3(3-0)

Other Requirements V (5 hours)
Select one of the following options:
Option I
PHY 130QR - College Physics I 4(4-0)
PHY 170 - College Physics Laboratory I 1(0-2)
Option II
PHY 145QR - University Physics I 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)

Other Requirements VI (5 hours)
Select one of the following options:
Option I
PHY 131 - College Physics II 4(4-0)
PHY 171 - College Physics Laboratory II 1(0-2)
Option II
PHY 146 - University Physics II 4(4-0)
PHY 176 - University Physics Laboratory II 1(0-2)

Total: 71-75 semester hours
Volunteering, job shadowing and/or work experience in the biomedical profession of the student's choice is required for admission to many professional programs. The student should consult an advisor as to the hours required for admittance into a program within their area of interest. Proficiency in conversational Spanish is recommended for students seeking careers in health professions.

Neuroscience Major
B.S. degree
This is an interdisciplinary major. Please check the index for the page number.

Biology Minor
B.A., B.A.A., B.S. degrees

Required Courses (20 hours)
BIO 110 - Concepts of Biology 4(3-3)
BIO 203 - General Botany 3(2-3)
BIO 208 - Microbiology 3(2-3)
BIO 218 - General Zoology 3(2-3)
BIO 326 - Genetics 4(3-3)
BIO 340 - Ecology 3(2-3)

Electives (4 hours)
Four hours of additional biology courses to be selected in consulta-

Total: 24 semester hours

Science Minor
B.A., B.S., B.S. in B.A. degree
This minor satisfies the science requirement for the Dietetics major and is administered by the Department of Biology.

Required Courses I (18 hours)
BIO 110 - Concepts of Biology 4(3-3)
BIO 208 - Microbiology 3(2-3)
BIO 392 - Mammalian Physiology 4(3-3)
CHM 342 - Survey of Organic Chemistry 4(3-3)
CHM 421 - Survey of Biochemistry 3(3-0)

Note: A student opting to take CHM 345, CHM 346 and CHM 349
instead of CHM 342 should have the equivalent of CHM 132 or CHM
161 as a prerequisite.

Note: A student with CHM 345, CHM 346 and CHM 349 may elect to
take either CHM 425 or CHM 521 and CHM 522 instead of CHM 421.

Required Courses II (5-8 hours)
Select one of the following options:
Option A (5 hours)
CHM 120 - Survey of Chemistry 4(4-0)
CHM 127 - Introductory Chemistry Laboratory 1(0-2)
Option B (8 hours)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)

Total: 23-26 semester hours

Undergraduate Certificate in Fermentation Science
This is an interdisciplinary program. Please see Undergraduate Certificates in the Index for the page number.

Teaching Majors and Minors

Integrated Science Major
B.S. in Ed. degree, Provisional Elementary Certification
This is an interdisciplinary major. Please check the index for the page number.

Integrated Science Minor
B.S. in Ed. degree, Elementary Provisional Certification and Elementary Provisional Certification with Emotional or Cognitive Impairment Endorsement (K-12)
This is an interdisciplinary minor. Please check the index for the page number.

Integrated Science Major
B.S. in Ed. degree, Secondary Provisional Certification
This is an interdisciplinary major. Please check the index for the page number.
Provisional Secondary Certification

Biology Major
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

Admission Requirements, Retention & Termination Standards
Biology majors and minors on the Secondary Certification are required to complete, with at least a 2.7 grade point average, 75% of the credit hours on the signed major or minor, including BIO 502, prior to approval for student teaching. At least 6 hours of the biology requirements must be taken at CMU.

Required Courses I (23 hours)
BIO 110 - Concepts of Biology 4(3-3)
BIO 203 - General Botany 3(2-3)
BIO 208 - Microbiology 3(2-3)
BIO 218 - General Zoology 3(2-3)
BIO 326 - Genetics 4(3-3)
BIO 340 - Ecology 3(2-3)
BIO 502 - Teaching Biology 3(2-3)

Required Courses II (4 hours)
Select one of the following:
BIO 390 - Comparative Animal Physiology 4(3-3)
BIO 391 - Plant Physiology 4(3-3)
BIO 392 - Mammalian Physiology 4(3-3)

Other Requirements I (5-8 hours)
Select one of the following options:
Option A
CHM 120 - Survey of Chemistry 4(4-0)
CHM 127 - Introductory Chemistry Laboratory 1(0-2)

Option B
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)

Option C
CHM 161 - Principles of Chemistry 5(4-4)

Other Requirements II (4-8 hours)
Select one of the following options:
Option A
CHM 342 - Survey of Organic Chemistry 4(3-3)

Option B
CHM 345 - Organic Chemistry I 3(3-0)
CHM 346 - Organic Chemistry II 3(3-0)
CHM 349 - Organic Chemistry Laboratory 2(0-6)

Other Requirements III (3-6 hours)
Select one of the following options:
Option A
CHM 421 - Survey of Biochemistry 3(3-0)

Option B
CHM 425 - Introductory Biochemistry 3(3-0)

Option C
CHM 521 - Fundamentals of Biochemistry 3(3-0)
CHM 522 - Intermediate Biochemistry 3(3-0)

Other Requirements IV (8 hours)
PHY 130QR - College Physics I 4(4-0)
PHY 131 - College Physics II 4(4-0)

Other Requirements V (3 hours)
Select one of the following:
BIO 500 - Biological Statistics 3(2-2)
STA 282QR - Introduction to Statistics 3(3-0)

Note: If a student selects BIO 500, it may count toward the 38 hours required in Biology.

Electives (11 hours)
Biology courses including one course in botany and one course in zoology selected in consultation with an advisor to total 38 hours of biology credit.

Total: 58-71 semester hours

Biology Minor
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

Admission Requirements, Retention & Termination Standards
Biology majors and minors on the Secondary Certification are required to complete, with at least a 2.7 grade point average, 75% of the credit hours on the signed major or minor, including BIO 502, prior to approval for student teaching. At least 6 hours of the biology requirements must be taken at CMU.

Required Courses I (4 hours)
BIO 110 - Concepts of Biology 4(3-3)

Required Courses II (19 hours)
BIO 203 - General Botany 3(2-3)
BIO 208 - Microbiology 3(2-3)
BIO 218 - General Zoology 3(2-3)
BIO 326 - Genetics 4(3-3)
BIO 340 - Ecology 3(2-3)
BIO 502 - Teaching Biology 3(2-3)

Required Courses III (4 hours)
Select one of the following:
BIO 390 - Comparative Animal Physiology 4(3-3)
BIO 391 - Plant Physiology 4(3-3)
BIO 392 - Mammalian Physiology 4(3-3)

Other Requirements (5-9 hours)
Select one of the following options:
Option A (9 hours)
CHM 120 - Survey of Chemistry 4(4-0)
CHM 127 - Introductory Chemistry Laboratory 1(0-2)
CHM 342 - Survey of Organic Chemistry 4(3-3)

Option B (8 hours)
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)
CHM 349 - Organic Chemistry Laboratory 2(0-6)

Option C (5 hours)
CHM 161 - Principles of Chemistry 5(4-4)

Total: 32-36 semester hours
Chemistry and Biochemistry (CHM)

For information, please contact the chairperson, 989-774-3981, 268 Dow Science Complex; https://www.cmich.edu/colleges/cst/chemistry/

Why Study Chemistry and Biochemistry?
The study of chemistry provides a wide variety of opportunities for students with career interests in the sciences or related professional areas and for students in non-science areas who wish to obtain some understanding of the impact of the chemical sciences on modern society. Biochemistry applies chemical principles to the study of living systems. An undergraduate major or minor in Chemistry or Biochemistry will give you an excellent foundation to apply for and succeed in:

- professional programs in medicine, allied health sciences, dentistry, veterinary medicine, pharmacy, optometry;
- graduate work in chemistry and biochemistry;
- graduate work in a related area such as pharmacology, polymer science, materials science, chemical engineering, molecular biology, biomedical science;
- industrial chemistry positions in research and development;
- technical services, chemical marketing, technical writing, patent preparation, product formulation, quality assurance, analysis;
- teaching chemistry or the sciences.

Chemistry and Biochemistry at CMU

The Department of Chemistry and Biochemistry offers a variety of courses at the freshman level to permit the selection of a beginning course that is most appropriate for each student. Although the principal guide in the selection of a beginning chemistry course is the student's curriculum and interest in chemistry, other considerations include previous experience in chemistry and mathematics.

Students for whom chemistry or biochemistry is a major or chemistry is a minor or degree requirement or demonstrate an aptitude for chemistry are encouraged to enroll in CHM 161 (5) Principles of Chemistry, an Honors offering, or CHM 131 (4) General Chemistry.

Students with minimal chemistry background may wish to enroll in CHM 120 (4) Survey of Chemistry. This course may satisfy some degree requirements or may also serve as preparation for CHM 131.

Students who have had no previous chemistry background and who desire some experience in chemistry as part of a liberal arts education may wish to enroll in CHM 111 (3) Interaction of Chemistry and Society, which satisfies Group IIA of University Program requirements, or CHM 101 (3) Armchair Chemistry, which satisfies the Group IIB requirement including laboratory, as do CHM 161 and CHM 131. CHM 120 meets the Group IIB requirement but does not include a laboratory. Students taking CHM 111 or 120 desiring to satisfy the Group II laboratory requirement may concurrently enroll in CHM 127 (1) Introductory Chemistry Laboratory.

A major in chemistry affords the student a broad background in all areas of chemistry (analytical, biochemistry, inorganic, organic, physical) with additional courses available in polymer and materials chemistry. The student with a chemistry major is prepared for graduate work in chemical sciences, industrial chemist positions, medical related professional schools or teaching chemistry.

A major in biochemistry requires a student to build a strong background in chemistry and biology/molecular biology with upper level courses that emphasize biological applications of chemistry (Biochemistry I and II, Bioanalytical Chemistry, Biophysical Chemistry). The biochemistry major is excellent preparation for students interested in medicine and allied health professions, pharmacy, and graduate programs in biochemistry and biomedical sciences (pharmacology, physiology, microbiology) and affords students important skills for jobs in biotechnology and pharmaceutical industries.

To properly acquaint the upper-level undergraduate student with the broader world of chemistry, the Department of Chemistry and Biochemistry maintains an excellent departmental seminar program. All majors are encouraged to participate in this program and, in addition, to earn at least one credit in CHM 583 Seminar in Chemistry. All chemistry and biochemistry majors are required to do an extended research project in collaboration with a professor of their choosing as a capstone experience (CHM 491 Undergraduate Research).

Students planning a major or minor program in chemistry or biochemistry should contact the appropriate departmental advisor by the end of the freshman year. Chemistry courses and their mathematics, physics and biology prerequisites should be scheduled in the proper sequence to avoid later conflict. Students planning to enter graduate school or the chemical industry are strongly encouraged to complete the requirements for the American Chemical Society (ACS) certified major in chemistry. CMU is accredited by the ACS to award degrees certified by the society.

All transfer students who wish to complete major or minor programs in chemistry or biochemistry must demonstrate proficiency by completing appropriate course work at Central Michigan University as determined by the departmental major or minor advisor.

A variety of scholarships are available in chemistry for outstanding high school students and current CMU students who plan to major in chemistry.

Courses taken on a Credit/No Credit basis are not allowed on the major or minor.

The Faculty

Chemistry Major (Non-Teaching)

B.A.; B.S. degrees

Chemistry Core I (5-8 hours)
Select one of the following options:

Option A (8 hours)
- CHM 131 - General Chemistry I 4(3-3)
- CHM 132 - General Chemistry II 4(3-3)

Option B (5 hours)
- CHM 161 - Principles of Chemistry 5(4-4)

Chemistry Core II (27-29 hours)
- CHM 211QR - Quantitative Analysis 4(3-5)
- CHM 331 - Inorganic Chemistry 3(2-4)
- CHM 345 - Organic Chemistry I 3(3-0)
- CHM 346 - Organic Chemistry II 3(3-0)
- CHM 349 - Organic Chemistry Laboratory 2(0-6)
- CHM 351 - Physical Chemistry I 3(3-0)
- CHM 352 - Physical Chemistry II 3(3-0)
- CHM 357 - Physical Chemistry Laboratory 2(0-4)
- CHM 425 - Introductory Biochemistry 3(3-0)
- CHM 491 - Undergraduate Research 1-3(Spec)

Electives (3-8 hours)
Sufficient 500-level advanced courses to meet the minimum credit hour requirement. Select from the following:
- CHM 511 - Advanced Analytical Chemistry 4(2-4)
- CHM 513 - Chemistry of Natural Waters 3(1-6)
- CHM 522 - Intermediate Biochemistry 3(3-0)
- CHM 527 - Biochemistry Laboratory 1(0-4)
- CHM 528 - Bioanalytical Techniques Laboratory 2(1-3)
- CHM 531 - Advanced Inorganic Chemistry 3(3-0)
- CHM 541 - Intermediate Organic Chemistry 3(3-0)
- CHM 547 - Advanced Chemistry Laboratory 2(1-3)
- CHM 551 - Materials Chemistry: Inorganics and Nanomaterials 3(3-0)
- CHM 555 - Advanced Physical Chemistry 3(3-0)
- CHM 561 - Polymer Chemistry 3(3-0)
- CHM 562 - Industrial Chemistry 3(3-0)
- CHM 564 - Polymer Technology 3(3-0)
- CHM 566 - Introduction to Biomaterials 3(3-0)
- CHM 567 - Polymer Science Laboratory 2(1-3)
- CHM 568 - Pharmaceutical Chemistry 3(3-0)
- CHM 571 - Topics in Chemistry 1-9(Spec)
- CHM 583 - Seminar in Chemistry 1-2(Spec)

Note: Other courses may be substituted only with permission of a chemistry major advisor.

Total: 40 semester hours

Notes: 11 credit hours must be in laboratory courses. (One credit hour each of CHM 131, 132, 211 and 331, and two credit hours of CHM 161 count as laboratory credit hours.) CHM 521 (3) and CHM 522 (3) may be substituted for CHM 425 (3). Students are urged to consult their major/pre-professional advisor before enrolling for biochemistry courses.

Mathematics and Physics: The following courses are required for students desiring American Chemical Society certification: MTH 132, 133, 223 and 233; PHY 145QR, 146, 175, and 176. Students with inadequate high school preparation may find it necessary to complete additional MTH courses. These MTH and PHY courses are also recommended for students who do not desire ACS certification. The MTH and PHY courses must be completed prior to enrolling in Physical Chemistry.

Chemistry Major (Teaching)

B.S. in Ed. degrees, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

Admission Requirements, Retention & Termination Standards

1. The student must have completed at least 30 hours of his or her chemistry major, in addition to CHM 505 (3) and CHM 507 (1), before approval for student teaching can be given. The student must have a minimum grade point average of 2.7 in those 33 hours of chemistry courses. Transfer chemistry credit will be accepted from regionally accredited institutions, but at least six of the hours must be CMU classes with a minimum grade point average of 2.7. At least 12 of the required chemistry credit hours must have been received within 10 years of application for student teaching.

2. In order for a student to be approved for student teaching in chemistry, two CMU chemistry faculty must, at the student's request, provide completed department student evaluation forms.

3. Each student must demonstrate competence in chemistry by passing an American Chemical Society standardized chemistry examination at a specific level in order to be approved for student teaching.

Chemistry Core I (5-8 hours)
Select one of the following options:

Option A (8 hours)
- CHM 131 - General Chemistry I 4(3-3)
- CHM 132 - General Chemistry II 4(3-3)

Option B (5 hours)
- CHM 161 - Principles of Chemistry 5(4-4)

Chemistry Core II (27-29 hours)
- CHM 211QR - Quantitative Analysis 4(3-5)
- CHM 331 - Inorganic Chemistry 3(2-4)
- CHM 345 - Organic Chemistry I 3(3-0)
- CHM 346 - Organic Chemistry II 3(3-0)
- CHM 349 - Organic Chemistry Laboratory 2(0-6)
- CHM 351 - Physical Chemistry I 3(3-0)
- CHM 352 - Physical Chemistry II 3(3-0)
- CHM 357 - Physical Chemistry Laboratory 2(0-4)
- CHM 425 - Introductory Biochemistry 3(3-0)
- CHM 491 - Undergraduate Research 1-3(Spec)

Electives: sufficient 500-level advanced courses to meet the minimum credit hour requirement. Certain electives are required for American Chemical Society certification. Electives are to be selected in consultation with and approved by a chemistry major advisor.

Total: 40 semester hours

Notes: 11 credit hours must be in laboratory courses. (One credit hour each of CHM 131, 132, 211 and 331, and two credit hours of CHM 161 count as laboratory credit hours).

Biochemistry Major

B.A. and B.S. degree

Core Courses I (5-8 hours)
Select one of the following options:

Option A (8 hours)
- CHM 131 - General Chemistry I 4(3-3)
- CHM 132 - General Chemistry II 4(3-3)

Option B (5 hours)
- CHM 161 - Principles of Chemistry 5(4-4)

Core Courses II (21 hours)
- CHM 211QR - Quantitative Analysis 4(3-5)
- CHM 345 - Organic Chemistry I 3(3-0)
- CHM 346 - Organic Chemistry II 3(3-0)
- CHM 349 - Organic Chemistry Laboratory 2(0-6)
- CHM 521 - Fundamentals of Biochemistry 3(3-0)
- CHM 522 - Intermediate Biochemistry 3(3-0)
- CHM 527 - Biochemistry Laboratory 1(0-4)
CHM 528 - Bioanalytical Techniques Laboratory 2(1-3)

Core Courses III (3-4 hours)
Select one of the following:
- BIO 324 - Cell Biology 3(3-0)
- BIO 325 - Biotechnology 3(1-5)
- BIO 524 - Molecular Biology 3(3-0)

Core Courses IV (3-6 hours)
Select one of the following options:
- Option A (3 hours)
  - CHM 355 - Biophysical Chemistry 3(3-0)
- Option B (6 hours)
  - CHM 351 - Physical Chemistry I 3(3-0)
  - CHM 352 - Physical Chemistry II 3(3-0)

Core Courses V (3 hours)
Select one of the following courses:
- BIO 403 - Undergraduate Research 3-4(Spec)
- CHM 491 - Undergraduate Research 1-3(Spec)

Required Courses I (15 hours)
- BIO 110 - Concepts of Biology 4(3-3)
- BIO 208 - Microbiology 3(2-3)
- MTH 132 - Calculus I 4(4-0)
- MTH 133 - Calculus II 4(4-0)

Required Courses II (3-4 hours)
Select one of the following courses:
- BIO 324 - Cell Biology 3(3-0)
- BIO 326 - Genetics 4(3-3)

Required Courses III (10 hours)
Select one of the following options:
- Option A
  - PHY 130QR - College Physics I 4(4-0)
  - PHY 131 - College Physics II 4(4-0)
  - PHY 170 - College Physics Laboratory I 1(0-2)
  - PHY 171 - College Physics Laboratory II 1(0-2)
- Option B
  - PHY 145QR - University Physics I 4(4-0)
  - PHY 146 - University Physics II 4(4-0)
  - PHY 175 - University Physics Laboratory I 1(0-2)
  - PHY 176 - University Physics Laboratory II 1(0-2)

Electives (0-6 hours)
Sufficient 300 level or greater CHM or BIO courses to meet the required 69 credit hours, selected in consultation with program advisor. Select one of the following options:
- PHY 130QR - College Physics I 4(4-0)
- PHY 131 - College Physics II 4(4-0)
- PHY 170 - College Physics Laboratory I 1(0-2)
- PHY 171 - College Physics Laboratory II 1(0-2)
- PHY 145QR - University Physics I 4(4-0)
- PHY 146 - University Physics II 4(4-0)
- PHY 175 - University Physics Laboratory I 1(0-2)
- PHY 176 - University Physics Laboratory II 1(0-2)

Electives (3-6 hours)
- CHM 349 - Organic Chemistry Laboratory 2(0-6)
- CHM 346 - Organic Chemistry II 3(3-0)
- CHM 349 - Organic Chemistry Laboratory 2(0-6)
- PHY 176 - University Physics Laboratory II 1(0-2)

Chemistry Minor
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

Admission Requirements, Retention & Termination Standards
1. The student must have completed at least 20 hours of his or her chemistry minor, in addition to CHM 505 (3), before approval for student teaching can be given. The student must have a minimum grade point average of 2.7 in those 23 hours of chemistry courses. Transfer chemistry credit will be accepted from regionally accredited institutions, but at least six hours must be CMU classes with a minimum grade point average of 2.7. At least 12 of the required chemistry credit hours must have been received within 10 years of application for student teaching.
2. In order for a student to be approved for student teaching in chemistry, two CMU chemistry faculty must, at the student’s request, provide completed department student evaluation forms.
3. Each student must demonstrate competency in chemistry by passing an American Chemical Society standardized chemistry examination at a specific level in order to be approved for student teaching.

Core Courses I (5-8 hours)
- CHM 131 - General Chemistry I 4(3-3)
- CHM 132 - General Chemistry II 4(3-3)

Option B (5 hours)
- CHM 161 - Principles of Chemistry 5(4-4)

Required Courses II (12 hours)
- CHM 211QR - Quantitative Analysis 4(3-5)
- CHM 345 - Organic Chemistry I 3(3-0)
- CHM 346 - Organic Chemistry II 3(3-0)
- CHM 349 - Organic Chemistry Laboratory 2(0-6)

Electives (3-6 hours)
Select from the following:
- CHM 331 - Inorganic Chemistry 3(2-4)
- CHM 355 - Biophysical Chemistry 3(3-0)
- CHM 425 - Introductory Biochemistry 3(3-0)
- CHM 522 - Intermediate Biochemistry 3(3-0)
- CHM 531 - Advanced Inorganic Chemistry 3(3-0)

Note: You may only count ONE of CHM 425, 522, or 531 for this minor. Other courses may be substituted only with the permission of a chemistry minor advisor.

Total: 23 semester hours

Chemistry Minor
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

Admission Requirements, Retention & Termination Standards
1. The student must have completed at least 20 hours of his or her chemistry minor, in addition to CHM 505 (3), before approval for student teaching can be given. The student must have a minimum grade point average of 2.7 in those 23 hours of chemistry courses. Transfer chemistry credit will be accepted from regionally accredited institutions, but at least six hours must be CMU classes with a minimum grade point average of 2.7. At least 12 of the required chemistry credit hours must have been received within 10 years of application for student teaching.
2. In order for a student to be approved for student teaching in chemistry, two CMU chemistry faculty must, at the student’s request, provide completed department student evaluation forms.
3. Each student must demonstrate competency in chemistry by passing an American Chemical Society standardized chemistry examination at a specific level in order to be approved for student teaching.

Required Courses I (5-8 hours)
- CHM 131 - General Chemistry I 4(3-3)
- CHM 132 - General Chemistry II 4(3-3)

Option B (5 hours)
- CHM 161 - Principles of Chemistry 5(4-4)

Required Courses II (15 hours)
- CHM 211QR - Quantitative Analysis 4(3-5)
- CHM 345 - Organic Chemistry I 3(3-0)
- CHM 346 - Organic Chemistry II 3(3-0)
- CHM 349 - Organic Chemistry Laboratory 2(0-6)
- CHM 505 - Teaching Chemistry and Physics in Secondary Schools 3(3-0)

Electives (0-3 hours)
Selected in consultation with and approved by a chemistry minor advisor.

Note: five credit hours must be in laboratory courses

Total: 23 semester hours

Undergraduate Certificate in Fermentation Science
This is an interdisciplinary program. Please see Undergraduate Certificates in the Index for the page number.
Computer Science (CPS, ITC)
For information, please contact the chairperson, 989-774-3774, 413 Pearce Hall;
https://www.cmich.edu/colleges/cst/comp_sci/

Why Study Computer Science or Information Technology?
The study of computer science can lead to such careers as applications programmer, systems programmer/analyst, computer communications specialist, database manager, and consultant. The field serves those students desiring general instruction in computer science, those interested in teaching the subject, and those who want to undertake advanced study of computer science at the graduate level. Information technology graduates will find a variety of career opportunities, including network administration, database administration, web master, application system designer, multimedia specialist, and customer service technologist.

Computer Science at CMU
The Department of Computer Science offers a major and a minor in computer science, a major and minor in information technology, and an M.S. program in computer science.

Students desiring a computer science course for general education purposes should consider CPS 180 or ITC 101QR. The first course for CPS majors and minors is CPS 180. The first course for ITC majors and minors is CPS 110 or CPS 180.

The Department of Computer Science is concerned that students interested in computer science enroll in the courses which best meet their needs or interests. Students should come to the department office to be assigned an advisor.

The Faculty

Majors

Computer Science Major
B.A.; B.S. degrees

Required Courses I (40 hours)
CPS 180 - Principles of Computer Programming 3(3-0)
CPS 181 - Introduction to Data Structures 3(3-0)
CPS 210 - Assembly Language and Computer Organization 3(3-0)
CPS 240 - Object-Oriented Programming, Analysis and Design 3(3-0)
CPS 340 - Advanced Data Structures and Algorithms 3(3-0)
CPS 360 - Computer Design and Architecture 3(3-0)
CPS 410 - Software Engineering 3(3-0)
CPS 450 - Programming Language Concepts 3(3-0)
CPS 470 - Introduction to Operating Systems 3(3-0)
MTH 132 - Calculus I 4(4-0)
MTH 175 - Discrete Mathematics 3(3-0)
MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
STA 382QR - Elementary Statistical Analysis 3(3-0)

Electives (9 hours)
Electives in CPS or ITC numbered at 280 or above

Total: 49 semester hours

Computer Science Minor
A minor in Computer Science may be approved for students with a major in Information Technology only if another major or minor outside of the department is also obtained.

Required Courses (19 hours)
CPS 180 - Principles of Computer Programming 3(3-0)
CPS 181 - Introduction to Data Structures 3(3-0)
CPS 210 - Assembly Language and Computer Organization 3(3-0)
CPS 240 - Object-Oriented Programming, Analysis and Design 3(3-0)
MTH 132 - Calculus I 4(4-0)
MTH 175 - Discrete Mathematics 3(3-0)

Electives (4-5 hours)
Electives in CPS or ITC numbered 280 or above.

Total: 23-24 semester hours

Information Technology Major
B.A.; B.S. degree

Required Courses I (9 hours)
Select one of the following options:

Option A (9 hours)
CPS 110 - Information Technology Programming I 3(3-0)
CPS 280 - Alternative Programming Languages 1-6(Spec)
ITC 111 - Information Technology Programming II 3(3-0)
Note: 3 hours of CPS 280 is required.

Option B (9 hours)
CPS 180 - Principles of Computer Programming 3(3-0)
CPS 181 - Introduction to Data Structures 3(3-0)
CPS 280 - Alternative Programming Languages 1-6(Spec)
Note: 3 hours of CPS 280 is required.
**Required Courses II (18 hours)**

CPS 282 - Introduction to Multimedia Design 3(3-0)
CPS 395 - Internship in Computer Science 1-9(Spec)
ITC 190 - Computer Hardware Concepts, Installation, Configuration, and Support 3(3-0)
ITC 191 - Computer Software Concepts, Installation, Configuration, and Support 3(3-0)
ITC 265 - Basics of Data Communications and Computer Networks 3(3-0)
ITC 341 - Introduction to Databases and Applications 3(3-0)

**Note:** 3 hours of internship (CPS 395) is required.

**Required Courses III (3 hours)**

An IT project as a capstone experience, preferably in the student’s area of concentration. It should involve the design and implementation of a solution to a nontrivial IT problem that has some practical meaning in the real world. Capstone experiences may include a special project conducted on- or off-campus under supervision of a faculty member or an internship or service learning project supervised by an off-campus project director in coordination with the advisor.

Select one of the following:
- CPS 497 - Independent Study 1-6(Spec)
- ITC 495 - Senior Internship 1-3(Spec)

**Specialized Tracks (6 hours)**

Each student is required to select one track from the following list:

- **Data Communication and Networking (6 hours)**
  - ITC 465 - Network Administration and Security 3(3-0)
  - ITC 466 - System Administration and Automation 3(3-0)

- **Database (6 hours)**
  - CPS 541 - Databases 3(3-0)
  - ITC 441 - Database and Virtual Data Server Administration 3(3-0)

- **Interactive Multimedia Design (6 hours)**
  - CPS 482 - Advanced Multimedia Design 3(3-0)
  - ITC 383 - Computer Game Design 3(3-0)

- **Web Application Development (6 hours)**
  - CPS 420 - Web Application Development - Web Services SOA 3(3-0)
  - ITC 320 - Web Application Development - Client Side Scripting 3(3-0)

- **Custom Track (6 hours)**

  A student may choose to develop a customized track by choosing courses from the other IT tracks or courses from another subject area. The courses may be selected from a variety of disciplines at CMU. The objective of this alternative is to allow students to have the opportunity to follow special interests. The student must propose a program of six hours that represent a coordinated area of interest, and the proposal must be approved by an IT advisor.

**Other Requirements I (3 hours)**

Select one of the following:
- STA 282QR - Introduction to Statistics 3(3-0)
- STA 382QR - Elementary Statistical Analysis 3(3-0)

**Other Requirements II (3-4 hours)**

Select one of the following:
- MTH 132 - Calculus I 4(4-0)
- MTH 175 - Discrete Mathematics 3(3-0)
- MTH 217 - Business Calculus 4(4-0)

**Other Requirements III (3 hours)**

Select one of the following:
- COM 264 - Organizational Communication 3(3-0)
- COM 361 - Interpersonal Communication 3(3-0)

**Electives (6 hours)**

Each student must take 6 additional elective hours, chosen to complement the student's program goals and approved by an IT advisor. In addition to CPS/ITC courses from other IT tracks, or other areas of CPS/ITC, possible electives might include courses such as ART 231, ART 235, ART 335, ART 435, BIO 516, BIS 308, BIS 315, BIS 327, EDU 590, FMD 246, FMD 346, GEO 303, GEO 503, IET 154, IET 226, IET 291, IET 457, IET 458, IET 502, IND 334, MGT 335, PSC 585, SOC 210, and TEC 321.

**Total:** 51-52 semester hours

**Information Technology Minor**

**B.A.; B.A.A.; B.F.A.; B.S. in B.A.; B.S. degrees**

A minor in Information Technology may not be approved for students with majors in Computer Integrated Manufacturing, or Computer Technology. A minor in Information Technology will be approved for students with a major in Computer Science only if another major or minor outside of the department is also obtained.

**Required Courses I (9 hours)**

Select one of the following options:

**Option A**
- CPS 110 - Information Technology Programming I 3(3-0)
- CPS 280 - Alternative Programming Languages 1-6(Spec)
- ITC 111 - Information Technology Programming II 3(3-0)

**Note:** 3 hours of CPS 280 is required.

**Option B**
- CPS 180 - Principles of Computer Programming 3(3-0)
- CPS 181 - Introduction to Data Structures 3(3-0)
- CPS 280 - Alternative Programming Languages 1-6(Spec)

**Note:** 3 hours of CPS 280 is required.

**Required Courses II (6 hours)**

- ITC 190 - Computer Hardware Concepts, Installation, Configuration, and Support 3(3-0)
- ITC 191 - Computer Software Concepts, Installation, Configuration, and Support 3(3-0)

**Other Requirements (3 hours)**

Select one of the following:
- STA 282QR - Introduction to Statistics 3(3-0)
- STA 382QR - Elementary Statistical Analysis 3(3-0)

**Electives (6 hours)**

Select two of the following:
- CPS 282 - Introduction to Multimedia Design 3(3-0)
- CPS 395 - Internship in Computer Science 1-9(Spec)
- CPS 420 - Web Application Development - Web Services SOA 3(3-0)
- CPS 482 - Advanced Multimedia Design 3(3-0)
- ITC 265 - Basics of Data Communications and Computer Networks 3(3-0)
- ITC 320 - Web Application Development - Client Side Scripting 3(3-0)
- ITC 341 - Introduction to Databases and Applications 3(3-0)
- ITC 365 - Introduction to Data Communications and Computer Networks 3(3-0)
- ITC 383 - Computer Game Design 3(3-0)
- ITC 441 - Database and Virtual Data Server Administration 3(3-0)
- ITC 465 - Network Administration and Security 3(3-0)
- ITC 466 - System Administration and Automation 3(3-0)

**Total:** 24 semester hours

**Media Design, Production, and Technology Minor**

This is an interdisciplinary minor. Please check the index for the page number.
Earth and Atmospheric Sciences (GEL, MET)

For information, please contact the chairperson, 989-774-3179, 314 Brooks Hall; https://www.cmich.edu/colleges/cst/earth_atmos/

Geology and Meteorology

As scientific knowledge has advanced, the ability to study Earth as a complex system of interacting physical processes has become possible. Fluids that move through Earth and on the surface are intimately connected to the motion of fluids and gases in our atmosphere and therefore represent two critical components of the Earth system. Therefore, these two programs are housed within the same department. This allows students the opportunity to take elective courses from either program to broaden their knowledge of the Earth system.

Why Study Geology?

Geology is the scientific study of Earth. Geoscientists investigate Earth and its history in order to discover resources, assess pollution, and evaluate natural hazards and other Earth processes that affect our lives. Geoscientists find employment in many areas that are indispensable to our society. Geoscientists locate mineral deposits and energy resources. They find, evaluate, and manage water supplies. They ensure that wastes are stored or disposed of safely. They monitor soil and ground water pollution and are involved in cleaning up contaminated sites. They evaluate environmental hazards for city, highway, and pipeline planners. They serve as public policy advisors. They study the formation of rocks, the movements of continents, the flow of glaciers, and the rise and fall of sea levels. Geoscientists contribute to our understanding of Earth’s long-term climate variability. They study fossils and the history of life. They contribute to the understanding and prediction of natural hazards and disasters, such as earthquakes, landslides, volcanic eruptions, coastal erosion, and floods. Geoscientists work outdoors, in laboratories, in offices, and as teachers.

Geology majors and minors are also good supplements to other majors, such as environmental studies, outdoor recreation, natural resources, and education. Geology courses are also helpful to students interested in fossils, gems, minerals, earthquakes, volcanoes, and resources. Because training in geology prepares students to work with large complex datasets and to make decisions based on limited information, geology graduates often successfully transfer their skills to various business, financial, and legal areas.

Geology at CMU

The geology program at CMU offers majors and minors to suit a variety of interests and needs. The department offers excellent facilities to support field work and laboratory-based research. All geology majors participate in field trips and research projects, both as required components of classes and as optional adventures. The small size of the department provides students an outstanding educational experience including close interaction with faculty.

The geology major emphasizes mastery of the basics required for success as a professional geoscientist: a strong foundation of geologic knowledge and the development of skills related to observation, field and laboratory projects, critical-thinking, computer use and technical writing. This rigorous course of study serves as excellent preparation for graduate education or for a career in the geosciences.

Why Study Meteorology?

Meteorology is the study of weather and all processes that affect weather. It is a rapidly evolving science with significant relevance to society. From climate change to severe storms, meteorologists apply theoretical understanding to observed and modeled atmospheric processes to create forecasts and conduct research. Society benefits from more accurate weather information, therefore the ability to communicate complex scientific analysis is of great importance to the meteorologist. Nearly every adult in the United States is a consumer of weather and climate data, at some decision-making level. The net national benefit of weather information is estimated at $8.8 billion per year.

Meteorology at CMU

Central Michigan University offers a modern, thorough curriculum to prepare students for a career in meteorology. It is the only undergraduate major in meteorology in the state of Michigan. The faculty have terminal degrees in meteorology and teach small classes with laboratory time for practical learning using state-of-the-art weather analysis software. Our program meets the guidelines specified for a Bachelor of Science degree by the American Meteorological Society, as well as the requirements outlined by the National Weather Service. This is considered to be the highest level of accreditation for undergraduate atmospheric science programs. Our program will provide students with the expertise necessary to attend graduate school, forecast for the National Weather Service, broadcast weather for television and radio, or work in the commercial weather industry. We have been accepted as an Academic Affiliate member of the University Corporation for Atmospheric Research (UCAR).

The Faculty

Rachael Agardy, Martin Baxter, Anthony Chappaz, Maria Mercedes Gonzalez, Daria Kluver, Sven Morgan, Neil Mower, Leigh Orf, Ashton Peyrefitte, Wendy Robertson, Mona Sirbescu, Martin Steinbis, Reed Wicander
Majors

Geology Major

B.S. degree

Students choose between this major or a Geology major with a hydrogeology/environmental concentration. Students are encouraged to meet with a departmental advisor to discuss the concentration that is in alignment with their individual goals. Note additional MTH and PHY courses strongly recommended for students who plan to go to graduate school. A minor is encouraged but not required.

I. Admission Requirements, Retention & Termination Standards

In order to sign a Geology major or minor in the Department of Earth and Atmospheric Sciences, a student must first meet with a Geology program advisor and provide written evidence that the student has successfully completed GEL 100, or GEL 130QR, or GEL 101 and GEL 102, or GEL 105 and GEL 102 with a minimum grade of B-.

II. In order to remain a major or minor in the Geology program, students are required to maintain a minimum average 2.5 GPA in all of the major courses, including required prerequisite courses in Math, Chemistry, Physics, and Geography. Furthermore, students must meet the following competency qualifications:

A. Written English Competency: To remain a major or minor in Geology, a student must have scored in at least the 80th percentile group on the university required Written English Competency Examination (CLEP) or earned a minimum grade of B- in English 101. Students not obtaining a minimum grade of B- in English 101 must have earned a minimum grade of B- in English 201. Students should be aware that this is more demanding than the general university competency requirement. Students transferring English competency or English composition course credits from another institution will be expected to meet the same standards required of CMU students.

B. Oral English Competency: To remain a major or minor in Geology, a student must have earned a minimum grade of B- in COM 101 or one of its accepted substitutes (TAI 302, COM 267, COM 269, COM 357, TAI 170). Students transferring COM course credits from another institution will be expected to meet the same standard required of CMU students.

C. Math Competency: To remain a major in Geology, a student must have successfully satisfied the CMU Mathematics Competency Requirement. Students transferring MTH course credits from another institution will be expected to meet the same standards required of CMU students.

II. Core Courses I (3-4 hours)

Introduction to the Geosciences

Select one of the following options:

Option A (4 hours)

GEL 101 - Physical Geology 3(3-0)
GEL 102 - Physical Geology Laboratory 1(0-2)

Option B (4 hours)

GEL 102 - Physical Geology Laboratory 1(0-2)
GEL 105 - Dangerous Planet 3(3-0)

Option C (3 hours)

GEL 100 - Introduction to Earth Systems 3(2-2)

Option D (3 hours)

GEL 130QR - Earth Processes 3(2-2)

II. Core Courses II (26 hours)

Geoscience Fundamentals

GEL 201 - Earth History 3(2-2)
GEL 280 - Geomath 2(0-4)
GEL 290 - Introduction to Geologic Investigation 3(2-2)
GEL 310 - Introductory Mineralogy 4(3-3)
GEL 370 - Structural Geology 3(2-3)

GEL 440 - Stratigraphy and Sedimentology 3(2-3)
GEL 450 - Geology Field Camp 5(Spec)
MET 101QR - Our Changing Climate 3(3-0)

Required Courses I (23 hours)

CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)
GEL 250/MET 250 - Geoscience Mapping and Resource Evaluation 3(3-0)
GEO 203QR - Introduction to Geographic Information Science 3(2-2)
MTH 132 - Calculus I 4(4-0)
PHY 145QR - University Physics I 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)

Note: In addition, students interested in pursuing graduate school are strongly recommended to take MTH 133 - Calculus II (4 hours) and PHY 146 - University Physics II (4 hours).

Required Courses II (6 hours)

Advanced Geoscience

GEL 321 - Petrology 3(2-3)
GEL 430 - Invertebrate Paleontology 3(2-3)

Required Courses III (6 hours)

Select two of the following courses:

GEL 372 - Introduction to Geophysics 3(2-3)
GEL 380 - Hydrogeology 3(2-3)
GEL 385 - Introductory Petroleum Geology 3(2-2)
GEL 420 - Applied Geostatistics 3(2-2)
GEL 460 - Geochemistry 3(3-0)
GEL 550 - Economic Geology 3(2-3)

Electives (3 hours)

Select one or more of the following courses for a total of 3 credits:

GEL 275 - Special Problems in Geology 1(Spec)
GEL 304 - Earth Resources 3(3-0)
GEL 305 - Engineering Geology 3(3-0)
GEL 308 - Introduction to Hydrologic Systems 3(2-2)
GEL 325 - Glacial Morphology and Landforms 3(3-0)
GEL 397 - Independent Study 1-3(Spec)
GEL 406 - Senior Thesis 3(Spec)
GEL 413 - Geomorphology 3(3-0)
GEL 502 - Environmental Geochemistry 3(3-0)
GEL 505 - Low Temperature Isotope Geochemistry
GEL 510 - Geomicrobiology 3(3-0)
GEL 515 - Environmental Soil Chemistry 3(3-0)
GEL 597 - Independent Study 1-6(Spec)
OR choose any course from Required Courses III listed above, without double counting.

Total: 67-68 semester hours

Geology Major: Hydrogeology/Environmental Geology Concentration

B.S. degree

Students choose between this concentration and a Geology major. Students are encouraged to meet with a departmental advisor to discuss the concentration that is in alignment with their individual goals. This concentration is a pregraduate/preprofessional course of study for students who plan to enter graduate school or work in the fields of hydrogeology or environmental geology. Note additional MTH and PHY courses strongly recommended for students who plan to go to graduate school. A minor is encouraged but not required.

I. Admission Requirements, Retention & Termination Standards

In order to sign a Geology major with a concentration in Hydrogeology/Environmental Geology, or a Hydrogeology/Environmental Geology minor in the Department of Earth and Atmospheric Sciences, a student must first meet with a Geology program advisor and provide written evidence that the student has successfully completed GEL 100, or GEL 130QR, or GEL 101 and GEL 102, or GEL 105 and GEL 102 with a minimum grade of B-.

(continued)
II. In order to remain a major or minor in the Geology program, students are required to maintain a minimum average 2.5 GPA in all of the major courses, including required prerequisite courses in Math, Chemistry, Physics, and Geography. Furthermore, students must meet the following competency qualifications:

A. Written English Competency: To remain a Geology major with a concentration in Hydrogeology/Environmental Geology, or a Hydrogeology/Environmental Geology minor, a student must have scored in at least the 80th percentile group on the university required Written English Competency Examination (CLEP) or earned a minimum grade of B- in English 101. Students not obtaining a minimum grade of B- in English 101 must have earned a minimum grade of B- in English 201. Students should be aware that this is more demanding than the general university competency requirement. Students transferring English competency or English composition course credits from another institution will be expected to meet the same standards required of CMU students.

B. Oral English Competency: To remain a Geology major with a concentration in Hydrogeology/Environmental Geology, or a Hydrogeology/Environmental Geology minor, a student must have earned a minimum grade of B- in COM 101 or one of its accepted substitutes (TAI 302, COM 267, COM 269, COM 357, TAI 170). Students transferring COM course credits from another institution will be expected to meet the same standard required of CMU students.

C. Math Competency: To remain a Geology major with a concentration in Hydrogeology/Environmental Geology, or a Hydrogeology/Environmental Geology minor, a student must have successfully satisfied the CMU Mathematics Competency Requirement. Students transferring MTH course credits from another institution will be expected to meet the same standards required of CMU students.

Core Courses I (3-4 hours)
Introduction to the Geosciences
Select one of the following options:

Option A (4 hours)
GEL 101 - Physical Geology 3(3-0)
GEL 102 - Physical Geology Laboratory I(0-2)

Option B (4 hours)
GEL 102 - Physical Geology Laboratory I(0-2)
GEL 105 - Dangerous Planet 3(3-0)

Option C (3 hours)
GEL 100 - Introduction to Earth Systems 3(2-2)

Option D (3 hours)
GEL 130QR - Earth Processes 3(2-2)

Core Courses II (26 hours)
Geoscience Fundamentals
GEL 201 - Earth History 3(2-2)
GEL 280 - Geomath 2(0-4)
GEL 290 - Introduction to Geologic Investigation 3(2-2)
GEL 310 - Introductory Mineralogy 4(3-3)
GEL 370 - Structural Geology 3(2-3)
GEL 440 - Stratigraphy and Sedimentology 3(2-3)
GEL 450 - Geology Field Camp 5(Spec)
MET 101QR - Our Changing Climate 3(3-0)

Required Courses I (23 hours)
Prerequisites and Skills
CHM 131 - General Chemistry I 4(3-3)
CHM 132 - General Chemistry II 4(3-3)
GEL 250/MET 250 - Geoscience Mapping and Resource Evaluation 3(3-0)

GEO 203QR - Introduction to Geographic Information Science 3(2-2)
MTH 132 - Calculus I 4(4-0)
PHY 145QR - University Physics I 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)

Note: In addition, students interested in pursuing graduate school are strongly recommended to take MTH 133 - Calculus II (4 hours) and PHY 146 - University Physics II (4 hours).

Required Courses II (9 hours)
GEL 372 - Introduction to Geophysics 3(2-3)
GEL 380 - Hydrogeology 3(2-3)
GEL 502 - Aqueous Geochemistry 3(2-3)

Required Courses III (3 hours)
Select one of the following:
GEL 420 - Applied Geostatistics 3(2-2)
GEL 510 - Geomicrobiology 3(3-0)
GEL 515 - Environmental Soil Chemistry 3(3-0)

Electives (3-4 hours)
Select one or more of the following courses:
CHM 345 - Organic Chemistry I 3(3-0)
GEL 275 - Special Problems in Geology 1(Spec)
GEL 304 - Earth Resources 3(3-0)
GEL 305 - Engineering Geology 3(3-0)
GEL 308 - Introduction to Hydrologic Systems 3(2-2)
GEL 321 - Petrology 3(2-3)
GEL 325 - Glacial Morphology and Landforms 3(3-0)
GEL 385 - Introductory Petroleum Geology 3(2-2)
GEL 397 - Independent Study 1-3(Spec)
GEL 406 - Senior Thesis 3(Spec)
GEL 413 - Geomorphology 3(3-0)
GEL 430 - Invertebrate Paleontology 3(2-3)
GEL 460 - Geochemistry 3(3-0)
GEL 505 - Low Temperature Isotope Geochemistry
GEL 510 - Geomicrobiology 3(3-0)
GEL 515 - Environmental Soil Chemistry 3(3-0)
GEL 550 - Economic Geology 3(2-3)
GEL 597 - Independent Study 1-6(Spec)

Total: 67-69 semester hours

Meteorology Major
B.S. degree

Required Courses (35 hours):
MET 260 - Introduction to Atmospheric Science 3(2-2)
MET 265 - Professional Development in the Atmospheric Sciences 1(1-0)
MET 310 - Atmospheric Thermodynamics and the Boundary Layer 3(2-2)
MET 312 - Meteorological Instruments and Observations 3(3-0)
MET 320 - Physical Meteorology 3(3-0)
MET 330 - Dynamic Meteorology I 3(3-0)
MET 335 - Dynamic Meteorology II 3(3-0)
MET 340 - Synoptic Meteorology I 3(2-2)
MET 345 - Synoptic Meteorology II 3(2-2)
MET 355 - Weather Forecasting Practicum 1-4(Spec)
MET 450 - Mesoscale Meteorology 3(3-0)
MET 460 - Global Climate Dynamics 3(3-0)
MET 480 - Atmospheric Modeling 3(2-2)

Note: One credit of MET 355 required.

Additional Requirements (36 hours):
CHM 120 - Survey of Chemistry 4(4-0)
CHM 127 - Introductory Chemistry Laboratory 1(0-2)
CPS 180 - Principles of Computer Programming 3(3-0)
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 232 - Linear Algebra and Differential Equations 3(3-0)
MTH 233 - Calculus III 4(4-0)
Required Courses II (5-8 hours)
Select one of the following options:

**Option A (8 hours)**
- CHM 131 - General Chemistry I 4(3-3)
- CHM 132 - General Chemistry II 4(3-3)

**Option B (5 hours)**
- CHM 161 - Principles of Chemistry 5(4-4)

Electives I (6 hours)
Select electives in consultation with advisor.
- BIO 365 - Environmental Contaminants 3(3-0)
- BIO 526 - Limnology 3(3-0)
- BIO 527 - Limnological Methods 2(0-4)
- CHM 345 - Organic Chemistry I 3(3-0)
- CHM 346 - Organic Chemistry II 3(3-0)
- CHM 513 - Chemistry of Natural Waters 3(1-6)
- GEL 372 - Introduction to Geophysics 3(2-3)
- GEL 502 - Aqueous Geochemistry 3(3-0)
- GEO 201 - Weather and Climate 4(4-0)
- GEO 203QR - Introduction to Geographic Information Science 3(2-2)
- GEO 305 - Remote Sensing of the Environment 3(2-2)
- GEO 503 - Geographic Information Systems 3(2-2)
- GEO 508 - Digital Remote Sensing 3(2-2)

Electives II (6 hours)
Select electives in consultation with advisor.
- ANT 171 - Human Origins: Introduction to Physical Anthropology 3(3-0)
- ANT 370/SOC 370 - Global Environmental Issues 3(3-0)
- BLR 410 - Regulatory Law 3(3-0)
- ENV 310 - Environmental Issues Management 3(3-0)
- HSC 352 - Environmental Health 3(3-0)
- IET 327 - Industrial Safety 3(3-0)
- IET 525 - Hazardous Materials Technology 3(3-0)
- IND 332 - Human Shelter and Environment 3(3-0)
- MGT 312 - Introduction to Management 3(3-0)
- MKT 151 - Marketing and Society 3(3-0)
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

Total: 56-59 semester hours

Earth Science Major
B.S. in Ed. degree, Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

This is an interdisciplinary major. Please check the index for the page number.

Integrated Science Major
B.S. in Ed. degree, Secondary Provisional Certification

This is an interdisciplinary major. Please check the index for the page number.
Minors

Geology Minor
B.A.; B.A.A.; B.S. degrees

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
See the information in the Geology Major at the beginning of this section.

Required Courses I (3-4 hours)
Students must select one of the following options:

Option A (4 hours)
- GEL 101 - Physical Geology 3(3-0)
- GEL 102 - Physical Geology Laboratory 1(0-2)

Option B (4 hours)
- GEL 102 - Physical Geology Laboratory 1(0-2)
- GEL 105 - Dangerous Planet 3(3-0)

Option C (3 hours)
- GEL 100 - Introduction to Earth Systems 3(2-2)

Option D (3 hours)
- GEL 130QR - Earth Processes 3(2-2)

Required Courses II (9 hours)
- GEL 201 - Earth History 3(2-2)
- GEL 290 - Introduction to Geologic Investigation 3(2-2)
- GEL 320 - Earth Materials 3(2-3)

Electives (9 hours)
Select from the following:
- BIO 365 - Environmental Contaminants 3(3-0)
- CHM 342 - Survey of Organic Chemistry 4(3-3)
- CHM 345 - Organic Chemistry I 3(3-0)
- GEO 310 - Surface Hydrology 3(2-2)
- GEL 320 - Earth Materials 3(2-3)
- GEL 372 - Introduction to Geophysics 3(2-3)
- GEL 413 - Geomorphology 3(3-0)
- GEL 440 - Stratigraphy and Sedimentology 3(2-3)
- GEL 502 - Aqueous Geochemistry 3(3-0)

Note: You may only select one of BIO 365, CHM 342, or CHM 345.

Total: 21-22 semester hours

Hydrogeology/Environmental Geology Minor
B.A.A.; B.A.; B.S. degrees

ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS
See the information in the Geology Major: Hydrogeology/Environmental Geology concentration at the beginning of this section.

Required Courses I (3-4 hours)
Students must select one of the following options:

Option A (4 hours)
- GEL 101 - Physical Geology 3(3-0)
- GEL 102 - Physical Geology Laboratory 1(0-2)

Option B (4 hours)
- GEL 102 - Physical Geology Laboratory 1(0-2)
- GEL 105 - Dangerous Planet 3(3-0)

Option C (3 hours)
- GEL 100 - Introduction to Earth Systems 3(2-2)

Option D (3 hours)
- GEL 130QR - Earth Processes 3(2-2)

Required Courses II (9 hours)
- GEL 201 - Earth History 3(2-2)
- GEL 290 - Introduction to Geologic Investigation 3(2-2)
- GEL 380 - Hydrogeology 3(2-3)

Electives (9 hours)
Select from the following:
- BIO 365 - Environmental Contaminants 3(3-0)
- CHM 342 - Survey of Organic Chemistry 4(3-3)
- CHM 345 - Organic Chemistry I 3(3-0)
- GEO 310 - Surface Hydrology 3(2-2)
- GEL 320 - Earth Materials 3(2-3)
- GEL 372 - Introduction to Geophysics 3(2-3)
- GEL 413 - Geomorphology 3(3-0)
- GEL 440 - Stratigraphy and Sedimentology 3(2-3)
- GEL 502 - Aqueous Geochemistry 3(3-0)

Note: You may only select one of BIO 365, CHM 342, or CHM 345.

Total: 21-23 semester hours

Earth Science Minor
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

This is an interdisciplinary minor. Please check the index for the page number.

Integrated Science Minor
B.S. in Ed. degree, Provisional Elementary Certification

This is an interdisciplinary minor. Please check the index for the page number.

Environmental Studies Minor
This is an interdisciplinary minor. Please check the index for the page number.
Why Study Engineering and Technology?

Students enter the fields of engineering and technology to intensify and broaden their knowledge within engineering, engineering technology, and construction management. They will gain preparation for industrial careers in a variety of engineering, technical, supervisory, or managerial capacities. Courses in these fields contribute to their technical and professional growth.

Engineeering and Technology at CMU

The School of Engineering and Technology offers a variety of choices to students interested in careers in engineering and technology. Majors and minors within the School reflect the diversity of our programs. As you select from our majors and minor, remember that you are pursuing a degree, and must meet all the degree requirements as well as the major and minor requirements given on the following pages.

Graduate Study: The Master of Science in Engineering is available. Refer to the College of Graduate Studies Bulletin or an advisor for additional information.

The Faculty


Engineering Majors

The engineering majors prepare students to help solve many exciting and demanding problems including important global issues related to energy and the environment, as well as the development of new devices, products and materials. Students work with advanced computer simulations and modern, well-equipped laboratories that provide exciting and valuable hands-on experience.

Mission Statement

The mission of the engineering programs at Central Michigan University is to

1. Provide an environment that encourages intense interaction between and among faculty and students.
2. Provide instruction that enables students to move from theoretical concepts into practical applications.
3. Create graduates who are capable of succeeding in the job market or advanced studies.

Admission Policy

The Engineering Majors are structured into two phases: pre-professional phase and professional phase. Admission to these undergraduate programs (as well as many other nationally accredited programs) is competitive and the number of applicants typically exceeds the number of students who can be admitted to the professional phase. Thus simply meeting the minimum admission standards listed below does not guarantee admission into the major program. The pre-professional phase will likely take the student a minimum of three semesters to complete. However, it could take a student longer than three semesters to meet selection criteria. Students must complete all pre-professional courses, as well as specific selection criteria and the ability to meet program Technical Standards, before selection to the professional phase can be completed. A limited number of students per semester are admitted to the professional phase of the engineering programs. Those students not admitted into the professional phase may apply in subsequent semesters. After being admitted, the student must complete four semesters of professional coursework.

Students cannot enroll in many of the courses until selected into the programs. In addition to the coursework, students will have a variety of other education experiences, which may include internships and/or senior projects.

Current CMU students who are contemplating an engineering major and have not begun the pre-professional courses are strongly encouraged to meet with an engineering faculty advisor, as soon as possible upon their decision to pursue an engineering major. Students intending to major in engineering must sign an intent to major form during their pre-professional phase, which will be considered as application to the program. CMU is developing a program to allow entering freshmen students with high ACT scores and high school GPAs to gain direct admission into the engineering program provided they maintain minimum GPA requirements in the pre-professional courses.

Computer Engineering Major

B.S.Cmp.E. degree

Requirements for the Bachelor of Science in Computer Engineering are listed in the degree section of this bulletin (see index for page number). The degree, including the major, requires a minimum of 130-136 hours.

Program Educational Objectives for Computer Engineering

The engineering programs have established the following expectations for the accomplishments of our graduates in the first several years following graduation:
1. Our graduates will apply their engineering knowledge and problem solving skills in related professional fields.
2. Our graduates will function as team members who think critically, communicate effectively, and demonstrate initiative and self-motivation.
3. Our graduates will be actively involved in their profession and engaged in lifelong learning activities in computer engineering or related fields.
4. Our graduates will exhibit high levels of professionalism and professional ethics.

(continued)
Computer Engineering Student Outcomes

By the time of graduation from the Computer Engineering Program, students are expected to have:

1. an ability to apply knowledge of mathematics, science and engineering;
2. an ability to design and conduct experiments, as well as to analyze and interpret data;
3. an ability to design systems, components, or processes to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
4. an ability to function in multidisciplinary teams;
5. an ability to identify, formulate and solve engineering problems;
6. an understanding of professional and ethical responsibility;
7. an ability to communicate effectively;
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and social context;
9. a recognition of the need for and an ability to engage in life-long learning;
10. a knowledge of contemporary issues;
11. an ability to use the techniques, skills and modern engineering tools necessary for engineering practice;
12. an ability to apply advanced mathematics, including multivariate calculus, differential equations, linear algebra, complex variables, and discrete mathematics;
13. a knowledge of probability and statistics, including computer engineering applications;
14. a knowledge of basic sciences, computer science, and engineering sciences necessary to analyze and design complex electrical and electronic devices, software, and systems containing hardware and software components.

Admission Requirements, Retention & Termination Standards

See the Admission Policy at the beginning of this department's section.

Students pursuing one of our majors or minors are required to meet with an E&T advisor during the first semester of attendance at CMU. Engineering majors are required to meet with their engineering advisor each semester to ensure students select appropriate courses to facilitate their progress through the program. Registration in upper level engineering classes is not allowed until after this meeting. Pre-requisites are strictly enforced for all engineering classes.

Admission Requirements

In order to sign a major (BScmpE) in computer engineering, a student must meet the following criteria:

1. An overall GPA of 2.5 or higher.
2. A GPA of 2.0 or higher within each of the following designators for the listed courses:
   a. Engineering: EGR 120, EGR 190QR, EGR 290;
   b. Mathematics: MTH 132, MTH 133, MTH 175;
   c. Physics: PHY 145QR, PHY 146, PHY 175;
   d. Computer science: CPS 180, CPS 181
3. A grade of C- or higher in each of the following courses: EGR 120, EGR 190QR, EGR 290, MTH 132, MTH 133, MTH 175, PHY 145QR, PHY 146, PHY 175, CPS 180, CPS 181.

Retention & Termination Standards

In order to remain a major (BScmpE) in computer engineering, a student must meet the following criteria:

1. Students must select courses in consultation with an engineering advisor.
2. Students may not take courses required for this major Credit/No Credit.
3. In order to graduate, students must maintain a minimum GPA of 2.0 in all required courses within each of the following designators: EGR, CPS, MTH, PHY. If the GPA falls below this level, the student will be required to re-take courses until the standard is met prior to taking additional EGR courses.
4. At least 30 credits of EGR courses must be taken at CMU to graduate with this major.
5. Students must register for and take the Fundamentals of Engineering (FE) Exam during their final year at CMU to graduate with this major.
6. If a student does not continue to meet the retention standards, s/he may be asked to withdraw from the major. The department maintains the right to terminate a student from the major if s/he is not progressing satisfactorily.

The engineering and technology degree programs consist of extensive laboratory work which involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practice. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signs.

Required Courses (63 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPS 181</td>
<td>Introduction to Data Structures</td>
<td>3(0)</td>
</tr>
<tr>
<td>CPS 340</td>
<td>Advanced Data Structures and Algorithms</td>
<td>3(0)</td>
</tr>
<tr>
<td>EGR 120</td>
<td>Introduction to Engineering</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 190QR</td>
<td>Digital Circuits</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 290</td>
<td>Circuit Analysis I</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 292</td>
<td>Circuit Analysis II</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 298</td>
<td>Microelectronic Circuits I</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 390</td>
<td>Computer System Design using HDL</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 391</td>
<td>Signal and System Theory</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 392</td>
<td>Microelectronic Circuits II</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 393</td>
<td>Circuit Lab 3</td>
<td>1(1-4)</td>
</tr>
<tr>
<td>EGR 394</td>
<td>Computer Circuit Simulation</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 396</td>
<td>Microprocessor Fundamentals</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 398</td>
<td>Microelectronics and Computer Lab</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 480</td>
<td>Digital Integrated Circuit Design with FPGAs</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 481</td>
<td>Embedded System Design</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 482</td>
<td>Design and Organization of Computer Hardware</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 484</td>
<td>Digital Signal Processing</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 487</td>
<td>Introduction to VLSI Systems</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 489</td>
<td>Senior Design I</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 499</td>
<td>Senior Design II</td>
<td>3(1-4)</td>
</tr>
</tbody>
</table>

Electives (3 hours)

Select at least 3 hours from the following engineering courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 251</td>
<td>Engineering Statics</td>
</tr>
<tr>
<td>EGR 371</td>
<td>Robotics &amp; Automation</td>
</tr>
<tr>
<td>EGR 388</td>
<td>Introduction to Electromagnetics</td>
</tr>
<tr>
<td>EGR 492</td>
<td>Automatic Control Systems</td>
</tr>
<tr>
<td>EGR 496</td>
<td>Communication Systems</td>
</tr>
<tr>
<td>EGR 591</td>
<td>CMOS Circuit Design</td>
</tr>
</tbody>
</table>

Total: 66 semester hours

Electrical Engineering Major

B.S.E.E. degree

All requirements for the Bachelor of Science in Electrical Engineering are listed in the degree section of this bulletin (see index for page number). The degree, including the major, requires a minimum of 130-134 hours.

Program Educational Objectives for Electrical Engineering

The engineering programs have established the following expectations for the accomplishments of our graduates in the first several years following graduation:
1. Our graduates will apply their engineering knowledge and problem solving skills in related professional fields.
2. Our graduates will function as team members who think critically, communicate effectively, and demonstrate initiative and self-motivation.
3. Our graduates will be actively involved in their profession and engaged in lifelong learning activities in electrical engineering or related fields.
4. Our graduates will exhibit high levels of professionalism and professional ethics.

**Electrical Engineering Student Outcomes**

By the time of graduation from the Electrical Engineering Program, students are expected to have:

1. an ability to apply knowledge of mathematics, science and engineering;
2. an ability to design and conduct experiments, as well as to analyze and interpret data;
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
4. an ability to function in multidisciplinary teams;
5. an ability to identify, formulate and solve engineering problems;
6. an understanding of professional and ethical responsibility;
7. an ability to communicate effectively;
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context;
9. a recognition of the need for and an ability to engage in lifelong learning;
10. a knowledge of contemporary issues;
11. an ability to use the techniques, skills and modern engineering tools necessary for engineering practice;
12. an ability to apply advanced mathematics including multivariate calculus, differential equations, linear algebra, complex variables, and discrete mathematics;
13. a knowledge of probability and statistics, including electrical engineering applications;
14. a knowledge of basic sciences, computer science, and engineering sciences necessary to analyze and design complex electrical and electronic devices, software, and systems containing hardware and software components.

**Admission Requirements, Retention & Termination Standards**

See the Admission Policy at the beginning of this department’s section.

Students pursuing one of our majors or minors are required to meet with an E&T advisor during the first semester of attendance at CMU.

Engineering majors are required to meet with their engineering advisor each semester to ensure that each student selects appropriate courses to facilitate their progress through the program. Registration in upper level engineering classes is not allowed until after this meeting. Prerequisites are strictly enforced for all engineering classes.

**Admission Requirements**

In order to sign a major (BSEE) in electrical engineering, a student must meet the following criteria:

1. An overall GPA of 2.5 or higher.
2. A GPA of 2.0 or higher within each of the following designators for the listed courses:
   a. Engineering: EGR 120, EGR 190QR, EGR 290;
   b. Mathematics: MTH 132, MTH 133;
   c. Physics: PHY 145QR, PHY 146, PHY 175.
3. A grade of C- or higher in each of the following courses: EGR 120, EGR 190QR, EGR 290, MTH 132, MTH 133, PHY 145QR, PHY 146, PHY 175.

**Retention & Termination Standards**

In order to remain a major (BSEE) in electrical engineering, a student must meet the following criteria:

1. Students must select courses in consultation with an engineering advisor.
2. Students may not take courses required for this major Credit/No Credit.
3. In order to graduate, students must maintain a minimum GPA of 2.0 in all required courses within each of the following designators: EGR, MTH, PHY. If the GPA falls below this level, the student will be required to re-take courses until the standard is met prior to taking additional EGR courses.
4. At least 30 credits of EGR courses must be taken at CMU to graduate with this major.
5. Students must register for and take the Fundamentals of Engineering (FE) Exam during their final year at CMU to graduate with this major.
6. If a student does not continue to meet the retention standards, s/he may be asked to withdraw from the major. The department maintains the right to terminate a student from the major if s/he is not progressing satisfactorily.

The engineering and technology degree programs consist of extensive laboratory work which involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

**Required Courses I (57 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 120</td>
<td>Introduction to Engineering</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 190QR</td>
<td>Digital Circuits</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 251</td>
<td>Engineering Statics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 290</td>
<td>Circuit Analysis I</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 292</td>
<td>Circuit Analysis II</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 298</td>
<td>Microelectronic Circuits I</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 300</td>
<td>Engineering Economic Analysis</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 388</td>
<td>Introduction to Electromagnetics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 390</td>
<td>Computer System Design using HDL</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 391</td>
<td>Signal and System Theory</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 392</td>
<td>Microelectronic Circuits II</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 393</td>
<td>Circuit Lab</td>
<td>3(1-4)</td>
</tr>
<tr>
<td>EGR 394</td>
<td>Computer Circuit Simulation</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 396</td>
<td>Microprocessor Fundamentals</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 398</td>
<td>Microelectronics and Computer Lab</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 489</td>
<td>Senior Design I</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 492</td>
<td>Automatic Control Systems</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 496</td>
<td>Communication Systems</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 499</td>
<td>Senior Design II</td>
<td>3(1-4)</td>
</tr>
</tbody>
</table>

**Required Courses II (3 hours)**

Select one of the following:

- CPS 180 - Principles of Computer Programming | 3(3-0)
- EGR 200 - Computer Aided Problem Solving for Engineers | 3(2-2)

**Electives (12 hours)**

Select at least 12 hours from the following engineering courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 235</td>
<td>Engineering Dynamics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 250</td>
<td>Strength of Materials</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 355</td>
<td>Engineering Materials</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 356</td>
<td>Thermodynamics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 358</td>
<td>Fluid Mechanics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 371</td>
<td>Robotics &amp; Automation</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 397</td>
<td>Special Topics in Engineering</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 437</td>
<td>Directed Research in Engineering</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 480</td>
<td>Digital Integrated Circuit Design with FPGAs</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 481</td>
<td>Embedded System Design</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 482</td>
<td>Design and Organization of Computer Hardware Systems</td>
<td>3(3-0)</td>
</tr>
</tbody>
</table>

(continued)
EGR 484 - Digital Signal Processing 3(3-0)
EGR 487 - Introduction to VLSI Systems 3(3-0)
EGR 490 - Computer Data Acquisition & Instrumentation 3(3-0)
EGR 591 - CMOS Circuit Design 3(2-2)
EGR 594 - Power Electronics 3(3-0)

Notes:
- Not more than three credits of EGR 437 will count.
- You may only count ONE of EGR 480 OR 481 OR 482 OR 484.

Total: 72 semester hours

**Mechanical Engineering Major**

*B.S.M.E. degree*

All requirements for the Bachelor of Science in Mechanical Engineering are listed in the degree section of this bulletin (see index for page number). The degree, including the major, requires a minimum of 130-134 hours.

**Program Educational Objectives for Mechanical Engineering**

The engineering programs have established the following expectations for the accomplishments of our graduates in the first several years following graduation:
1. Our graduates will apply their engineering knowledge and problem solving skills in related professional fields.
2. Our graduates will function as team members who think critically, communicate effectively, and demonstrate initiative and self-motivation.
3. Our graduates will be actively involved in their profession and engaged in lifelong learning activities in mechanical engineering or related fields.
4. Our graduates will exhibit high levels of professionalism and professional ethics.

**Mechanical Engineering Student Outcomes**

By the time of graduation from the Mechanical Engineering Program, students are expected to have:
1. an ability to apply knowledge of advanced mathematics through multivariate calculus, statistics, linear algebra and differential equations, chemistry, calculus-based physics and engineering;
2. an ability to design and conduct experiments, as well as to analyze and interpret data;
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
4. an ability to function in multidisciplinary teams;
5. an ability to identify, formulate and solve engineering problems;
6. an understanding of professional and ethical responsibility;
7. an ability to communicate effectively;
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context;
9. a recognition of the need for and an ability to engage in lifelong learning;
10. a knowledge of contemporary issues;
11. an ability to use the techniques, skills and modern engineering tools necessary for engineering practice;
12. an ability to work professionally in both thermal and mechanical systems areas including the design and realization of such systems.

**Admission Requirements, Retention & Termination Standards**

See the Admission Policy at the beginning of this department’s section.

Students pursuing one of our majors or minors are required to meet with an E&T advisor during the first semester of attendance at CMU. Engineering majors are required to meet with their engineering advisor each semester to ensure that each student selects appropriate courses to facilitate their progress through the program. Registration in upper level engineering classes is not allowed until after this meeting. Prerequisites are strictly enforced for all engineering classes.

**Admission Requirements**

In order to sign a major (BSME) in mechanical engineering, a student must meet the following criteria:
1. An overall GPA of 2.5 or higher.
2. A GPA of 2.0 or higher within each of the following designators for the listed courses:
   a. Engineering: EGR 120, EGR 190QR, EGR 251;
   b. Mathematics: MTH 132, MTH 133;
   c. Physics: PHY 145QR, PHY 146, PHY 175.
3. A grade of C- or higher in each of the following courses: EGR 120, EGR 190QR EGR 251, MTH 132, MTH 133, PHY 145QR, PHY 146, PHY 175.

**Retention & Termination Standards**

In order to remain a major (BSME) in mechanical engineering, a student must meet the following criteria:
1. Students must select courses in consultation with an engineering advisor.
2. Students may not take courses required for this major Credit/No Credit.
3. In order to graduate, students must maintain a minimum GPA of 2.0 in all required courses within each of the following designators: EGR, MTH, PHY. If the GPA falls below this level, the student will be required to re-take courses until the standard is met prior to taking additional EGR courses.
4. At least 30 credits of EGR courses must be taken at CMU to graduate with this major.
5. Students must register for and take the Fundamentals of Engineering (FE) Exam during their final year at CMU to graduate with this major.
6. If a student does not continue to meet the retention standards, s/he may be asked to withdraw from the major. The department maintains the right to terminate a student from the major if s/he is not progressing satisfactorily.

The engineering and technology degree programs consist of extensive laboratory work which involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

**Required Courses (63 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 120</td>
<td>Introduction to Engineering</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 190QR</td>
<td>Digital Circuits</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 200</td>
<td>Computer Aided Problem Solving for Engineers</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 251</td>
<td>Engineering Statics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 253</td>
<td>Engineering Dynamics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 255</td>
<td>Strength of Materials</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 290</td>
<td>Circuit Analysis</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 300</td>
<td>Engineering Economic Analysis</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 355</td>
<td>Engineering Materials</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 356</td>
<td>Thermodynamics I</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 358</td>
<td>Fluid Mechanics</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 359</td>
<td>Machine Design I</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 360</td>
<td>Solid Mechanics Laboratory</td>
<td>3(1-4)</td>
</tr>
<tr>
<td>EGR 456</td>
<td>Thermodynamics II &amp; Heat Transfer</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 458</td>
<td>Measurement and Instrumentation Laboratory</td>
<td>3(1-4)</td>
</tr>
<tr>
<td>EGR 459</td>
<td>Machine Design II</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 460</td>
<td>Thermal Fluids Laboratory</td>
<td>3(1-4)</td>
</tr>
<tr>
<td>EGR 477</td>
<td>Finite Element Analysis</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>EGR 489</td>
<td>Senior Design I</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>EGR 499</td>
<td>Senior Design II</td>
<td>3(1-4)</td>
</tr>
<tr>
<td>IET 154</td>
<td>Engineering Design Graphics</td>
<td>3(2-2)</td>
</tr>
</tbody>
</table>
Electives (9 hours)
Select 9 hours from the following courses:
- EGR 292 - Circuit Analysis II 3(3-0)
- EGR 298 - Microelectronic Circuits 1 3(3-0)
- EGR 371 - Robotics & Automation 3(2-2)
- EGR 397 - Special Topics in Engineering 1 6(Spec)
- EGR 437 - Directed Research in Engineering 1 3(Spec)
- EGR 479 - Fracture and Fatigue Analysis 3(3-0)
- EGR 553 - Mechanical Vibrations 3(3-0)
- EGR 554 - Mechanical Controls 3(3-0)
- EGR 576 - Mechanics of Composite Materials 3(3-0)
- EGR 578 - Advanced Mechanics of Materials 3(3-0)

Note: You may only select one of EGR 292 or 298.
Note: Not more than 3 credits of EGR 437 will count.
Total: 72 semester hours

Other Majors

Construction Management Major
B.S.E.T. degree
The Construction Management program of study prepares students for challenging and rewarding careers in management within the construction industry. Construction Management students learn to organize, lead, and manage the people, materials, resources, and processes of construction utilizing the latest technologies within the industry.

Admission Requirements, Retention & Termination Standards

The engineering and technology degree programs consist of extensive laboratory work which involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

Students pursuing one of our majors or minors are required to meet with an ET advisor during the first semester of attendance at CMU.

A maximum of six semester hours of Credit/No Credit may be used on departmental majors (excluding computer, electrical and mechanical engineering) or minors. Credit/No Credit courses are identified in the Course Search & Registration.

Required Courses (55 hours)
- EGR 200 - Computer Aided Problem Solving for Engineers 3(2-2)
- GEL 101 - Physical Geology 3(3-0)
- GEL 102 - Physical Geology Laboratory 1(0-2)
- IET 130 - Industrial Materials and Testing 3(2-2)
- IET 181QR - Alternative Energy Analysis 3(2-2)
- IET 261 - Construction Surveying 3(2-2)
- IET 279 - Applied Statics 3(3-0)
- IET 327 - Industrial Safety 3(3-0)
- IET 356 - Thermodynamics 3(3-0)
- IET 357 - Residential Architectural Graphics 3(1-4)
- IET 361 - Construction Technology 3(1-4)
- IET 368 - International Residential Code 3(3-0)
- IET 379 - Mechanics of Materials 3(3-0)
- IET 461 - Construction Estimating and Scheduling 3(3-0)
- IET 500 - Production Concepts 3(3-0)
- IET 557 - Construction Safety 3(3-0)
- IET 590 - Green Building and Sustainability 3(3-0)
- IET 591 - Construction Management 3(3-0)
- STA 282QR - Introduction to Statistics 3(3-0)

Technical Electives (11 hours)
Select at least 11 hours from the following technology courses:
- BLR 202 - Legal Environment of Business 3(3-0)
- BLR 360 - Construction Law 3(3-0)
- EGR 120 - Introduction to Engineering 3(2-2)
- IET 154 - Engineering Design Graphics 3(2-2)

IET 291 - Applied Circuits 3(2-2)
IET 294 - Residential Electrical Wiring 3(2-2)
IET 326 - Manufacturing Methods Analysis 3(3-0)
IET 358 - Light Commercial Architectural Graphics 3(2-2)
IET 363 - Building Code Enforcement 3(3-0)
IET 367 - International Building Codes 3(3-0)
IET 425 - Industrial Internship 2 8(Spec)
IET 462 - Mechanical Systems in Buildings 3(3-0)
IET 497 - Special Studies 1 6(Spec)
IET 501 - Application of Industrial Management Principles 3(3-0)
IET 561 - Light Frame Construction Workshop 3(0-6)
IND 139 - Interior Design Drafting 3(2-2)

Total: 66 semester hours

Industrial Engineering Technology Major
B.S.E.T. degree
The Industrial Engineering Technology major will prepare graduates with the technical and managerial skills necessary to develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy. Graduates will be prepared for careers in systems design, integration, manufacturing, and management.

All Industrial Engineering Technology students are required to complete the following required courses. Students also need to select nine (9) credit hours of Technical Electives in consultation with an advisor.

Program Educational Objectives (PEO) for Industrial Engineering Technology

The engineering technology programs have established the following expectations for the accomplishments of our graduates in the first several years following graduation:
1. Attain appropriate employment and practice successfully in an Industrial Engineering Technology related profession;
2. Work in multi-disciplinary teams providing technical knowledge and effective communication as engineering technologists;
3. Remain technically current through continuous learning and self-improvement;
4. Understand and exhibit professional, ethical and social responsibility as they pursue their career.

Industrial Engineering Technology Student Outcomes

By the time of graduation from the Industrial Engineering Technology program, students are expected to have:
1. An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;
2. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;
3. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;
4. An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;
5. An ability to function effectively as a member or leader on a technical team;
6. An ability to identify, analyze, and solve broadly-defined engineering technology problems;
7. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;
8. An understanding of the need for and an ability to engage in self-directed continuing professional development;
9. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;
10. A knowledge of the impact of engineering technology solutions in a societal and global context; and
11. A commitment to quality, timeliness, and continuous improvement. (continued)
ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS

The engineering and technology degree programs consist of extensive laboratory work which involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

On-campus students are required to meet with an ET advisor during the first semester of attendance at CMU. Global Campus majors must consult with their Program Plan advisor.

A maximum of six semester hours of Credit/No Credit may be used on departmental majors (excluding computer, electrical and mechanical engineering) or minors. Credit/No Credit courses are identified in the Course Search & Registration.

Required Courses (57 hours)

EGR 200 - Computer Aided Problem Solving for Engineers 3(2-2)
IET 130 - Industrial Materials and Testing 3(2-2)
IET 154 - Engineering Design Graphics 3(2-2)
IET 170 - Manufacturing Processes I 3(1-4)
IET 181QR - Alternative Energy Analysis 3(2-2)
IET 226 - Parametric Design and Modeling 3(2-2)
IET 279 - Applied Statics 3(3-0)
IET 291 - Applied Circuits 3(2-2)
IET 326 - Manufacturing Methods Analysis 3(3-0)
IET 327 - Industrial Safety 3(3-0)
IET 365 - Manufacturing Processes II 3(2-2)
IET 375 - Robotics 3(2-2)
IET 377 - Computer Numerical Control Programming 3(2-2)
IET 426 - Plant Layout and Materials Handling 3(3-0)
IET 428 - Manufacturing Quality 3(3-0)
IET 499 - Industrial Projects Capstone 3(1-4)
IET 500 - Production Concepts 3(3-0)
IET 501 - Application of Industrial Management Principles 3(3-0)
STA 282QR - Introduction to Statistics 3(3-0)

Technical Electives (9 hours)

Select nine semester hours of coursework from the following:

CPS 180 - Principles of Computer Programming 3(3-0)
EGR 120 - Introduction to Engineering 3(2-2)
EGR 190QR - Digital Circuits 3(3-0)
EGR 290 - Circuit Analysis I 3(3-0)
EGR 300 - Engineering Economic Analysis 3(3-0)
ENG 303 - Technical Writing 3(3-0)
IET 223QR - Lean Six Sigma for Process Improvement 3(3-0)
IET 284 - Fluid Power Technology 3(2-2)
IET 324 - Product Design and Development 3(2-2)
IET 350 - Mechanism Design 3(3-0)
IET 379 - Mechanics of Materials 3(3-0)
IET 425 - Industrial Internship 2-8(Spec)
IET 450 - Mechanical Computer-Aided Engineering 3(2-2)
IET 451 - Geometric Dimensioning and Tolerancing 3(2-2)
IET 458 - Surface Modeling 3(2-2)
MTH 133 - Calculus II 4(4-0)

Total: 66 semester hours

Mechanical Engineering Technology Major

B.S.E.T. degree

The Mechanical Engineering Technology major is designed to prepare students with knowledge, problem solving ability, and hands-on skills to enter careers in the design, installation, manufacturing, testing, evaluation, technical sales, or maintenance of mechanical systems. The mechanical engineering technologist makes significant contributions in supporting engineering design, testing, production, research, and development operations in a wide variety of industrial, aerospace, and government organizations. Students must complete the coursework in major requirements and electives.

The educational objectives of the BSET-Mechanical Engineering Technology Program describe the expected accomplishments of graduates during their first few years after graduation. The main goal is to provide a competitive curriculum and learning environment that prepare graduates who will be able to:

1. Attain appropriate employment and practice successfully in a mechanical engineering technology related profession;
2. Work in multi-disciplinary teams providing technical knowledge and effective communication as engineering technologists;
3. Remain technically current through continuous learning and self-improvement;
4. Understand and exhibit professional, ethical and social responsibility as they pursue their career.

Mechanical Engineering Technology Student Outcomes

By the time of graduation from Mechanical Engineering Technology program, students are expected to have:

1. An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities, including skills in mechanical design/analysis, manufacturing processes, mechanics, and fluid/thermo;
2. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;
3. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes and designs appropriate to the level of mechanical engineering technology;
4. An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;
5. An ability to function effectively as a member or leader on a technical team;
6. An ability to identify, analyze, and solve broadly-defined engineering technology problems;
7. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;
8. An understanding of the need for and an ability to engage in self-directed continuing professional development;
9. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;
10. A knowledge of the impact of engineering technology solutions in a societal and global context;
11. A commitment to quality, timeliness, and continuous improvement.
Required Courses I (48 hours)
EGR 200 - Computer Aided Problem Solving for Engineers 3(2-2)
IET 130 - Industrial Materials and Testing 3(2-2)
IET 154 - Engineering Design Graphics 3(2-2)
IET 170 - Manufacturing Processes I 3(1-4)
IET 181QR - Alternative Energy Analysis 3(2-2)
IET 226 - Parametric Design and Modeling 3(2-2)
IET 350 - Mechanism Design 3(3-0)
IET 352 - Applied Fluid Mechanics 3(3-0)
IET 356 - Thermodynamics 3(3-0)
IET 365 - Manufacturing Processes II 3(2-2)
IET 375 - Robotics 3(2-2)
IET 450 - Mechanical Computer-Aided Engineering 3(2-2)
IET 453 - Heat Transfer 3(3-0)
IET 454 - Machine Design 3(2-2)
IET 472 - Instrumentation and Controls 3(2-2)
IET 499 - Industrial Projects Capstone 3(1-4)

Required Courses II (3 hours)
Select one of the following:
EGR 251 - Engineering Statics 3(3-0)
IET 279 - Applied Statics 3(3-0)

Required Courses III (3 hours)
Select one of the following:
EGR 290 - Circuit Analysis I 3(3-0)
IET 291 - Applied Circuits 3(2-2)

Required Courses IV (3 hours)
Select one of the following:
EGR 253 - Engineering Dynamics 3(3-0)
IET 281 - Dynamics 3(3-0)

Required Courses V (3 hours)
Select one of the following:
EGR 255 - Strength of Materials 3(3-0)
IET 379 - Mechanics of Materials 3(3-0)

Technical Electives (6 hours)
Select 6 hours from the following:
EGR 120 - Introduction to Engineering 3(2-2)
IET 226 - Parametric Design and Modeling 3(2-2)
IET 324 - Manufacturing Methods Analysis 3(3-0)
IET 327 - Industrial Safety 3(3-0)
IET 355 - Tool Design 3(2-2)
IET 356 - Thermodynamics 3(3-0)
IET 357 - Robotics 3(2-2)
IET 375 - Manufacturing Processes II 3(2-2)
IET 379 - Mechanics of Materials 3(3-0)
IET 375 - Robotics 3(2-2)
IET 450 - Mechanical Computer-Aided Engineering 3(2-2)
IET 453 - Heat Transfer 3(3-0)
IET 454 - Machine Design 3(2-2)
IET 472 - Instrumentation and Controls 3(2-2)
IET 499 - Industrial Projects Capstone 3(1-4)

Total: 66 semester hours

Product Design Engineering Technology
Major
B.S.E.T. degree

This major offers a program of coursework for students planning careers in Product Design and Development. Product design as a process is the efficient and effective development of ideas and concepts that lead to new products. Product Design Engineering Technology as a discipline overlaps the conceptual talents of industrial designers and the analytical knowledge required of engineers.

Program Educational Objectives for Product Design Engineering Technology

The engineering technology programs have established the following expectations for the accomplishments of our graduates in the first several years following graduation:

1. Attain appropriate employment and practice successfully in a product design engineering technology related profession;
2. Work in multi-disciplinary teams providing technical knowledge and effective communication as engineering technologists;
3. Remain technically current through continuous learning and self-improvement;
4. Understand and exhibit professional, ethical and social responsibility as they pursue their career.

Product Design Engineering Technology Student Outcomes

By the time of graduation from the Product Design Engineering Technology program, students are expected to have:

1. An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;
2. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;
3. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;
4. An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;
5. An ability to function effectively as a member or leader on a technical team;
6. An ability to identify, analyze, and solve broadly-defined engineering technology problems;
7. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;
8. An understanding of the need for and an ability to engage in self-directed continuing professional development;
9. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;
10. A knowledge of the impact of engineering technology solutions in a societal and global context; and
11. 11. A commitment to quality, timeliness, and continuous improvement.

All Product Design Engineering Technology students are required to complete the following required courses. Students also need to select nine (9) credit hours of Technical Electives in consultation with an advisor.

Admission Requirements, Retention & Termination Standards

The engineering and technology degree programs consist of extensive laboratory work which involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

(continued)
On-campus students are required to meet with an ET advisor during the first semester of attendance at CMU. Global Campus majors must consult with their Program Plan advisor. A maximum of six semester hours of Credit/No Credit may be used on departmental majors (excluding computer, electrical and mechanical engineering) or minors. Credit/No Credit courses are identified in the Course Search & Registration.

**Required Courses (57 hours)**

- EGR 200 - Computer Aided Problem Solving for Engineers 3(2-2)
- IET 130 - Industrial Materials and Testing 3(2-2)
- IET 154 - Engineering Design Graphics 3(2-2)
- IET 170 - Manufacturing Processes I 3(1-4)
- IET 181QR - Alternative Energy Analysis 3(2-2)
- IET 226 - Parametric Design and Modeling 3(2-2)
- IET 279 - Applied Statics 3(3-0)
- IET 291 - Applied Circuits 3(2-2)
- IET 324 - Product Design and Development 3(2-2)
- IET 350 - Mechanism Design 3(3-0)
- IET 365 - Manufacturing Processes II 3(2-2)
- IET 379 - Mechanics of Materials 3(3-0)
- IET 424 - Human Factors and Ergonomics 3(3-0)
- IET 450 - Mechanical Computer-Aided Engineering 3(2-2)
- IET 451 - Geometric Dimensioning and Tolerancing 3(2-2)
- IET 458 - Surface Modeling 3(2-2)
- IET 488 - Computer Aided Product Design Capstone 3(1-4)
- IET 501 - Application of Industrial Management Principles 3(3-0)
- STA 282QR - Introduction to Statistics 3(3-0)
- IET 561 - Light Frame Construction Workshop 3(0-6)
- IET 567 - Construction Safety 3(3-0)
- IET 590 - Green Building and Sustainability 3(3-0)
- IET 591 - Construction Management 3(3-0)
- IND 139 - Interior Design Drafting 3(2-2)
- IND 355 - Contract Documents 3(2-2)

**Technical Electives (9 hours)**

Select nine semester hours of coursework from the following:

- ART 106 - Introduction to Drawing 3(0-6)
- ART 115 - 2-D Design 3(0-6)
- ART 118 - 3-D Design 3(0-6)
- CPS 180 - Principles of Computer Programming 3(3-0)
- EGR 120 - Introduction to Engineering 3(2-2)
- EGR 190QR - Digital Circuits 3(3-0)
- EGR 290 - Circuit Analysis I 3(3-0)
- EGR 300 - Engineering Economic Analysis 3(3-0)
- IET 223QR - Lean Six Sigma for Process Improvement 3(3-0)
- IET 281 - Dynamics 3(3-0)
- IET 327 - Industrial Safety 3(3-0)
- IET 375 - Robotics 3(2-2)
- IET 377 - Computer Numerical Control Programming 3(2-2)
- IET 425 - Industrial Internship 2-8(Spec)
- IET 454 - Machine Design 3(2-2)
- IET 455 - Tool Design 3(2-2)
- MTH 133 - Calculus II 4(4-0)

**Total: 66 semester hours**

**Minor**

**Industrial Technology Minor**

B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

The Industrial Technology minor is available for students desiring to increase their understanding and competencies in industrial and engineering technology. Students may select any combination of 21 semester hours from within the IET designator, or any approved course from another designator. The following represents recommended courses from specific industrial and engineering technology fields of study:

**ADMISSION REQUIREMENTS, RETENTION & TERMINATION STANDARDS**

The engineering and technology degree programs consist of extensive laboratory work which involves a close physical relationship with tools, moving machinery and electrical equipment necessitating specific safe practices. Examples include voltage checks, use of safety guards, and continuous observation of associated visual alarms, caution signs and auditory signals.

Students pursuing one of our majors or minors are required to meet with an ET advisor during the first semester of attendance at CMU.

A maximum of six semester hours of Credit/No Credit may be used on departmental majors (excluding computer, electrical and mechanical engineering) or minors. Credit/No Credit courses are identified in the Course Search & Registration.

**Construction Courses**

- IET 160 - Wood Technology 3(1-4)
- IET 261 - Construction Surveying 3(2-2)
- IET 279 - Applied Statics 3(3-0)
- IET 294 - Residential Electrical Wiring 3(2-2)
- IET 357 - Residential Architectural Graphics 3(1-4)
- IET 361 - Construction Technology 3(1-4)
- IET 363 - Building Code Enforcement 3(3-0)
- IET 367 - International Building Codes 3(3-0)
- IET 368 - International Residential Code 3(3-0)
- IET 561 - Light Frame Construction Workshop 3(0-6)
- IET 567 - Construction Safety 3(3-0)
- IET 590 - Green Building and Sustainability 3(3-0)
- IET 591 - Construction Management 3(3-0)
- IND 139 - Interior Design Drafting 3(2-2)
- IND 355 - Contract Documents 3(2-2)

**Product Design Courses**

- EGR 120 - Introduction to Engineering 3(2-2)
- EGR 251 - Engineering Statics 3(3-0)
- IET 154 - Engineering Design Graphics 3(2-2)
- IET 226 - Parametric Design and Modeling 3(2-2)
- IET 279 - Applied Statics 3(3-0)
- IET 324 - Product Design and Development 3(2-2)
- IET 350 - Mechanism Design 3(3-0)
- IET 379 - Mechanics of Materials 3(3-0)
- IET 450 - Mechanical Computer-Aided Engineering 3(2-2)
- IET 451 - Geometric Dimensioning and Tolerancing 3(2-2)
- IET 455 - Tool Design 3(2-2)
- IET 458 - Surface Modeling 3(2-2)
- IET 488 - Computer Aided Product Design Capstone 3(1-4)

**Manufacturing/Production Courses**

- EGR 120 - Introduction to Engineering 3(2-2)
- EGR 130 - Industrial Materials and Testing 3(2-2)
- IET 154 - Engineering Design Graphics 3(2-2)
- IET 170 - Manufacturing Processes I 3(1-4)
- IET 223QR - Lean Six Sigma for Process Improvement 3(3-0)
- IET 225 - Manufacturing Process Planning 3(3-0)
- IET 226 - Parametric Design and Modeling 3(2-2)
- IET 284 - Fluid Power Technology 3(2-2)
- IET 291 - Applied Circuits 3(2-2)
- IET 326 - Manufacturing Methods Analysis 3(3-0)
- IET 365 - Manufacturing Processes II 3(2-2)
- IET 375 - Robotics 3(2-2)
- IET 377 - Computer Numerical Control Programming 3(2-2)
- IET 426 - Plant Layout and Materials Handling 3(3-0)
- IET 428 - Manufacturing Quality 3(3-0)
- IET 477 - Advanced Computer Numerical Control Programming 3(2-2)

**Total: 21 semester hours**
**Geography (GEO, ESC)**

For information, please contact the chairperson 989-774-3323, 296 B Dow Science Complex Science and Technology;
https://www.cmich.edu/colleges/cst/geography/

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### Why Study Geography?

Geography (GEO/ESC) offers a systematic education that will help you cope with our rapidly changing world. With an emphasis on the interrelationships and interactions between humans and the environment, Geography provides a comprehensive and analytical approach to contemporary environmental, economic, and social issues. Geography students are equipped with cutting edge computational and information technology to understand patterns of human activities and earth processes and to help make decisions on urban and regional planning, resource utilization and preservation, marketing strategies, mitigation of natural hazards, and homeland security.

Geography students possess highly marketable skills and find many career opportunities—Geospatial intelligence analyst, GIS analyst, land use planner, cartographer, resource manager, environmental and engineering consultant, climatologist, and educator.

### Geography at CMU

CMU offers a prominent Geography program with an emphasis on Geospatial technology, environmental analysis and planning, and global studies. The Geography Department offers a Geography major with a concentration in Geographic Information Sciences, a Geography major with a concentration in Environmental and Land use Planning, a GIS minor, and an Undergraduate Certificate in Human Geography. The department also offers both teaching and non-teaching majors and minors in Geography. The department also advises Interdisciplinary majors and minors in Earth Science (see the index for the page number of these majors and minors).

Geography and Earth Science majors are required to take courses which cover the basic content, concepts, and techniques of the disciplines. Elective hours should be selected in consultation with an advisor. Students should also consult with a departmental advisor early in their career at CMU. This may be done by contacting the department office or any of the advisors listed below.

### Notes:

**Advising.** Majors and minors should begin their program as early as possible because they may be advised to elect another major or minor in a related discipline. Majors should consult with their advisor each semester prior to registration.

**Credit/No Credit.** Courses taken on a Credit/No Credit basis may not be counted on departmental majors and minors.

**Transfer credit.** Survey or introductory courses are accepted for not more than three hours per course for the department majors and minors.

**Field trips.** Expenses for field trips may be prorated among class members.

**Student Teaching.** Students seeking the Geography Department's recommendation for student teaching must have: (1) a signed major/minor in geography or earth science, (2) a minimum grade point average of 2.7 in the major/minor courses, and (3) completed a Geography Department application form.

### The Faculty

Brian Becker, Jorge A. Brea, Anthony Feig, Mark Franczek, Benjamin Heumann, Bin Li, Michael J. Libbee, Matthew Liesch, David Patton, Yong Tian, Xiaoguang Wang, Tao Zheng

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### Geography Major

**B.A.; B.S. degrees**

Advisors: Staff

**Core Courses (12 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GEO 105 - Physical Geography</td>
<td>3(2-2)</td>
<td></td>
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<tr>
<td>GEO 120QR - Environmental Geography</td>
<td>3(3-0)</td>
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<tr>
<td>GEO 121 - Cultures of the World</td>
<td>3(3-0)</td>
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<tr>
<td>GEO 203QR - Introduction to Geographic Information Science</td>
<td>3(2-2)</td>
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**Required Courses (9 hours)**

9 hours of 300-level, including one regional course.

**Electives (9 hours)**

9 hours selected with permission of instructor.

**Total: 30 semester hours**

(continued)

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### Geographic Information Sciences (GISci)

**Concentration**

Advisors: Becker, Heumann, Li, Patton, Tian, Wang, Zheng

**Core Courses (12 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 105 - Physical Geography</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>GEO 120QR - Environmental Geography</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>GEO 121 - Cultures of the World</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>GEO 203QR - Introduction to Geographic Information Science</td>
<td>3(2-2)</td>
</tr>
</tbody>
</table>

**Required Courses I (10 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 303 - Geographic Information Systems I</td>
<td>3(2-2)</td>
</tr>
<tr>
<td>GEO 404 - Global Positioning System</td>
<td>1(1-0)</td>
</tr>
<tr>
<td>STA 382QR - Elementary Statistical Analysis</td>
<td>3(3-0)</td>
</tr>
</tbody>
</table>

(continued)
Geography Major: Environmental and Land Use Planning Concentration

B.A., B.S. degrees
Advisors: Brea, Patton, Wang

This concentration will prepare one for an entry level position in the fields of land use, environmental, or regional planning. Graduates may wish to enhance their qualifications upon completion of the concentration with graduate study in these areas.

Core Courses (12 hours)
GEO 105 - Physical Geography 3(2-2)
GEO 120QR - Environmental Geography 3(3-0)
GEO 121 - Cultures of the World 3(3-0)
GEO 203QR - Introduction to Geographic Information Science 3(2-2)

Required Courses I (15 hours)
GEO 303 - Geographic Information Systems 3(2-2)
GEO 304 - Resource Perception and Utilization 3(3-0)
GEO 340 - Urban Geography 3(3-0)
GEO 530 - Land Use Planning 3(3-0)
GEO 531 - Integrated Land Use Planning 3(3-0)

Electives (9 hours)
At least one physical course (i.e. ESC or BIO) and a course in statistics is strongly recommended:

Electives I (3-9 hours)
BLR 521 - Environmental Law and Policy 3(3-0)
GEO 305 - Remote Sensing of the Environment 3(2-2)
GEO 317 - Economic Geography 3(3-0)
GEO 320 - Population Geography 3(3-0)
GEO 500 - Advanced Cartography 3(2-2)
GEO 503 - Geographic Information Systems 3(2-2)
GEO 508 - Digital Remote Sensing 3(2-2)
GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)
PSC 261 - State and Local Government 3(3-0)

Electives II (0-3 hours)
You may select only one of the following:
GEO 210 - Landforms 3(2-2)
GEO 310 - Surface Hydrology 3(2-2)
GEO 334 - Soil Science 3(2-2)

Electives III (0-3 hours)
You may select only one of the following:
STA 282QR - Introduction to Statistics 3(3-0)
STA 382QR - Elementary Statistical Analysis 3(3-0)

Total: 40 semester hours
Required Courses I (3 hours)
Select one of the following:
GEO 312 - Geography of Contemporary Global Issues 3(3-0)
GEO 346 - Geography of the Developing World 3(3-0)

Required Courses II (6 hours)
Select two of the following:
GEO 315 - Food and Agriculture 3(3-0)
GEO 317 - Economic Geography 3(3-0)
GEO 320 - Population Geography 3(3-0)
GEO 325 - Geography of Growth and Change 3(3-0)
GEO 340 - Urban Geography 3(3-0)
GEO 345 - Political Geography 3(3-0)

Required Courses III (6 hours)
Select two of the following:
GEO 350 - United States and Canada 3(3-0)
GEO 365 - Europe 3(3-0)
GEO 373 - Latin America 3(3-0)
GEO 385 - China: Environment and People 3(3-0)

Electives I (6 hours)
Six hours of courses that develop analytical skills and techniques for geographic inquiry using either primary or secondary data. These courses must be selected with advisor. Suggested courses include:
GEO 303 - Geographic Information Systems I 3(2-2)
GEO 305 - Remote Sensing of the Environment 3(2-2)
PSC 280 - Introduction to Empirical Methods of Political Research 3(3-0)
SOC 200 - Introduction to Social Research and Analysis 3(3-0)

Electives II (6 hours)
Six hours of 300-500 level geography or non-geography courses that advance the understanding of contemporary issues outside the U.S. from a global perspective. Specifically, these courses may be either foreign language courses or courses with a primary regional focus outside of the United States. These courses must be selected with advisor. It is strongly recommended that at least 3 hours come from GEO 511 or a similar field-oriented courses:
GEO 511 - International Geographic Experience 3-6(Spec)

Total: 39 semester hours

Geography Major
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary with Emotional or Cognitive Impairment Endorsement
Advisors: Libbee

Core Courses (12 hours)
GEO 105 - Physical Geography 3(2-2)
GEO 120QR - Environmental Geography 3(3-0)
GEO 121 - Cultures of the World 3(3-0)
GEO 203QR - Introduction to Geographic Information Science 3(2-2)

Required Course (3 hours)
GEO 400 - Geographic Education 3(2-2)

Electives I (3 hours)
Select one thematic course focused on social/economic issues, selected from:
GEO 315 - Food and Agriculture 3(3-0)
GEO 317 - Economic Geography 3(3-0)
GEO 325 - Geography of Growth and Change 3(3-0)
GEO 330 - Resource Perception and Utilization 3(3-0)
GEO 340 - Urban Geography 3(3-0)
GEO 345 - Political Geography 3(3-0)

Electives II (3 hours)
Select one regional course in a North American context which includes a concern with ethnic groups and minority populations selected from:
GEO 350 - United States and Canada 3(3-0)
GEO 395 - Michigan 3(3-0)
GEO 515 - Geography of the Great Lakes Region 3(3-0)

Electives III (3 hours)
Select one regional course focused on an area other than North America or an internationally focused course selected from the following:
GEO 346 - Geography of the Developing World 3(3-0)
GEO 365 - Europe 3(3-0)
GEO 373 - Latin America 3(3-0)

Electives IV (9 hours)
Select hours from GEO or ESC.

Total: 33 semester hours

Environmental Studies Major
B.A. and B.S. degrees

Environmental Studies focuses on the complex relationship between humans and the environment. This program is designed to satisfy the needs of students who desire to work in fields that are explicitly related to the environment as well as to provide valuable information to students who simply care about environmental issues.

For additional information regarding the Environmental Studies Major, please contact Dr. Brian Becker, 989-774-1529, 292 Dow Science Complex, beckelb@cmich.edu.

All Environmental Studies majors must:
1. earn a minimum cumulative grade point average of 2.5 in courses applying toward the major.
2. complete a minor chosen in consultation with major advisor.

Core Courses I (21 hours)
ANT 370/SOC 370 - Global Environmental Issues 3(3-0)
ECO 301 - Environmental Economics 3(3-0)
ENV 101 - Introduction to Environmental Studies 3(3-0)
ENV 310 - Environmental Issues Management 3(3-0)
ENV 400 - Environmental Studies Capstone 3(3-0)
PSC 261 - State and Local Government 3(3-0)

Core Courses II (3 hours)
Select one of the following:
BLR 521 - Environmental Law and Policy 3(3-0)
PSC 516 - Environmental Politics and Policy 3(3-0)

Core Courses III (3 hours)
Select one of the following:
BIO 240 - Conservation of Natural Resources 3(3-0)
ENV 210QR - Environmental Resource Use 3(3-0)
GEO 330 - Resource Perception and Utilization 3(3-0)

Required Courses I (3 hours)
Select one of the following:
GEL 100 - Introduction to Earth Systems 3(2-2)
GEL 101 - Physical Geology 3(3-0)
GEO 105 - Physical Geography 3(2-2)

Required Courses II (3-4 hours)
Select one of the following:
BIO 101 - General Biology 3(2-2)
BIO 105 - General Geology 3(3-0)

Required Courses III (4-5 hours)
Select one of the following:
CHM 161 - Principles of Chemistry 4(4-0)
CHM 131 - General Chemistry I 4(3-3)
CHM 120 - Survey of Chemistry 4(4-0)

Required Courses IV (3 hours)
Select one of the following:
STA 282QR - Introduction to Statistics 3(3-0)
STA 382QR - Elementary Statistical Analysis 3(3-0)
Electives (12-14 hours)
Select 12-14 hours from the list of Electives below from at least two designators. Six hours must be earned from courses at the 300 level or above.
BIO 250/ANT 250/CHM 250 - Water as Life, Death, and Power 3(2-2)
BIO 334/GEO 334 - Soil Science 3(2-2)
BIO 338 - Human Ecology 3(3-0)
BIO 340 - Ecology 3(2-3)
BIO 356 - Environmental Contaminants 3(3-0)
BLR 521 - Environmental Law and Policy 3(3-0)
CHM 342 - Survey of Organic Chemistry 4(3-3)
ENV 197 - Special Topics 1-6(Spec)
ENV 397 - Special Topics 1-6(Spec)
ENV 497 - Independent Study 1-3(Spec)
ENV 597 - Special Topics 1-6(Spec)
GEL 304 - Earth Resources 3(3-0)
GEL 380 - Hydrogeology 3(2-3)
GEO 120QR - Introduction to Geographic Information Science 3(2-2)
GEO 201 - Weather and Climate 4(4-0)
GEO 210 - Landforms 3(2-2)
GEO 303 - Geographic Information Systems I 3(2-2)
GEO 305 - Remote Sensing of the Environment 3(2-2)
GEO 310 - Surface Hydrology 3(2-2)
GEO 315 - Food and Agriculture 3(3-0)
GEO 325 - Geography of Growth and Change 3(3-0)
GEO 335 - Biogeography 3(3-0)
GEO 350 - United States and Canada 3(3-0)
GEO 342 - Historical Geography 3(3-0)
GEO 345 - Political Geography 3(3-0)
GEO 346 - Geography of the Developing World 3(3-0)
GEO 365 - Europe 3(3-0)
GEO 373 - Latin America 3(3-0)
GEO 385 - China: Environment and People 3(3-0)
GEO 395 - Michigan 3(3-0)
GEO 400 - Geographic Education 3(2-2)
GEO 404 - Global Positioning System 1(1-0)
GEO 405 - CAD Mapping for GIS 3(2-2)
GEO 406 - Remote Sensing of the Environment 3(2-2)
GEO 417 - Economic Geography 3(3-0)
GEO 425 - Geography of Growth and Change 3(3-0)
GEO 435 - Political Geography 3(3-0)
GEO 455 - Environmental Catastrophes 3(3-0)
EDU 280/380 - Integrating Geography in the Classroom 3(3-0)
EDU 285/385 - Integrating Geography in Secondary Education 3(3-0)
EDU 390 - New Directions in Education 3(3-0)
MIN 355 - Environmental Contaminants 3(3-0)
MSC 325 - Environmental Health 3(3-0)
MSC 327 - Environmental Health 3(3-0)
MSC 330 - Resource Perception and Utilization 3(3-0)
MSC 335 - Biogeography 3(3-0)
MSC 340 - Population Geography 3(3-0)
MSC 342 - Historical Geography 3(3-0)
MSC 345 - Political Geography 3(3-0)
MSC 346 - Geography of the Developing World 3(3-0)
MSC 365 - Europe 3(3-0)
MSC 373 - Latin America 3(3-0)
MSC 385 - China: Environment and People 3(3-0)
MSC 395 - Michigan 3(3-0)
MSC 400 - Geographic Education 3(2-2)
MSC 406 - Remote Sensing of the Environment 3(2-2)
MSC 417 - Economic Geography 3(3-0)
MSC 425 - Geography of Growth and Change 3(3-0)
MSC 435 - Political Geography 3(3-0)
MSC 455 - Environmental Catastrophes 3(3-0)
MSC 456 - Environmental Contaminants 3(3-0)
SOP 317 - Economic Geography 3(3-0)
SOP 325 - Geography of Growth and Change 3(3-0)
SOP 335 - Political Geography 3(3-0)
SOP 345 - Environmental Catastrophes 3(3-0)
SOP 346 - Geography of the Developing World 3(3-0)
SOP 365 - Europe 3(3-0)
SOP 373 - Latin America 3(3-0)
SOP 385 - China: Environment and People 3(3-0)
SOP 395 - Michigan 3(3-0)
SOP 400 - Geographic Education 3(2-2)
SOP 406 - Remote Sensing of the Environment 3(2-2)
SOP 417 - Economic Geography 3(3-0)
SOP 425 - Geography of Growth and Change 3(3-0)
SOP 435 - Political Geography 3(3-0)
SOP 455 - Environmental Catastrophes 3(3-0)
SOP 456 - Environmental Contaminants 3(3-0)
SOP 457 - Environmental Health 3(3-0)
SOP 465 - Europe 3(3-0)
SOP 473 - Latin America 3(3-0)
SOP 485 - China: Environment and People 3(3-0)
SOP 495 - Michigan 3(3-0)
SOP 500 - Geographic Education 3(2-2)
SOP 506 - Remote Sensing of the Environment 3(2-2)
SOP 517 - Economic Geography 3(3-0)
SOP 525 - Geography of Growth and Change 3(3-0)
SOP 535 - Political Geography 3(3-0)
SOP 545 - Environmental Catastrophes 3(3-0)
SOP 556 - Environmental Contaminants 3(3-0)
SOP 557 - Environmental Health 3(3-0)
SOP 565 - Europe 3(3-0)
SOP 573 - Latin America 3(3-0)
SOP 585 - China: Environment and People 3(3-0)
SOP 595 - Michigan 3(3-0)

Geography Minor
B.S. in Ed. degree, all certifications
Advisors: Libbee
The geography minor is intended primarily for students interested in teaching middle school or high school geography, global issues or integrated history and geography courses. An accompanying major in history is required.
Required Courses I (12 hours)
Core Courses
GEO 105 - Physical Geography 3(2-2)
GEO 120QR - Environmental Geography 3(3-0)
GEO 121 - Cultures of the World 3(3-0)
GEO 203QR - Introduction to Geographic Information Science 3(2-2)
Required Courses II (3 hours)
Geography Education Core
GEO 400 - Geographic Education 3(2-2)
Required Courses III (3 hours)
Geography and History
Select one of the following:
GEO 342 - Historical Geography 3(3-0)
GEO 350 - United States and Canada 3(3-0)
Electives I (3 hours)
Global Issues
Select one course focused on global issues from:
GEO 312 - Geography of Contemporary Global Issues 3(3-0)
GEO 317 - Economic Geography 3(3-0)
GEO 320 - Population Geography 3(3-0)
GEO 325 - Geography of Growth and Change 3(3-0)
GEO 345 - Political Geography 3(3-0)
GEO 355 - Environmental Catastrophes 3(3-0)
Electives II (3 hours)
World Regions
Select one regional course focused on an area other than North America from the following:
GEO 346 - Geography of the Developing World 3(3-0)
GEO 365 - Europe 3(3-0)
GEO 373 - Latin America 3(3-0)
GEO 385 - China: Environment and People 3(3-0)
Total: 24 semester hours

Geographic Information Sciences (GISci) Minor
B.A.; B.A.A.; B.S. degrees
Advisors: Becker, Heumann, Li, Patton, Tian, Wang, Zheng
The Geographic Information Sciences Minor provides both academic and technical training in the three major areas of the Geographic Information Sciences-cartography, GIS and remote sensing. This minor will emphasize both concepts and technical skills that will enable students to apply Geographic Information Sciences principles and techniques to their respective disciplines.
Required Courses I (9 hours)
GEO 203QR - Introduction to Geographic Information Science 3(2-2)
GEO 303 - Geographic Information Systems I 3(2-2)
GEO 305 - Remote Sensing of the Environment 3(2-2)
Required Courses II (3 hours)
CPS 110 - Information Technology Programming I 3(3-0)
CPS 180 - Principles of Computer Programming 3(3-0)
Electives (9 hours)
Select from the following:
GEL/MET 250 - Geoscience Mapping and Resource Evaluation 3(3-0)
GEO 404 - Global Positioning System 1(1-0)
GEO 405 - CAD Mapping for GIS 3(2-2)
Earth Science Majors and Minors

Earth Science Major
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement
This is an interdisciplinary major. Please check the index for the page number.

Earth Science Minor
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement
This is an interdisciplinary minor. Please check the index for the page number.

Integrated Science Major
B.S. in Ed. degree, Provisional Elementary Certification
This is an interdisciplinary major. Please check the index for the page number.

Integrated Science Minor
B.S. in Ed. degree, Elementary Provisional Certification and Elementary Provisional Certification with Emotional or Cognitive Impairment Endorsement (K-12)
This is an interdisciplinary major. Please check the index for the page number.

Undergraduate Certificate - Human Geography

This 18-credit-hour certificate enhances students’ global perspectives by building upon the strengths of traditional and contemporary geographic research that emphasizes foreign regional studies, field experience, and geospatial analytical techniques.

Required Courses I (3 hours)
Select one of the following:
ANT 170 - Cultural Anthropology 3(3-0)
GEO 121 - Cultures of the World 3(3-0)

Required Courses II (3 hours)
Select one of the following:
GEO 312 - Geography of Contemporary Global Issues 3(3-0)
GEO 346 - Geography of the Developing World 3(3-0)

Electives I (6-9 hours)
Select two or three of the following:
GEO 315 - Food and Agriculture 3(3-0)
GEO 317 - Economic Geography 3(3-0)
GEO 320 - Population Geography 3(3-0)
GEO 345 - Political Geography 3(3-0)
GEO 355 - Environmental Catastrophes 3(3-0)

Electives II (3-6 hours)
Select one or two of the following:
ANT 322 - Cultures of Africa 3(3-0)
ANT 324 - Cultures of the South Pacific 3(3-0)
ECO 281 - Economic Development of the Pacific Rim 3(3-0)
GEO 350 - United States and Canada 3(3-0)
GEO 365 - Europe 3(3-0)
GEO 373 - Latin America 3(3-0)
GEO 385 - China: Environment and People 3(3-0)
HST 237 - Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)
HST 535 - The Middle East in the Modern Era 3(3-0)

Total: 18 semester hours
Why Study Mathematics?

What do the mathematical sciences involve? They all involve the study of patterns. Many, but not all, of these patterns involve numbers. Some of these patterns emerge from problems or situations in the world around us. Others emerge from considering how mathematical ideas fit together. People with a background in the mathematical sciences solve problems. Some mathematicians solve problems dealing with communications technology. Statisticians use data to make informed decisions. Actuaries find ways to manage risk. Mathematics teachers help others learn about ideas in the mathematical sciences. As a mathematician, your problem-solving expertise will allow you to make contributions to many areas like business, industry, government, education, and more. The study of mathematics includes comprehensive training in thinking, reasoning, and problem-solving skills. These skills will strengthen your education, make you a well-rounded individual and enhance your appeal to employers worldwide.

Mathematics at CMU

The Department of Mathematics provides a variety of programs. Depending on preference, a student may prepare to become a teacher of mathematics; study to become an applied mathematician, actuary, statistician or computer scientist; prepare for graduate work in mathematics or statistics; or earn a general liberal arts undergraduate degree with a major in mathematics. Four minor programs in mathematics also are available for a student needing a concentration in mathematics to support his/her major. In addition, service courses are provided for programs throughout the university, and a number of courses meet the mathematics competency requirement.

The Faculty


Mathematics Major

B.A.; B.S. degrees

Required Courses I (24 hours)

- MTH 132 - Calculus I 4(4-0)
- MTH 133 - Calculus II 4(4-0)
- MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
- MTH 233 - Calculus III 4(4-0)
- MTH 332 - Introduction to Mathematical Proof 3(3-0)
- MTH 499 - Capstone Course in Mathematics 3(3-0)
- MTH 523 - Modern Algebra I 3(3-0)

Required Courses II (3 hours)

Select one of the following:

- MTH 532 - Advanced Calculus I 3(3-0)
- MTH 545 - Introduction to Point-Set Topology 3(3-0)

Electives (9 hours)

Nine or more hours of electives are to be selected from MTH, STA, or CPS in consultation with and approved by a mathematics advisor and must be numbered MTH 296 or higher, STA 382QR or higher, or CPS 181 or higher. See notes on double counting at the end of this section.

MTH 175 (3) Discrete Mathematics may be included as an elective. If MTH 175 is included, then at least 33 hours of the total hours must be in mathematics or statistics.

Total: 36 semester hours

Mathematics Major: Applied Mathematics Concentration

B.A.; B.S. degrees

The Concentration in Applied Mathematics is designed for mathematics students who plan to either enter graduate school after graduation from CMU or use mathematics as an adjunct skill in their professional life outside academe. This includes students planning to enter professions as wide-ranging as mathematical modeling, accounting and finance, actuary, computer programming, engineering, and a variety of positions within the health and social sciences.

Core Courses (30 hours)

- MTH 132 - Calculus I 4(4-0)
- MTH 133 - Calculus II 4(4-0)
- MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
- MTH 233 - Calculus III 4(4-0)
- MTH 332 - Introduction to Mathematical Proof 3(3-0)
- MTH 334 - Differential Equations 3(3-0)
- MTH 499 - Capstone Course in Mathematics 3(3-0)
- MTH 523 - Modern Algebra I 3(3-0)
- MTH 532 - Advanced Calculus I 3(3-0)
- MTH 545 - Introduction to Point-Set Topology 3(3-0)

Required Courses (12 hours)

Applied Mathematics Concentration

Select four of the following:

- MTH 434 - Methods of Applied Mathematics 3(3-0)
- MTH 438 - Numerical Analysis I 3(3-0)
- MTH 439 - Numerical Analysis II 3(3-0)
Mathematics Major: Pure Mathematics Concentration
B.A.; B.S. degrees

The Concentration in Pure Mathematics is designed for mathematics students who plan to enter graduate school after graduation from CMU or use mathematics as an adjunct skill in their professional life outside academe. This includes students planning to enter professions as wide-ranging as mathematical modeling, accounting and finance, actuary, computer programming, engineering, and a variety of positions within the health and social sciences.

Core Courses (30 hours)
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
MTH 233 - Calculus III 4(4-0)
MTH 332 - Introduction to Mathematical Proof 3(3-0)
MTH 334 - Differential Equations 3(3-0)
MTH 499 - Capstone Course in Mathematics 3(3-0)
MTH 523 - Modern Algebra I 3(3-0)
MTH 532 - Advanced Calculus I 3(3-0)

Required Courses (12 hours)
Pure Mathematics Concentration
Select four of the following:
MTH 436 - Elements of Complex Variables 3(3-0)
MTH 444 - Introduction to Differential Geometry 3(3-0)
MTH 521 - Theory of Numbers 3(3-0)
MTH 525 - Modern Algebra II 3(3-0)
MTH 533 - Advanced Calculus II 3(3-0)
MTH 545 - Introduction to Point-Set Topology 3(3-0)

Total: 42 semester hours

Mathematics Major
B.S. in Ed. degree, Provisional Elementary Certification

Admission Requirements, Retention & Termination Standards
To sign a major, students must have:
1. Completed either MTH 130 or MTH 132 with a grade of B- or higher.
2. Completed MTH 151 with a grade of B or higher.

Required Courses (25 hours)
MTH 132 - Calculus I 4(4-0)
MTH 175 - Discrete Mathematics 3(3-0)
MTH 254 - Probability and Statistics for K-8 Mathematics Teachers 3(3-0)
MTH 256 - Algebraic Modeling and Measurement for K-8 Math Teachers 3(3-0)
MTH 251 - Geometry for K-8 Mathematics Teachers 3(3-0)
MTH 551 - Mathematical Structures for K-8 Mathematics Teachers 3(3-0)
MTH 553 - History of Elementary Mathematics for K-8 Teachers 3(3-0)

Electives (6 hours)
Electives (6 semester hours) are to be selected from MTH or STA in consultation with and approval by a mathematics advisor.

Total: 31 semester hours
Note: See notes on double counting at the end of this section.

Statistics Major
B.A.; B.S. degrees

Required Courses (33 hours)
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
MTH 233 - Calculus III 4(4-0)
MTH 341 - College Geometry 3(3-0)
MTH 362 - Problem-Based and Technology-Enhanced Geometry for Secondary Teachers 3(3-0)
MTH 363 - Problem-Based Probability and Statistics for Secondary Teachers 3(3-0)
MTH 375 - Discrete Structures 3(3-0)
MTH 462 - Capstone on Teaching and Learning Mathematics for Secondary Teachers 3(3-0)
MTH 523 - Modern Algebra I 3(3-0)
STA 382QR - Elementary Statistical Analysis 3(3-0)

Electives (6-7 hours)
A minimum of two additional courses is required. At least one of these must be numbered 500 or above. These courses are to be selected from the following list:
MTH 233 - Calculus III 4(4-0)
MTH 334 - Differential Equations 3(3-0)
MTH 499 - Capstone Course in Mathematics 3(3-0)
MTH 521 - Theory of Numbers 3(3-0)
MTH 532 - Advanced Calculus I 3(3-0)
MTH 545 - Introduction to Point-Set Topology 3(3-0)
MTH 573 - History of Mathematics 3(3-0)
MTH 578 - Combinatorics 3(3-0)
STA 580 - Applied Statistical Methods I 3(3-0)

Electives are to be selected from MTH or STA in consultation with and approved by a mathematics advisor.

Total: 44-45 semester hours
Note: See notes on double counting at the end of this section.

Statistics Major
B.S. in Ed. degree, Provisional Elementary Certification

Admission Requirements, Retention & Termination Standards
To sign a major, students must have:
1. Completed either MTH 130 or MTH 132 with a grade of B- or higher.
2. Completed MTH 151 with a grade of B or higher.

Required Courses (25 hours)
MTH 132 - Calculus I 4(4-0)
MTH 175 - Discrete Mathematics 3(3-0)
MTH 254 - Probability and Statistics for K-8 Mathematics Teachers 3(3-0)
MTH 256 - Algebraic Modeling and Measurement for K-8 Math Teachers 3(3-0)
MTH 251 - Geometry for K-8 Mathematics Teachers 3(3-0)
MTH 551 - Mathematical Structures for K-8 Mathematics Teachers 3(3-0)
MTH 553 - History of Elementary Mathematics for K-8 Teachers 3(3-0)
STA 382QR - Elementary Statistical Analysis 3(3-0)

Electives (6 hours)
Electives (6 semester hours) are to be selected from MTH or STA in consultation with and approval by a mathematics advisor.

Total: 31 semester hours
Note: See notes on double counting at the end of this section.
Option B (6 hours)
Select hours from the courses in which statistics has a natural application from a discipline other than MTH or STA. These courses may not be double counted as general education courses nor courses required by the minor that a student is taking. The track and courses must be approved by an advisor in the Department of Mathematics.

Electives (6 hours)
Select from the following:
- STA 582 - Experimental Designs 3(3-0)
- STA 583 - Nonparametric Statistics 3(3-0)
- STA 586 - Clinical Trials and Survival Analysis 3(3-0)
- STA 587 - Statistical Theory and Methods for Quality Improvement 3(3-0)
- STA 588 - Sampling Techniques 3(3-0)
- STA 589 - Time Series Forecasting 3(3-0)
- STA 591 - Data Mining Techniques I 3(3-0)
- STA 592 - Six Sigma: Foundations and Techniques for Green Belts 3(3-0)
- STA 596 - Special Topics in Statistics 1-6(Spec)
- STA 597 - Independent Study 1-6(Spec)

Total: 45 semester hours
Note: See notes on double counting at the end of this section.

Actuarial Science Major
B.A.; B.S. degrees

Why Study Actuarial Science?
Actuaries study risk. The work is quite quantitative. About 70% of actuaries work for insurance companies; about 25% for consulting firms, and about 5% for government agencies. The publication Jobs Rated Almanac has always rated actuary as one of the top five jobs in the United States. In the 2002 edition (sixth edition), it is rated number 2.

Actuarial Science at CMU
The Actuarial Science major is an interdisciplinary major with an advisor from the Department of Mathematics. It offers courses to prepare students for the first (Exam P) and second (Exam FM) actuarial exams jointly administered by the Society of Actuaries and the Casualty Actuarial Society. Students should try to pass both exams by the time they graduate from CMU. The major also provides coursework to prepare a graduate for a career in the business world in which the insurance industry is focused. More direct contact with actuaries comes through the student organization Gamma Iota Sigma.

This major consists of 62-63 hours of course work in mathematics, statistics, accounting, economics, finance, business law, and computer science. The major is designed to give the student the type of background necessary to pursue a career in actuarial science and, in particular, to prepare the student to pass two actuarial exams. There is no required minor. Advisors are from the Department of Mathematics.

Admission Requirements; Retention & Termination Standards
Admission Requirements: To be admitted to the Actuarial Science major, students must complete MTH 132 with a grade of B- or higher.
Retention & Termination Standards: To retain their Actuarial Science major status, students must maintain a GPA of 2.7 (B-) or higher in all coursework toward the major.

Required Courses I (51 hours)
- ACC 201 - Concepts of Financial Accounting 3(3-0)
- ACC 202 - Concepts of Managerial Accounting 3(3-0)
- ACT 539 - Probability Foundations of Actuarial Science 3(3-0)
- ACT 540 - Mathematical Theory of Interest 4(4-0)
- BLR 202 - Legal Environment of Business 3(3-0)
- ECO 201 - Principles of Macroeconomics 3(3-0)
- ECO 202 - Principles of Microeconomics 3(3-0)
- FIN 317 - Insurance Planning 3(3-0)
- FIN 332 - Managerial Finance 3(3-0)
- MTH 132 - Calculus I 4(4-0)
- MTH 133 - Calculus II 4(4-0)
- MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
- MTH 233 - Calculus III 4(4-0)
- STA 575 - Statistical Programming for Data Management and Analysis 3(3-0)
- STA 584 - Mathematical Statistics I 3(3-0)
- STA 585 - Mathematical Statistics II 3(3-0)

Required Courses II (3 hours)
Select one of the following:
- ECO 385 - Introduction to Econometrics 3(3-0)
- STA 580 - Applied Statistical Methods I 3(3-0)

Required Courses III (3 hours)
Select one of the following:
- ECO 352 - Economic Forecasting 3(3-0)
- STA 589 - Time Series Forecasting 3(3-0)

Electives (3 hours)
Select one of the following in consultation with the advisor:
- BIS 360 - Applied Business Communication 3(3-0)
- ECO 365 - Intermediate Microeconomic Theory 3(3-0)
- ECO 370 - Intermediate Macroeconomic Theory 3(3-0)
- FIN 442 - Intermediate Financial Management 3(3-0)
- MTH 332 - Introduction to Mathematical Proof 3(3-0)
- STA 591 - Data Mining Techniques I 3(3-0)

Total: 62-63 semester hours

Minors

Mathematics Minor
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

Admissions Requirements; Retention & Termination Standards
To sign a minor, students must have completed MTH 132 with a grade of B- or higher.

Note: A minimum 2.7 GPA (B-) must be earned in all teaching majors.

Required Courses (29 hours)
- MTH 132 - Calculus I 4(4-0)
- MTH 133 - Calculus II 4(4-0)
- MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
- MTH 261 - Algebra for Secondary Teachers 3(3-0)
- MTH 332 - Introduction to Mathematical Proof 3(3-0)
- MTH 362 - Problem-Based and Technology-Enhanced Geometry for Secondary Teachers 3(3-0)
- MTH 462 - Capstone on Teaching and Learning Mathematics for Secondary Teachers 3(3-0)

Total: 29 semester hours
Mathematics Minor
B.S. in Ed. degree, Provisional Elementary Certification and Provisional Elementary Certification with Emotional or Cognitive Impairment Endorsement

A minimum 2.7 GPA (B-) must be earned in all teaching minors

Admission Requirements, Retention & Termination Standards
To sign a minor, students must have:
1. Completed either MTH 130 or MTH 132 with a grade of B- or higher.
2. Completed MTH 151 with a grade of B or higher.

Required Courses I (15 hours)
MTH 254 - Probability and Statistics for K-8 Mathematics Teachers 3(3-0)
MTH 256 - Algebraic Modeling and Measurement for K-8 Math Teachers 3(3-0)
MTH 351 - Geometry for K-8 Mathematics Teachers 3(3-0)
MTH 551 - Mathematical Structures of K-8 Mathematics Teachers 3(3-0)
MTH 553 - History of Elementary Mathematics for K-8 Teachers 3(3-0)

Required Courses II (4 hours)
Select one of the following:
MTH 130 - Pre-Calculus Mathematics 4(4-0)
MTH 132 - Calculus I 4(4-0)

Electives (3 hours)
Electives (3 semester hours) are to be selected from MTH or STA in consultation with and approval by a mathematics advisor.

Total: 22 semester hours

Mathematics Minor
B.A.; B.S. degrees

Required Courses I (8 hours)
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)

Required Courses II (3 hours)
Select one of the following:
MTH 223 - Linear Algebra and Matrix Theory 3(3-0)
MTH 232 - Linear Algebra and Differential Equations 3(3-0)

Electives (9 hours)
Nine or more hours of electives are to be selected from MTH, STA, or CPS in consultation with and approval by a mathematics advisor and must be numbered MTH 233 or higher, STA 382QR or higher, or CPS 150 or higher.

At least 17 hours must be in mathematics or statistics. MTH 175 (3) Discrete Mathematics may be included as an elective. If MTH 175 is included, then all 20 of the total hours must be in mathematics or statistics.

Total: 20 semester hours

Note: See notes on double counting at the end of this section.

Statistics Minor
B.A.; B.A.A.; B.S.; B.S. in B.A. degrees

A substitution of any course must be approved by an advisor in the Department of Mathematics prior to taking the course. See note on double counting.

Required Courses (13 hours)
MTH 132 - Calculus I 4(4-0)
STA 382QR - Elementary Statistical Analysis 3(3-0)
STA 575 - Statistical Programming for Data Management and Analysis 3(3-0)
STA 580 - Applied Statistical Methods I 3(3-0)

Electives (9 hours)
Select from the following:
STA 582 - Experimental Designs 3(3-0)
STA 583 - Nonparametric Statistics 3(3-0)
STA 586 - Clinical Trials and Survival Analysis 3(3-0)
STA 587 - Statistical Theory and Methods for Quality Improvement 3(3-0)
STA 588 - Sampling Techniques 3(3-0)
STA 589 - Time Series Forecasting 3(3-0)
STA 591 - Data Mining Techniques I 3(3-0)
STA 592 - Six Sigma: Foundations and Techniques for Green Belts 3(3-0)
STA 596 - Special Topics In Statistics 1-6(Spec)
STA 597 - Independent Study 1-6(Spec)

Total: 22 semester hours

Note: See notes on double counting at the end of this section.

Notes on Double Counting
• Note to students with Mathematics major and Statistics minor or Statistics major and Mathematics minor: these combinations are permitted only if another major or minor is also obtained.
• Note to students with Actuarial Science major and Mathematics major or Mathematics minor: for this combination, student must take 6 hours of MTH or STA courses numbered 300 or above which are not counted toward the Actuarial Science major.
• Note to student with Mathematics major and Statistics major with Mathematics track: on the Mathematics major, at least 9 hours at the 300 level or above must not be counted on the Statistics major. Also, student must have an outside major or minor.
• Note to students with Statistics major with Application track: Student must have a minor in an area other than Mathematics or another major.
Why Study Physics and Astronomy?

Physics is the basis of science and technology. The laws of physics describe the behavior of matter and energy and help us to understand the physical world. On the smallest scale, physicists study quarks, nuclei, atoms, and other basic constituents of matter. They also study the mechanical, electromagnetic, and thermal properties of solids, liquids, gases, and plasmas. On the grand scale, physicists and astronomers study stars and galaxies, and apply physical principles to questions about the nature of the universe.

More than 50,000 physicists work in industry, educational institutions, state and federal government, and nonprofit research centers in the United States. Some of them perform basic research in physics, while others apply their knowledge to solve human problems in such areas as energy sources, environmental protection, medicine, transportation, communication, meteorology, geology, and defense.

These researchers are supported by those who teach science and engineering, providing students with the problem-solving and laboratory skills necessary for challenging the future. Physics teachers are prepared to instruct in the high school or community college, and many physicists are employed as university professors. Besides educating future physicists, our faculty provides students with the knowledge of physics that is required for such fields as medicine, engineering, technical writing, and environmental science.

Physics and Astronomy at CMU

The Department of Physics offers physics and astronomy courses to serve the needs of the following groups of students: those who contemplate graduate studies or professional employment in physics and astronomy; those who plan to teach physics or astronomy at community colleges and secondary schools; those who plan to enter the professions such as medicine or engineering, which require a thorough understanding of physical concepts; and those who plan to major in another academic discipline and desire an understanding of the fundamental processes which govern the physical environment.

The department offers courses in astronomy designed to meet several needs. A student may complete a portion of the requirements for an interdisciplinary major or minor, or as a major in another academic discipline obtain a better understanding of the physical world. The department also offers a variety of service and general education courses in introductory physics, physical science, and astronomy for students in programs that are not directly related to science.

A student can take a major or a minor in physics. An astronomy concentration is available on the physics major for students who intend to pursue graduate work in astronomy. Students who are headed for a teaching career have available to them the physics major and minor, and an interdepartmental chemistry-physics major. Any student interested in a departmental major or minor should contact the chairperson as soon as possible to be assigned an advisor.

Undergraduate and graduate physics students have opportunities for individual research projects in the advanced physics laboratory and also in the research laboratories of the department: the Brooks Astronomical Observatory, the laser spectroscopy laboratory, the x-ray diffraction laboratory, the polymer fluid dynamics laboratory, the thin-films laboratory and experimental atomic and nuclear physics laboratories. Such projects are supported by two full-time technicians who staff a machine shop and an electronics shop.

The department’s classrooms, laboratories, and faculty offices are located in the Leon and Frances McDermott wing of the Dow Science Complex. The observatory and associated facilities are in Brooks Hall. The main collection of physics and astronomy books and serials is in the Park Library. There is a departmental reading room in Dow 231, where tutors are available during the evening hours. Computers with access to the department’s and the university’s networked resources are available in this room, as well as elsewhere in the department.

Notes:

The Physics Department offers courses under three designators: PHY, PHS, AST. These courses are described in detail in the part of this Bulletin entitled “Course Descriptions” where designators are arranged in alphabetical order. Physics and engineering students, as well as students of chemistry, meteorology, and geology, normally begin their study of physics with a calculus-based sequence. A separate introductory physics sequence based on trigonometry is offered for biology and pre-professional students.

The Faculty

Veronica Barone, Joseph Finck, Marco Fornari, Mihai Horoi, Koblar Jackson, Axel Mellinger, Juan Peralta, Georgios Perdikakis, Valeri Petkov, Matthew Redshaw, Andrzej Sieradzan, Christopher Tycner, Glen Williams
Physics Majors and Minors

Admission Requirements, Retention & Termination Standards

Several MTH courses are required as prerequisites for the physics courses listed below. Prospective majors are urged to begin their study of mathematics in the fall of the freshman year with MTH 132 (or MTH 130, if necessary), and to consult with a departmental advisor as soon as possible for help in scheduling additional MTH courses.

No more than five semester hours of credit taken on a credit/no credit basis may be counted toward the physics major or minor. Since the department permits credit/no credit registration only for beginning physics courses, the restriction refers specifically to PHY 145QR and 175.

Although not recommended, the following course substitutions can be allowed for a student who successfully completes PHY 247:
- PHY 130QR in place of 145QR,
- 131 for 146,
- 170 for 175,
- 171 for 176.

Transfer students from two-year colleges can complete a major in physics in two additional years if they have satisfactorily completed a one-year course in calculus and a one year course in general physics (preferably utilizing calculus). Transfer students should consult the chairperson of this department at their earliest opportunity, and in any case, prior to initial registration.

Physics Teaching Majors and Minors

A minimum 2.7 GPA (B-) must be earned in all teaching majors and minors.

CHM 131 and 132 are prerequisites for one of the required courses for teaching majors and minors. Students should plan to take these courses early in their careers.

For students seeking the department’s recommendation for student teaching in physics, the following requirements must be met:
1. At least 20 hours of physics (including PHY 505) must be completed with a minimum grade point average of 2.7.
2. At least 6 hours of physics (excluding PHY 505) must be completed at CMU.

Majors

Physics Major

B.A., B.S. degrees

Admission Requirements, Retention & Termination Standards

See the information at the beginning of this section.

Core Courses (35 hours)

PHY 145QR - University Physics I 4(4-0)
PHY 146 - University Physics II 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)
PHY 176 - University Physics Laboratory II 1(0-2)
PHY 247 - Introduction to Modern Physics 3(3-0)
PHY 277 - University Physics Laboratory III 1(0-3)
PHY 312 - Introduction to Mathematical Physics 3(3-0)
PHY 322 - Intermediate Mechanics 3(3-0)
PHY 332 - Electricity and Magnetism 3(3-0)
PHY 377 - Experimental Physics 2(Spec)
PHY 491 - Senior Physics Project 3(Spec)
PHY 578 - Experimental Physics 2(0-6)

Electives (3 hours)

With the approval of an advisor, select courses having as prerequisite a course in the required major sequence.

Cognate Courses (0-15 hours)

Mathematics Prerequisites

MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 233 - Calculus III 4(4-0)
MTH 334 - Differential Equations 3(3-0)

Total: 38-53 semester hours

Physics Major: Astronomy Concentration

B.A., B.S. degrees

Admission Requirements, Retention & Termination Standards

See the information at the beginning of this section.

Core Courses (35 hours)

PHY 145QR - University Physics I 4(4-0)
PHY 146 - University Physics II 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)
PHY 176 - University Physics Laboratory II 1(0-2)
PHY 247 - Introduction to Modern Physics 3(3-0)
PHY 277 - University Physics Laboratory III 1(0-3)
PHY 312 - Introduction to Mathematical Physics 3(3-0)
PHY 322 - Intermediate Mechanics 3(3-0)
PHY 332 - Electricity and Magnetism 3(3-0)
PHY 442 - Introductory Quantum Theory 4(4-0)
PHY 450 - Thermal Physics 3(3-0)
PHY 491 - Senior Physics Project 3(Spec)
PHY 578 - Experimental Physics 2(0-6)

Required Courses (15 hours)

AST 260 - General Astronomy I 4(3-2)
AST 261 - General Astronomy II 4(3-2)
AST 562 - Observational Astronomy 4(3-2)
AST 563 - Astrophysics 3(3-0)

Cognate Courses (0-15 hours)

Mathematics Prerequisites

MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 233 - Calculus III 4(4-0)
MTH 334 - Differential Equations 3(3-0)

Total: 50-65 semester hours

Physics Major (Teaching)

B.S. in Ed. degree, Provisional Secondary Certification

Admission Requirements, Retention & Termination Standards

See the information at the beginning of this section.

Required Courses (37 hours)

PHS 563 - Physical Science Practicum 2(Spec)
PHY 145QR - University Physics I 4(4-0)
PHY 146 - University Physics II 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)
PHY 176 - University Physics Laboratory II 1(0-2)
PHY 247 - Introduction to Modern Physics 3(3-0)
PHY 277 - University Physics Laboratory III 1(0-3)
PHY 312 - Introduction to Mathematical Physics 3(3-0)
PHY 322 - Intermediate Mechanics 3(3-0)
PHY 332 - Electricity and Magnetism 3(3-0)
PHY 442 - Introductory Quantum Theory 4(4-0)
PHY 450 - Thermal Physics 3(3-0)
PHY 505/CHM 505 - Teaching Chemistry and Physics in the Secondary School 3(3-0)
PHY 507/CHM 507 - Field Experience in Teaching Chemistry/Physics 1(Spec)

(continued)
Physics Electives (1 hour)
With the help of an advisor, select a minimum of one additional hour from courses having as prerequisite a course in the required major sequence.

Cognate Courses (0-20 hours)

Group I - Mathematics Prerequisites
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 233 - Calculus III 4(4-0)
MTH 334 - Differential Equations 3(3-0)

Group II - Chemistry Prerequisites
Select one of:
CHM 132 - General Chemistry II 4(3-3)
CHM 161 - Principles of Chemistry 5(4-4)

Total: 38-58 semester hours

Chemistry-Physics Major
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

This is an interdepartmental major. Please check the index for the page number.

Minors

Physics Minor (Non-Teaching)
B.S., B.A. degrees

Admission Requirements, Retention & Termination Standards
See the information at the beginning of this section.

Required Courses (22 hours)
PHY 145QR - University Physics I 4(4-0)
PHY 146 - University Physics II 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)
PHY 176 - University Physics Laboratory II 1(0-2)
PHY 247 - Introduction to Modern Physics 3(3-0)
PHY 277 - University Physics Laboratory III 1(0-3)
PHY 322 - Intermediate Mechanics 3(3-0)
PHY 332 - Electricity and Magnetism 3(3-0)
PHY 578 - Experimental Physics 2(0-6)

Elective (1 hour)
With the help of an advisor, select a minimum of one additional hour from courses having as prerequisite a course in the required major sequence.

Cognate Courses (0-15)
Mathematics Prerequisites
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 233 - Calculus III 4(4-0)
MTH 334 - Differential Equations 3(3-0)

Total: 23-38 semester hours

Physics Minor (Teaching)
B.S. in Ed. degree, Provisional Secondary Certification and Provisional Secondary Certification with Emotional or Cognitive Impairment Endorsement

Admission Requirements, Retention & Termination Standards
See the information at the beginning of this section.

Required Courses (26 hours)
PHS 563 - Physical Science Practicum 2(Spec)
PHY 145QR - University Physics I 4(4-0)
PHY 146 - University Physics II 4(4-0)
PHY 175 - University Physics Laboratory I 1(0-2)
PHY 176 - University Physics Laboratory II 1(0-2)
PHY 247 - Introduction to Modern Physics 3(3-0)
PHY 252 - Modern Concepts in Nuclear and Particle Physics 1(1-0)
PHY 277 - University Physics Laboratory III 1(0-3)
PHY 322 - Intermediate Mechanics 3(3-0)
PHY 332 - Electricity and Magnetism 3(3-0)
PHY 505/CHM 505 - Teaching Chemistry and Physics in the Secondary School 3(3-0)

Cognate Courses (0-20 hours)

Group I - Mathematics Prerequisites
MTH 132 - Calculus I 4(4-0)
MTH 133 - Calculus II 4(4-0)
MTH 233 - Calculus III 4(4-0)
MTH 334 - Differential Equations 3(3-0)

Group II - Chemistry Prerequisites
Select one of:
CHM 132 - General Chemistry II 4(3-3)
CHM 161 - Principles of Chemistry 5(4-4)

Total: 26-46 semester hours
## Key to Designators

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## Key to Course Descriptions

### Course Numbers

#### Course Numbers

Usually it is expected that students will take courses appropriate to their classification. It is particularly important for freshmen to register for courses numbered below 200.

- **000-099** Credits in these courses do not apply to the minimum 124 hour requirement for graduation.
- **100-199** Primarily for Freshmen
- **200-299** Primarily for Sophomores
- **300-399** Primarily for Juniors
- **400-499** Primarily for Seniors
- **500-599** Advanced Undergraduate Courses

A student who has been formally admitted to the College of Graduate Studies and who takes courses numbered 500 or higher will receive graduate credit and, with the approval of the advisor, may apply it to a degree program.

(Continued)
**600-699 Graduate Courses.** Open only to students who have been admitted to the College of Graduate Studies. Undergraduate students should use the form available from the College of Graduate Studies to apply to take a graduate course for undergraduate credit.

**700-799 Graduate Courses.** Open only to students who have been admitted to the College of Graduate Studies.

**800-899 Graduate Courses.** Open only to students who have been admitted to the College of Graduate Studies and who are in the third year of doctoral study or full time internships at the specialist level.

**900-999 Graduate Courses.** Open only to students who have been admitted to the College of Graduate Studies and who are in the fourth year of doctoral study.

Graduate courses which are subject to limitation under the policy on unspecified content or variable credit are listed in each department.

**Non-Degree Courses**

Courses numbered (DESIGNATOR) 589 - Professional Development (1-6) do not apply to degree requirements. These courses cover selected issues designed for professional development, in-service training to meet specific staff development needs in education, business/industry, allied health, technology, and other professional settings. They are not applicable to degree requirements.

**Cross-Listed Courses**

Cross-listed courses are those courses identified in the course listing as “identical to” another course. Credit may not be earned in more than one of these courses.

**Credit and Attendance Hours**

The number of semester hours of credit in each course is indicated by the first number following the title of the course. The number before the first number indicates the number of hours of lecture per week; the second number, the hours of laboratory per week. EXAMPLE: 4(3-2) means four hours of credit, three hours of lecture, 2 hours of laboratory.

**Prerequisites**

Some courses listed as prerequisites may have their own prerequisites. You may need to plan more than one semester in advance when deciding which semester to take a particular course. Students seeking to substitute prerequisite courses with equivalents or permission of instructor may do so only with departmental approval. Such substitutions are not automatic.

**Definitions**

- **Prerequisite** – Any course(s) and/or other requirement(s) that must be completed prior to enrolling in a particular course.
- **Pre/Co-requisite(s)** – Any course and/or other requirement(s) that students may take prior to, or concurrently, with the particular course.
- **Co-requisite** – Any course and/or other requirement(s) that students must take concurrently with a particular course.
- **Recommended** – Any course and/or other requirement(s) that might be useful for students to complete prior to enrolling in a particular course.

**Syntax Guidelines**

- Multiple Course Requirements are separated by a comma. Example: ART 105, 115.
- Compound requirements are separated by a semi-colon. Example: ART 105, 115; Admission to the Teacher Education Program.
- Alternative courses are separated by “or.” Example: ART 105 or 115.
- Multiple alternative courses may be preceded by the use of “One of:”. Example: One of: ART 105, 115, 215.
- Default prerequisites, “or permission of instructor” and “or equivalent” are default prerequisites and therefore apply to any course. It is understood that students may contact a faculty member for permission to register for a class (with a bump card) or have previous coursework evaluated for equivalency (with a bump card). Thus, these phrases should not appear in course descriptions.
- “Or graduate standing” should appear only in 500 level classes to permit graduate students to register without CMU’s undergraduate requirements.

**Variable Credit Courses**

Variable credit courses are indicated by a semester-hour designation such as 1-3(Spec). (Spec) means there are special arrangements regarding the number of hours spent in class. Maximum hours which a student may earn in a variable credit course to apply toward graduation are the highest number in the semester-hour designation for the course (i.e., three hours maximum in example listed above).

**Distance Learning, Online, or Hybrid Courses**

Distance learning courses include online courses, hybrid courses, and other courses that do not have the traditional face-to-face classroom format. Course approved for offering in a distance learning format are identified in each course description when the course is approved for distance learning, hybrid, or online.

**Other Designation**

- **CR/NC Credit/No Credit, see index for more information.**
- **Italic Type** Indicates the course is approved for the University Program
- **Courses are listed in alphabetical order by designator.**
ACC - Accounting

See the School of Accounting for more information.

ACC 101 Introduction to Accounting 3(3-0)
Basic concepts and principles of accounting. Overview of accounting cycle from a building block approach. No credit if credit has been earned in ACC 201. Does not count on major or minor in College of Business Administration.

ACC 197 Special Topics in Accounting 3(3-0)
Introductory topics in accounting. Credit counts toward total hours for graduation, but not toward a major or minor in the College of Business Administration.

ACC 201 Concepts of Financial Accounting 3(3-0)
Students gain an understanding of the accounting system used to develop financial statements. The emphasis is on interpreting financial data used in business decision making. Recommended: completion of MTH 105. This course is approved for offering in a distance learning format.

ACC 202 Concepts of Managerial Accounting 3(3-0)
Students gain an understanding of how the information provided by an accounting system is used for managerial decision making. This course is approved for offering in a distance learning format. Prerequisite: minimum grade of C- in ACC 201.

ACC 203 Essentials of Accounting for Business 3(3-0)
Basic concepts and principles of an accounting process used to develop financial reports and make management decisions for businesses and other entities. This course is approved for offering in a distance learning format. Prerequisite: MTH 105.

ACC 204 Accounting for Not-For-Profit Entities 1(1-0)
Students gain an understanding of accounting and financial reporting for not-for-profit entities. This course is approved for offering in a distance learning format. Prerequisite: ACC 203 with a minimum grade of C.

ACC 210 Accounting Information for Entrepreneurial Decision Making 3(3-0)
Introduction to principles of financial and managerial accounting, design of accounting systems, techniques of analysis and cost control. Interpretation of accounting information for decision making. Does not count for the School of Accounting major or minor. Identical to ENT 210. Credit may not be earned in more than one of these courses. ACC 210 may not be used as a substitute for ACC 201 or ACC 250. This course may be offered in an online or hybrid format.

ACC 227 Accounting for Health Care Managers 3(3-0)
The use and analysis of accounting information for managerial control and decision making in health care. Basic measurement and reporting principles are also emphasized.

ACC 250 Introduction to Financial Accounting 3(3-0)
Overview of how a business functions through the generation and interpretation of accounting data. Prerequisite: Tier 1 admission to Professional Business Studies. Recommended: MTH 107 or 132 or 217.

ACC 255 Managerial Accounting & Decision Making 3(3-0)
Managerial decision-making methods using accounting and financial information and includes application of concepts to integrated study of business problems. Prerequisites: GPA of 2.50 or higher; ACC 250 BLR 255; ECO 204; one of MTH 132 or 217 or STA 282 or 382; Co-requisite: BIS 255. For signed Accounting Majors, BLR 235 and ECO 204 may be co-requisites.

ACC 300 Corporate Financial Reporting and Reporting Analysis 3(3-0)
Financial accounting concepts required to analyze financial statements from a management and investors viewpoint. Not available for credit to accounting majors or minor, or students with credit in ACC 302. Prerequisites: ACC 202, FIN 332; 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

ACC 301 Intermediate Accounting I 3(3-0)
Study of financial accounting processes, theory and principles. Includes analysis of financial statements and financial reporting issues. This course is approved for offering in a distance learning format. Pre/Co-Requisites: ACC 202 or ACC 255.

ACC 302 Intermediate Accounting II 3(3-0)
Continuation of ACC 301. Course includes in-depth study of special reporting issues related to financial accounting. Prerequisites: ACC 301; 56 semester hours completed, and admission to Professional Business Studies or listed on signed major or minor.

ACC 311 Federal Income Taxation I 3(3-0)
Basic concepts of federal income taxation, emphasizing individual taxpayers. Tax law covering taxable and excludable income, deductions, basis, tax-free exchanges, capital gains and losses, tax credits, deferral of tax, and depreciation. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor. Recommended: ACC 202 or 255.

ACC 321 Managerial Cost Accounting 3(3-0)
Accumulation and use of cost accounting information for planning and control purposes. Prerequisites: ACC 202 or 255; STA 282 or 382; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 370 Accounting Systems and Controls 3(3-0)
The use of internal accounting control theory to evaluate and improve accounting systems. Enterprise resource planning and electronic commerce topics are also addressed. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed minor or major. Pre/Co-Requisites: ACC 302 and 321.

ACC 405 The Accounting Profession and Contemporary Accounting Issues 3(3-0)
Background on rule-making in accounting; recent pronouncements of regulatory and professional organizations; evolving areas in accounting. Prerequisites: ACC 302; 56 semester hours completed; admission to Professional Business Studies or listed on signed minor or major.

ACC 489 Accounting Internship/Co-Op 1-3(Spec)
For full-time, on-the-job work experience for one or more semesters in industry, government, or public accounting arranged through departmental internship/co-op supervisor. CR/NC only. Prerequisites: 6-12 hours of accounting depending upon the program entered; GPA of 3.0; accounting GPA of 3.2; acceptance by program supervisor; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 491 Independent Studies 1-3(Spec)
Directed reading or research on an approved topic. Not more than 3 credits for ACC 491 may count toward accounting major. Prerequisites: permission of instructor; 86 semester hours completed; admission to Professional Business Studies or listed on signed minor or major.

ACC 492 Practicum In Small Business 3(Spec)
Provides the student an opportunity to analyze the accounting, finance, management, management information systems, production systems, and ongoing small business. Identical to FIN/MGT/MKT/BIS 492. Credit may not be earned in more than one of these courses. Prerequisites: 56 semester hours completed; permission of instructor; admission to Professional Business Studies or listed on signed major or minor.

ACC 501 Advanced Accounting 3(3-0)
Incorporate investments and consolidated statements, purchases, and goodwill, segment reporting, interim reporting, partnerships, foreign operations, and fund accounting. Prerequisites: ACC 301; 382; 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor; or Graduate status.

ACC 511 Federal Income Tax II 3(3-0)
Formation, operation, distributions, redemption, dissolution, and liquidation of corporations, partnerships, Subchapter S corporations and personal holding companies; accumulated earnings tax; tax shelter investments. Prerequisites: ACC 311; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 512 Tax Research and Administration 3(3-0)
A study of the sources of tax law, professional tax research techniques, IRS procedures used to administer the tax system, and professional tax practice standards. Prerequisites: ACC 311; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 517 Federal Estate and Gift Taxation 3(3-0)
Concentrated study of federal taxation of death transfers and gratuitous lifetime transfers including preparation of decedents final income tax return. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 521 Managerial Cost Control Analysis 3(3-0)
Principles and techniques of accounting data analysis and profit planning, measurement, evaluation, and control for management. Prerequisites: ACC 321; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor. Recommended: MGT 349.

ACC 524 Budgeting: Planning and Control 3(3-0)
Intensive study of budgeting for both profit and non-profit organizations. Prerequisites: ACC 321, FIN 332; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.
ACC 531 Auditing and Assurance Services 3(3-0)
A study of assurance services offered by professional service firms with major emphasis on the traditional auditing concepts and procedures. Prerequisites: signed major authorization in accounting; completion or concurrent enrollment in ACC 370; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 533 Auditing Procedures and Statistical Sampling 3(3-0)
Auditing programs, work paper techniques, procedures, and statistical sampling. Prerequisites: ACC 531 with a grade of B- or better; BIS 221; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 535 EDP Auditing and Control 3(3-0)
EDP auditing including controls, applications, software, systems, and service center records. Prerequisites: ACC 531, BIS 221; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 536 Forensic Accounting 3(3-0)
The study of financial fraud and the methods of fraud detection, investigation, and prevention. Prerequisites: 75 semester hours completed; admission to professional Business Studies or graduate status.

ACC 543 Fund Accounting 3(3-0)
Accounting principles and procedures for governmental units and various non-profit organizations. Prerequisites: ACC 302; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

ACC 550 Internal Auditing 3(3-0)
Emphasis on internal auditing as an internal control. Standards, ethics, concepts, techniques, and reporting practices relevant to financial, compliance, and operational auditing. Prerequisites: signed accounting major or minor; 56 hours completed; admission to Professional Business Studies.

ACC 570 Strategic Accounting System Development and Implementation 3(3-0)
The strategic design and implementation of accounting systems for competitive advantage. Topics include enterprise resource planning, business process re-engineering, change management and semantic object modeling. Prerequisites: ACC 301, ACC 302, ACC 321, ACC 370; 56 semester hours completed and admission to Professional Business Studies; or listed on signed major or minor; or graduate students, permission of the MBA Director.

ACC 597 Special Topics in Accounting 1-3(Spec)
Advanced topics in accounting. Not more than 3 credits for S97 count toward accounting major, minor, or concentration. Prerequisites: permission of instructor; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

ACC 605 Accounting Theory I 3(3-0)

ACC 689 Accounting Internship 3(Spec)

ACC 711 Tax Seminar 3(3-0)

ACC 721 Managerial Accounting Seminar 3(3-0)

ACC 730 Configuration, Control & Implementation of Global Accounting Systems using GRC 3(3-0)

ACC 731 Auditing Seminar 3(3-0)

ACC 741 Fund Accounting Seminar 3(3-0)

ACC 791 Independent Studies 1-3(Spec)

ACC 797 Special Topics in Accounting 1-3(Spec)

AFL - Air Force Leadership
See the Department of Military Science for more information.

AFL 111 Foundations of United States Air Force I 1(1-2)
Introduction to the U.S. Air Force today. Mission and organization; group leadership problems; introduction to communication skills. Leadership laboratory.

AFL 112 Foundations of United States Air Force II 1(1-2)
Introduction to the U.S. Air Force today. Mission and organization; group leadership problems; introduction to communication skills. Leadership laboratory.

AFL 211 The Evolution of USAF Air and Space Power I 1(1-2)
Air Force heritage. Evolution of air power concepts and doctrine; introduction to ethics and values; introduction to leadership; ongoing application of communication skills. Leadership laboratory.

AFL 212 The Evolution of USAF Air and Space Power II 1(1-2)
Air Force heritage. Evolution of air power concepts and doctrine; introduction to ethics and values; introduction to leadership; ongoing application of communication skills. Leadership laboratory.

AFL 321 Air Force Leadership Studies I 3-4(Spec)
Communication, management, and ethical skills for Air Force officers. Emphasizes standards and professionalism in the modern officer corps. Leadership laboratory required for AFROTC cadets.

AFL 322 Air Force Leadership Studies II 3-4(Spec)

AFL 421 National Security Affairs 3-4(Spec)

AFL 422 National Security Affairs and Preparation for Active Duty 3-4(Spec)

ANT - Anthropology
See the Department of Sociology, Anthropology and Social Work for more information. Note: Prerequisites for any courses in anthropology may be waived by permission of the Department Chair and the instructor.

ANT 110 Meet Your Ancestors and Other Distant Relatives 3(3-0)
An introduction to human place in nature, including our relationship to non-human primates and the adaptations and behavior of Neanderthals and other early human groups. (University Program Group II-A: Descriptive Sciences)

ANT 120 Ancient Insights Into Current Crises 3(3-0)
A survey of major archaeological discoveries around the world considered within the context of past and contemporary problems faced by human societies. (University Program Group III-B: Studies in Social Structures)

ANT 170 Cultural Anthropology 3(3-0)
Comparative study of contemporary cultures, including methods and theories employed. The impact of globalization on cultural diversity. (University Program Group III-B: Studies in Social Structures)

ANT 171 Human Origins: Introduction to Physical Anthropology 3(3-0)
Introduction to human and primate evolution, and the origin of human hereditary variations. (University Program Group II-A: Descriptive Sciences)

ANT 173 Laboratory in Physical Anthropology 1(0-2)
Laboratory practicum surveying the techniques and procedures by which evidence is developed and analyzed in studying human variation and evolution. Satisfies University Program Group II laboratory requirement. Pre-Co-requisite: ANT 171. (University Program Group II-A: Descriptive Sciences)

ANT 174 Introduction to Prehistoric Archaeology: From Stone Age to Civilization 3(3-0)
The development of culture in Africa, Asia, and Europe to the rise of urban civilizations. How archaeological evidence is obtained, analyzed, dated, and interpreted.

ANT 175 Archaeology of the Americas 3(3-0)
Archaeology of the Americas: From the earliest peopling of the Western Hemisphere to the rise of civilizations such as the Maya, Aztec, and Inca. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

ANT 200 Education and Culture 3(3-0)
Processes of learning from infancy through adolescence across cultures and institutions, including family and school. Origins and spread of mass education. Educational disparities and inequality. (University Program Group III-B: Studies in Social Structures)

ANT 202 Anthropology of Gender 3(3-0)
Examination of gender and sexuality across cultures and through time through the lens of anthropology.

ANT 205 Social Justice in a Global Society 3(3-0)
Introduction to key concepts in global social justice, foundational human rights instruments and processes, contemporary manifestations of social injustice, and the role of social action. Identical to SOC 205; credit may not be earned in more than one of these courses. (University Program Group III-B: Studies in Social Structures)

ANT 250 Water as Life, Death, and Power 3(2-2)
Problems of water access, water-borne pathogens, water treatment, and power relationships in global cultures from anthropology, biology, and chemistry perspectives, via lecture and seminar. Identical to BIO 250 and CHM 250. Credit may not be earned in more than one of these courses. No credit on biology or chemistry major or minor. Recommended: ANT 171 or 170; BIO 101 or 110; CHM 111, 120, or 131.

ANT 276 Language and Culture 3(3-0)
Theory and methods of linguistic anthropology; the study of language use in cultural contexts. Recommended: ANT 170. May be offered as Writing Intensive.

ANT 320 North American Indian Cultures 3(3-0)
Diversity of North American Indian cultures, their experiences of colonization and culture change, and their contributions to American and global cultures. This course may be offered in an online or hybrid format. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)
ANT 321 Cultures of Latin America 3(3-0)
Indigenous, European, and African origins and contemporary diversity of cultures of Latin America. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

ANT 322 Cultures of Africa 3(3-0)
Cultures of Africa, their history and contemporary diversity. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

ANT 324 Cultures of the South Pacific 3(3-0)

ANT 340 South American Archaeology 3(3-0)
Archaeology of South America. Emphasis on the Central Andean region. Introduction to documentation and interpretation of cultural developments from earliest human occupations to European conquest. Prerequisite: ANT 175.

ANT 342 Principles of Forensic Anthropology 3(3-0)
An introduction to the principles of forensic anthropology, including identification of human skeletal remains, search/recovery of human remains and estimation of time since death. Prerequisites: ANT 171 or BIO 101.

ANT 344 Michigan Archaeology 3(3-0)
Michigan archaeology from the first peopling of the area to historic times. Changing adaptive patterns examined in context of the Great Lakes region and North America generally. Recommended: ANT 174 or 175.

ANT 345 Cultural Resource Management in Archaeology 3(3-0)
Introduction to the laws and practice of Cultural Resource Management (CRM) and applied archaeology within public, private, and governmental settings. Recommended: ANT 174 or 175.

ANT 347 Human Evolution 3(3-0)
Fossil evidence of human evolution and its analysis within a theoretical framework of ongoing evolutionary forces and basic phylogenetic principles. Prerequisite: ANT 171.

ANT 348 Stone-Age Europe: Peoples and Cultures of the Distant Past 3(3-0)
Ancient peoples and cultures of Europe from the perspective of anthropological archaeology, beginning perhaps 800,000 years ago and developing through Paleolithic, Mesolithic, and Neolithic periods.

ANT 351 The Race Concept and Human Variation 3(3-0)
Analysis and interpretation of human physical variation (genetic) to permit an examination of historical and modern evolutionary and "scientific" racism. Recommended: ANT 171 or BIO 101.

ANT 356 Primate Behavior 3(3-0)
Applying principles of evolution to primate behavior with emphasis on effects of ecology on social relations and group organizations. Recommended: ANT 171 or BIO 101.

ANT 358 Diseases and Human Evolution 3(3-0)
Etiological and ecological approaches to human diseases; how diseases affect past and contemporary humans; explorations of interactions between human biology, biological/cultural adaptation, and disease. Prerequisite: ANT 171 or ANT 250 or BIO 250 or CHM 250.

ANT 365 Current American Indian Issues 3(3-0)
Current social, economic, political, and cultural issues affecting American Indians; social movements of resistance and change. (University Program Group IV-C: Studies in Race and Cultural Diversity in the United States)

ANT 370 Global Environmental Issues 3(3-0)
Social and cultural dimensions of global population issues, food and energy policies, destruction of indigenous lifeways, roles of multinational organizations, environmental racism, and environmental movements. Identical to SOC 370; credit may not be earned in more than one of these courses.

ANT 380 Culture through Art 3(3-0)
Theories and methods from anthropology and the arts, addressing historical and at-hand research questions. Includes archaeological and ethnographic perspectives. Recommended: ANT 170.

ANT 388 Special Topics in Anthropology 1-12(Spec)
Consideration of subject matter not included in courses currently listed in catalog.

ANT 426 Method and Theory in Archaeology 3(3-0)
Nature of archaeological evidence, methods of analysis, theories and problems in interpretation and explanation of the human past. This course given in alternate years in rotation with ANT 451. Prerequisite: ANT 174 or 175.

ANT 430 Applied Anthropology 3(3-0)
The application of basic research and methods in the subfields of anthropology to address contemporary socio-cultural problems related to human diversity across ethnicity, "race," class and gender. Prerequisites: ANT 170, 171, and 175.

ANT 450 Ethnographic Methods and Research Design 3(3-0)
Ethnographic methods, ethics, and research design in cultural anthropology. Identical to SOC 450. Credit may not be earned in more than one of these courses. Prerequisite: ANT 170.

ANT 451 History of Anthropological Thought 3(3-0)
Development of anthropological theory. Key persons, concepts, and schools of thought. This course given in alternate years in rotation with ANT 426. Prerequisite: ANT 170.

ANT 457 Globalization and Society 3(3-0)
Effects of the global economy on the division of labor, transnational migration, social inequality, ethnic identities, gender relations, and other aspects of social organization. Identical to SOC 457; credit may not be earned in more than one of these courses. Prerequisites: SOC 100 or 201 or 221 or ANT 170.

ANT 459 Anthropology of Religion 3(3-0)
Anthropological approaches to religions in global and local contexts. Recommended: ANT 170.

ANT 461 Race, Racism and Human Evolution 3(3-0)
This course examines the relationship between science and social policies that impact "race" historically and in the present day. Prerequisites: ANT 351, or a signed major or minor in Anthropology and junior or senior status.

ANT 465 Capstone Experience in Anthropology 3(3-0)
A current topic of broad anthropological interest, as approached from the various perspectives of the sub-disciplines. Prerequisites: Authorized major or minor in Anthropology, and Junior or Senior standing, and ANT 170, 171, either ANT 174 or 175.

ANT 498 Independent Studies In Anthropology 1-12(Spec)
Directed reading or research on an approved topic. Not open to students on academic probation. Prerequisites: 9 hours of Anthropology at the 200-level or higher; permission of instructor.

ANT 500 Field School in Archaeology 3-6(Spec)
Intensive practical experience in field survey, excavation, and laboratory analysis of resulting materials. Prerequisite: ANT 174 or 175 or 240; and permission of instructor.

ANT 506 Comparative Cultural Systems 3(3-0)
Explores theories of cultural development, with particular emphasis on urban and post-industrial cultures. Students investigate cultures different from their own. Identical to SOC 506. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisite: One anthropology or sociology course.

ANT 520 Medical Anthropology 3(3-0)
Transcultural variations in conceptions of health, illness, disease, sickness and healing; cultural practices and social, political, economic and global forces that impact these conditions. Prerequisites: Six credits of cultural anthropology and/or sociology.

ANT 521 North American Indian Ethnohistory 3(3-0)
The history of Native American peoples in North America since 1492, impact of colonization and U.S. policy upon Native Americans, and ethnohistorical theory and methodology. Prerequisite: Senior standing and ANT 320 or 365 or HST 323; or graduate standing.

ANT 531 Capstone Experience in Global Justice 3(3-0)
Capstone course synthesizes course work on the issues of global social justice/injustice. Explores roots, consequences, types, policy approaches, and strategies for pursuing global justice. Identical to SOC 531. Credit may not be earned in more than one of these courses. Prerequisites: SOC/ANT 101; 15 hours in the Global Justice Minor; Completion of the Service Learning component of the Global Justice Minor; and Approval of the Global Justice Advisor. May be taken by SOC or ANT Majors with the approval of the Global Justice Advisor. Or, graduate standing.

ANT 532 Global Aging: Cross-Cultural Aging in a Globalized World 3(3-0)
Comparative study of cultural shapings, expressions and experiences of contemporary aging. Social and cultural responses to perceived problems of aging, Transformations of aging under globalization. Cross listed with SOC 532. Credit may only be earned for one of these courses. Prerequisite: Six credits of cultural anthropology, gerontology and/or sociology.

ANT 540 Archaeological Field and Laboratory Techniques 3(3-0)
Practical instruction in archaeological techniques including field survey and excavation; description, classification, data analysis, and documentation of cultural materials in the laboratory. Prerequisites: ANT 175 and one of the following: ANT 340, 344, 348; or Graduate standing.

ANT 542 Methods in Forensic Anthropology: Osteology and Skeletal Analysis 4(3-2)
Lectures and laboratory training in forensic identification and analysis of human skeletal remains for utilization by criminal justice authorities, missing persons bureaus, archaeologists and paleoanthropologists. Prerequisites: ANT 173, 342, or 347; or graduate standing.

ANT 544 Great Lakes Archaeology 3(3-0)
Examination of prehistoric cultural trends and societies in the Great Lakes region within the context of broader trends in eastern North America and impact of historic Euroamerican settlement. Prerequisites: ANT 175; or Graduate standing.

ANT 588 Special Topics in Anthropology 1-10(Spec)
Consideration of subject matter not included in courses currently listed in catalog. Prerequisite: 15 credit hours in Anthropology or Graduate Standing.
ANT 590 Gender, Culture & Society 3(3-0)
Analysis of gender roles in various cultures; theoretical approaches to explaining gender role variation. Identical to SOC 590 and WST 590. Credit may not be earned in more than one of these courses. (Not open to students who have completed ANT 490 or WST 490.) Prerequisites: 6 hours of anthropology and/or sociology and/or women's studies.
For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

ANT 626 Theory and Research in Archaeology 3(3-0)

ANT 645 Cultural Resource Management in Archaeology 3(3-0)

ANT 698 Independent Studies in Anthropology 1-12(Spec)

ANT 798 Thesis 3-6(Spec)

ART 217 Introduction to Figure Drawing 3(0-6)
Introduction to the study of the human figure in drawing with emphasis on three-dimensional representation, proportions, and anatomical structure. 

ART 214 Introduction to Ceramics 3(2-3)
An introduction to hand-building and wheel-throwing processes with an emphasis on technical, formal, historical, and conceptual development. Prerequisite: ART 106.

ART 217 Introduction to Figure Drawing 3(0-6)
Introduction to the study of the human figure in drawing with emphasis on three-dimensional representation, proportions, and anatomical structure. Prerequisite: ART 106.

ART 230 Painting II 3(0-6)
Continuation of the aims of ART 130 (Painting I), with emphasis on problems concerning conceptual and perceptual approaches to dealing with color and composition. Prerequisite: ART 130.

ART 231 Introduction to Graphic Design 3(0-6)
An introduction to the theory and practice of communication design. An emphasis is placed on technical and aesthetic fundamentals.

ART 233 Introduction to Painting 3(0-6)
Introduction to painting media and techniques with a focus on painting from observation in order to express light, space, form through the use of color.

ART 235 Logo and Identity Design 3(0-6)
A continuation of ART 135, with emphasis on development of conceptualization and visualization skills. The course focuses on printed materials that apply to identity systems. Prerequisites: ART 135.

ART 240 Photography II: Digital Montage & Studio Lighting 3(0-6)
Digital photography assignments emphasizing digital compositing and artificial lighting techniques. Prerequisite: ART 241.

ART 241 Introduction to Photography 3(0-6)
Introduction to the basic technical and conceptual skills of digital photography as a fine art.

ART 250 Printmaking II 3(0-6)
A continuation of Printmaking I with additional emphasis on conceptual development and more advanced printing methods within fine art printmaking. Prerequisites: ART 251.

ART 251 Introduction to Printmaking 3(0-6)
An introduction to fine art printmaking. This course explores a variety of print techniques including relief, intaglio, lithography and/or silkscreen. Prerequisite: ART 106.

ART 258 Everyday Web Design 3(0-6)
Web design as it relates to personal development and options for an on-line presence. This course does not count toward the Graphic Design Concentration.

ART 260 Making Multiples: Sculpture 3(0-6)
A continuation and expansion of the skills developed in ART 261. This course focuses on the development and the creation of sculptural multiples. Prerequisite: ART 261.

ART 261 Introduction to Sculpture 3(0-6)
An introduction to the basic tools, techniques, processes, materials, history and concepts of traditional and contemporary sculpture.

ART 274 Introduction to Fibers 3(0-6)
Introduction to concepts, materials, and techniques of fiber arts such as weaving, felting, dyeing, basketry, and papermaking.

ART 275 Papermaking/Book Arts I 3(0-6)
An introduction to techniques and aesthetics for making handmade paper for 2-D and 3-D forms including basic bookbinding. Prerequisites: ART 115 or 175.

ART 283 Introduction to Western Art, Part I 3(3-0)
History of Western art from prehistoric through medieval periods. Roots of western cultures seen in differing artistic styles and attitudes. (University Program Group I-A: Human Events and Ideas)

ART 285 Introduction to Western Art, Part II 3(3-0)
History of Western art from the Renaissance to the twentieth century. Relations of form and content to cultural attitudes. Unique contributions of major artists. (University Program Group I-A: Human Events and Ideas)

ART 287 Introduction to Non-Western Art 3(3-0)
An introduction to the visual arts of non-European cultures: Africa, Oceania, Asia and the Americas. Explores relations between arts, philosophies, and ways of life.

ART 297 Special Studies 1-6(Spec)
A general introduction to specialized topics, techniques, materials, Studio and/or scholarly areas.

ART 301 Visiting Artist Studio Experience 3-9(Spec)
A studio course taught by the visiting Artist-In-Residence. Repeatable up to nine hours when course content previously studied is not duplicated. Prerequisite: ART 106 or 115.

ART 305 Drawing III 3(0-6)
Advanced work building on Drawing I and II with emphasis on contemporary trends in drawing and a more mature conceptual expression. Prerequisite: ART 205.

ART 313 Ceramics: Hand-building 3(0-6)
A continuation of the hand-building skills acquired in ART 214 covering vessel and sculpture making with an emphasis on technical, formal, and conceptual development. Prerequisite: ART 214.

ART 314 Ceramics Studio: Wheel-throwing 3(0-6)
A continuation of the wheel-throwing skills acquired in ART 214 focusing on vessel making with an emphasis on technical, formal, and conceptual development. Prerequisite: ART 214.

ART 316 Intermediate Figure Drawing 3(0-6)
Continuation of figure drawing at the intermediate level. Study of proportions and anatomy leading to competency in defining three-dimensional and spatial aspects of the figure. Prerequisite: ART 217.

ART 319 Art Criticism and the Methodology of Art History 3(3-0)
The description, analysis, interpretation, and evaluation of visual art.

Course Descriptions approved for University Program are in italics.
ART 330 Painting III 3(0-6)
Emphasis on individual development and refinement of personal expression in various approaches to painting. Prerequisite: ART 230.

ART 334 Watercolor Painting 3(0-6)
Exploration of transparent watercolor techniques including dry-brush and mixed-media, and development of an understanding of paper surfaces and pigment compositions. Prerequisites: ART 106, ART 115, ART 130.

ART 335 Design Bureau 3(0-6)
Investigations into the concept and production of communication graphic solutions for real-world clients in a group or "bureau" pre-professional studio setting. Prerequisites: ART 235, 241, 349; signed BFA with a concentration in graphic design.

ART 336 Illustration 3(0-6)
Basic methods of black and white and color digital illustration with a specific focus for the graphic designer. Prerequisites: ART 106, 115.

ART 341 History of Photography 3(1-0)
The history of photography from the advent of the camera obscura to the present, emphasizing the contributions of major photographers.

ART 342 Experimental Photography Studio 3-6(Spec)
Creative work using experimental lens-based image capture and alternative printing methods. Prerequisite: ART 241.

ART 343 Art in the Elementary School Grades K-4 3(1-0)
An art methods class for the art education major covering developmentally appropriate curricula and content for the elementary school student. Prerequisites: ART 106, ART 115, ART 118, and admission to the Teacher Education Program.

ART 344 Art in the Middle School Grades 5-8 3(0-6)
An art methods class for the art education major covering developmentally appropriate curricula and content for the middle school student. Prerequisites: ART 106, 115, 118, 343, and admission to the Teacher Education program.

ART 345 Art in the Elementary School 2(1-2)
This course investigates the essential role of art in adolescent learning. Prerequisite: knowledge, skills, and pedagogies are acquired through readings, lecture, studio, and clinical practice. Prerequisite: Admission to the Teacher Education Program.

ART 346 Secondary School Art and Mid-Tier Observation 3(2-2)
Similar to ART 345, but applicable to the secondary grades. Students enrolled are required to put in a maximum of 2 hours per week in Mid-tier observation. Prerequisite: Admission to the Teacher Education program.

ART 349 Typography 3(0-6)
An intensive survey of the history and application of letterform. Prerequisite: ART 231.

ART 350 Printmaking III 3(0-6)
A continuation of Printmaking II with additional emphasis on conceptual development and more advanced printing methods within fine art printmaking. Prerequisite: ART 250.

ART 358 Web Design I 3(0-6)
Web design as it relates to graphic design. Prerequisites: ART 349; signed BFA with a concentration in graphic design.

ART 360 Figurative Sculpture 3(0-6)
A continuation and expansion of the skills developed in ART 261. This course focuses on the development and the creation of figurative sculpture. Prerequisite: ART 261.

ART 362 Metal Sculpture 3(0-6)
A continuation and expansion of the basic skills of metal sculpture. This course focuses on the development and the creation of sculpture utilizing metals. Prerequisites: ART 260 or 360.

ART 363 History of Design: 1750-2010 3(3-0)
Survey of the development of the applied arts in material culture from the beginning of the Industrial Revolution into the twenty-first century. Recommended: Sophomore standing or above. (University Program Group I-A: Human Events and Ideas)

ART 366 Contemporary Design Issues 3(3-0)
A survey of the ethical, conceptual, and stylistic trends driving contemporary design theory and practice. Prerequisites: Sophomore standing or above.

ART 375 Surface Design on Fabric 3(0-6)
The application of patterning and color with dyes and pigments through silk screen, batik, resist tie-dye, and painting on fabric. Prerequisites: ART 115 or 175.

ART 380 Greek Art and Architecture 3(3-0)
The art and architecture of ancient Greece from the Geometric to Hellenistic periods. May be offered as Writing Intensive. Prerequisites: ART 185.

ART 381 Early Christian and Byzantine Art 3(3-0)
Art of the early church, Byzantine art from the reign of Theodosius I to the fall of Constantinople in the fifteenth century. Prerequisite: Completion of 26 credit hours.

ART 382 Gender and Art 3(3-0)
Examines how gender (identity) has played a role in art. Examines artists, patrons, viewers, and subjects of representations as gendered and historically specific entities. Identical to WST 382. Credit cannot be earned in more than one of these courses. Prerequisite: Completion of 26 credit hours.

ART 383 Modern Architecture 3(3-0)
The history of building styles, technologies, and architectural theory in Europe and the United States from the late 19th century to the present. Prerequisite: ART 285.

ART 385 European Art from 1890-1940 3(3-0)
A history and analysis of European art from 1890 to 1940. Prerequisite: ART 285.

ART 386 American Art 3(3-0)
History of American art from the colonial period to World War II. Prerequisite: completion of 26 credit hours.

ART 387 Baroque Art 3(3-0)
An examination of the art and architecture of the Baroque period in Europe in the context of social, political and religious developments. Prerequisite: Completion of 26 hours of coursework.

ART 388 Eighteenth-Century Art 3(3-0)
An examination of eighteenth-century painting, prints, sculpture, architecture, and decorative arts of Europe and America in the context of social, political and intellectual developments. Prerequisite: Completion of 26 hours of coursework.

ART 389 Art of the Ancient Near East and Egypt 3(3-0)
The art and architecture of Mesopotamia, Egypt, and the Levant from the origins of civilization through the Persian Empire. Prerequisite: Completion of 26 credit hours.

ART 397 Special Studies 1-6(Spec)
In-depth consideration of specialized topics, techniques, and material in studio, scholarly areas.

ART 405 Advanced Drawing 3(0-6)
Exploring more advanced concepts in drawing techniques, spatial relationships, and personal expression. Prerequisites: ART 217, 305.

ART 406 Drawing Studio 3-9(Spec)
An upper level course in drawing with emphasis on spatial relationships, experimentation with media, and conceptual processes of drawing as avenues toward personal expression. Prerequisite: ART 106.

ART 414 Ceramics Studio 3-9(Spec)
Students work with various processes associated with ceramics with an emphasis on beginning to develop a personal working direction and a unified body of work. Prerequisite: ART 214.

ART 416 Figure Drawing Studio 3(0-6)
Continuation of figure drawing experience at the advanced level. Exploration of figure dynamics, and the application of the theories of foreshortening, and creative composition. Prerequisite: ART 316.

ART 417 Figure Drawing Studio 3-9(Spec)
The study of proportion, anatomy, and definition of form as an avenue to the expressive possibilities of drawing the human figure. Prerequisite: ART 217.

ART 430 Painting IV 3(0-6)
Independent inquiry in painting where the mode of expression is consistent. Regular consultation with instructor is required. Prerequisite: ART 330.

ART 433 Painting Studio 3-9(Spec)
An upper level course in painting with emphasis on color relationships, paint development, experimentation, and conceptual development, while developing personal expression. Prerequisite: ART 233.

ART 435 Professional Design Practices 30-60
Development of print production and portfolio skills in preparation for employment in the communication design field. Prerequisites: Signed BFA with a concentration in Graphic Design. Pre/Co-requisites: ART 335.

ART 436 Graphic Design Internship 31-50
Supervised internship of 180 hours in a graphic design firm or related field designed to complement classroom learning. Prerequisites: ART 235, 349; signed BFA with a concentration in Graphic Design; minimum of 56 credit hours completed and permission of instructor.

ART 438 Motion Graphics 30-60
Introduction to computer-aided animation theory and application. Prerequisites: ART 235, 349; signed BFA with a concentration in graphic design.

ART 441 Photography Studio 3-9(Spec)
An upper level studio course in fine art photography with emphasis on technical refinement, conceptual development and professional presentation. Prerequisite: ART 241.

ART 446 Visual Arts and Aesthetic Education 3(3-0)
Exploration of the developmental methods and growth of aesthetic education in culture as it relates to secondary school curricula. Prerequisite: Admission to teacher education.

ART 449 Advanced Typography 3(0-6)
Advanced study in the theory and development of letterform. Prerequisites: ART 349, signed BFA with a concentration in graphic design.

ART 450 Printmaking IV 3(0-6)
A continuation of Printmaking III, with emphasis on conceptual development and advanced printing methods. Development of a fine art print portfolio. Prerequisite: ART 350.
ART 451 Printmaking Studio 3-9(Spec)
An upper-level studio course in fine art printmaking with emphasis on technical refinement, conceptual development and professional presentation. Prerequisite: ART 251.

ART 458 Web Design Studio 3-9(Spec)
Advanced web design as it relates to graphic design. Prerequisites: ART 358, signed BFA with a concentration in graphic design.

ART 460 Contemporary Bronze Casting 3-6(Spec)
ART 460 (beginning and advanced) is an advanced sculpture course focusing on the development of skills and the creation of bronze casting. Prerequisite: ART 260 or 360.

ART 462 Public Sculpture 3-0(Spec)
An investigation of the contemporary practices, history and concepts of public sculpture, combining research of techniques, processes and materials of installation, performance and environmental art. Prerequisites: ART 260 or 360.

ART 463 Sculpture Studio 3-9(Spec)
A continuation and expansion of skills developed in Introduction to Sculpture with an emphasis on developing a personal working direction and a unified body of work. Prerequisite: ART 261.

ART 471 BFA Exhibition 3(3-0)
Capstone experience for the B.F.A. art student, including a thesis exhibition, an artist’s statement, talk and final portfolio; and strategies for a successful post-graduate career. Must be taken in the last semester prior to graduation. Prerequisites: Signed BFA in Art and senior standing.

ART 472 Graphic Design Capstone Experience 3(0-6)
A graphic design capstone experience focusing on the development of a personal design philosophy, a senior project and exhibition, a public presentation of work and portfolio critique by an external assessor. Must be taken in one of the last two semesters prior to graduation. Prerequisites: ART 435; signed BFA with concentration in graphic design; and senior standing.

ART 474 Fibers Studio 3-9(Spec)
Intermediate level exploration of fiber concepts and techniques with custom dyed fabrics, weavings, and handmade paper and books. Prerequisite: ART 274.

ART 475 Papermaking/Book Arts II 3(0-6)
An advanced level investigation of techniques and aesthetics for making handmade paper for 2-D and 3-D forms including book binding. Prerequisite: ART 275.

ART 480 Roman Art and Architecture 3(3-0)
The art of Rome and the Roman world from earliest times to Constantine the Great. Prerequisite: ART 185.

ART 481 Western Medieval Art 3(3-0)
Art of western Europe from the fall of Rome to 1500. Origins of Romanesque art and dissemination of the French Gothic style throughout Europe. Prerequisite: Completion of 26 credit hours.

ART 482 Italian Renaissance Art 3(3-0)
An examination of the art and architecture of fifteenth- and sixteenth-century Italy in the context of social, political, and religious developments. Prerequisite: Completion of 26 hours of coursework.

ART 483 Nineteenth Century European Art 3(3-0)
Stylistic evolution of nineteenth century European art as viewed against its political and cultural background. Neo-classicism, Romanticism, Realism, Impressionism, Post-Impressionism, the Pre-Raphaelites, and the Symbolists. Prerequisite: ART 285.

ART 484 From Impressionism to the Present: New York Galleries 2(Spec)
Travel course to New York City to study original works of art. Prerequisite: ART 285.

ART 485 Art After 1945 3(3-0)
A history and analysis of works of art from 1945 to the present. Prerequisite: ART 285.

ART 486 Independent Study in Art History 1-6(Spec)
Independent study of a topic in art history selected by student in consultation with instructor. Prerequisite: permission of instructor.

ART 488 Northern Renaissance Art 3(3-0)
An examination of the fifteenth- and sixteenth-century art in Northern Europe in the context of political and religious developments. Prerequisite: Completion of 26 hours of coursework.

ART 489 Islamic Art 3(3-0)
Art and architecture of the Islamic world from the rise of Islam through the 17th century. Prerequisite: Completion of 26 credit hours.

ART 494 Gallery Management 3(2-2)
Concepts and processes in the production of art exhibitions and gallery management. Students will select a theme, research and select art, develop interpretation and market an art exhibition. Prerequisites: MST 310, 320; ART 285; senior standing.

ART 497 Special Studies 1-6(Spec)
Further study when scholarly/studio adequacy beyond ART 397 is achieved.

ART 498 BA/BS Capstone Experience 1-1(Spec)
Students will assemble a portfolio of their work and participate in a group portfolio review for a final capstone assessment. Course must be taken in one of the last two semesters prior to graduation. Prerequisites: Signed BA/BS in Art; and senior standing.

ART 499 BAA Senior Seminar 3(3-0)
Capstone course for the B.A.A. student, including development and presentation of senior portfolio, documentation of artwork, and professional strategies for establishing a successful career. Must be taken in one of the last two semesters prior to graduation. Prerequisites: Signed BAA in Art and senior standing.

ART 506 Advanced Drawing Studio 1-12(Spec)
An individualized studio experience for the advanced student in drawing media. Development of an independently directed body of work and portfolio. Prerequisite: ART 405.

ART 510 Advanced Ceramics 3(12-Spec)
Emphasizes problems relating to concepts of forms and surface as well as technical information pertaining to firing and glazing. A student may take this course four times, for 3 hours of credit each time. Prerequisite: ART 410.

ART 517 Advanced Figure Drawing Studio 1-12(Spec)
An individualized studio experience with emphasis on the human figure that would include problems in foreshortening, placement, and composition. Prerequisite: ART 416.

ART 533 Advanced Painting Studio 1-12(Spec)
An individualized studio experience for the advanced student of painting leading to artistic achievement and professional development. Prerequisite: ART 430.

ART 535 Digital Multimedia for Designers 3(0-6)
The design and visual development of multimedia using a variety of authoring tools. Prerequisites: ART 358, ART 438, and a signed BFA with a concentration in graphic design.

ART 541 Advanced Photography Studio 1-12(Spec)
An individualized studio experience for the advanced photography student, emphasizing long-term independent projects, critiques, and the creation of a professional portfolio. Prerequisite: ART 342, 441.

ART 551 Advanced Printmaking Studio 1-12(Spec)
An individualized studio experience in printmaking beyond ART 450 competency. Development of a fine art print portfolio. Prerequisite: ART 450 or 9 hours of printmaking credit and graduate standing.

ART 556 Independent Study 1-12(Spec)
An individualized studio experience determined in consultation with a faculty member. Prerequisites: minimum of 56 credit hours or graduate standing.

ART 561 Advanced Sculpture Studio 1-12(Spec)
An individualized studio experience focusing on personal research of new techniques, processes, materials, history and concepts of traditional and contemporary sculpture, and professional development. Prerequisites: ART 460 or 462.

ART 575 Surface Design on Fabric II 3(0-6)
Advanced techniques and aesthetics for the application of image, patterning, and color with dyes and pigments through silkscreen, batik, paints, resists, and transfers on fabric. Prerequisites: ART 375 or graduate standing.

ART 580 Seminar in Ancient/Medieval Art History 3-6(3-0)
Advanced study of a topic in ancient or medieval art history selected by instructor using readings, discussion, lecture, and research as appropriate. This course is repeatable when content is not duplicated. May be taken for graduate credit. Prerequisites: ART 283, 319, and additional 6 hours of 300+ level art history courses; or graduate standing.

ART 581 Seminar in Early Modern Art History 3-6(3-0)
Advanced study of a topic in early modern art history selected by instructor using readings, discussion, lecture, and research as appropriate. This course is repeatable when content is not duplicated. May be taken for graduate credit. Prerequisites: ART 285, 319, and additional 6 hours of 300+ level art history courses; or graduate standing.

ART 582 Seminar in Modern and Contemporary Art History 3-6(3-0)
Advanced study of a topic in modern or contemporary art history selected by instructor using readings, discussion, lecture, and research as appropriate. This course is repeatable when content is not duplicated. May be taken for graduate credit. Prerequisites: ART 285, 319, and additional 6 hours of 300+ level art history courses; or graduate standing.

ART 584 Drawing in Florence 3(Spec)
An advanced drawing course in Florence, Italy, using the city as a source of inspiration for creative work. Prerequisites: ART 106 and permission of instructor.

ART 586 Special Topics Seminar in Art History 3-9(3-0)
Advanced study of a thematic or cross-temporal art historical topic selected by instructor using readings, discussion, lecture, and research as appropriate. Repeatable up to 9 hours when content does not duplicate previous topics. Prerequisites: ART 319; additional 6 hours of 300+ level art history courses.

ART 589 Research Seminar in Art History 3(3-0)
Seminar supporting research projects in art history. Must be taken in one of the last two semesters prior to graduation. May be taken for graduate credit. Prerequisites: 3 credits of 500-level art history and signed Art History major; or graduate standing.

ART 597 Special Studies 1-6(Spec)
Further in-depth graduate study when scholarly/studio adequacy beyond ART 497 is achieved.

Course Descriptions approved for University Program are in italics.
AST - American Sign Language

See the Department of Communication Disorders for more information.

ASL 100 Introduction to the Deaf Community and Deaf Culture 3(3-0)
An introduction to the audiological, social, linguistic, and cultural aspects of Deafness and the Deaf Community.

ASL 101 American Sign Language, Level I 3(3-0)
Basic receptive and expressive American Sign Language (ASL) vocabulary and grammatical structure; fingerspelling; and conversational behavior. Basic understanding of Deaf Culture and ASL linguistics.

ASL 102 American Sign Language, Level II 3(3-0)
Basic receptive and expressive ASL vocabulary, grammar, fingerspelling, and conversational behavior. Basic understanding of Deaf Culture and ASL linguistics. A continuation of ASL 101. Prerequisite: ASL 101.

ASL 201 American Sign Language, Level III 3(3-0)

ASL 202 American Sign Language, Level IV 3(3-0)
Further development of intermediate-level receptive and expressive ASL vocabulary, grammar, fingerspelling, and conversational behavior; Deaf Culture and ASL linguistics. Continuation of ASL 201. Prerequisite: ASL 201.

ASL 300 Introduction to the DeafBlind Community 3(3-0)
An introduction to the diversity of the DeafBlind community, including etiologies, accommodations for vision and hearing losses, communication strategies, supports, and social issues. Prerequisites: ASL 100, 202.

ASL 390 Sociocultural History of the American Deaf Community 3(3-0)
Social and cultural aspects of persons who self-identify as members of the American Deaf community, including history, patterns of social interaction, folklore, and art. Prerequisites: ASL 100, 202.

ASL 401 American Sign Language Level V 3(3-0)
Advanced conversational American Sign Language. Beginning development of advanced-level receptive and expressive skills. Continued consideration of Deaf Culture and ASL linguistics. Prerequisites: ASL 100, ASL 202.

ASL 402 American Sign Language Level VI 3(3-0)
Advanced conversational American Sign Language. Continued development of advanced-level receptive and expressive skills. Continued consideration of Deaf Culture and ASL linguistics. Prerequisites: ASL 100, ASL 401.

ASL 404 Advanced Fingerspelling and Numbers 3(3-0)
Reading/comprehending and producing fingerspelled words and numbers; emphasis on clarity, accuracy, incorporation into conversational ASL. Prerequisites: ASL 100, ASL 202.

ASL 510 ASL Linguistics 3(3-0)
This course will examine the linguistics of American Sign Language. Topics will include the form, content and use of ASL; the relationship between ASL, spoken languages, and other signed languages; ASL acquisition; and historical change in ASL. Prerequisites: ASL 100, ASL 202.

ASL 590 Independent Study 1-4(Spec)
Student-initiated study of a topic related to the ASL minor guided by a faculty member or faculty committee. Prerequisites: ASL 100, ASL 202, permission of instructor.

ASL 594 ASL in Elementary Education 3(Spec)
Students apply their American Sign Language skills and knowledge of Deaf culture by assisting in the provision of ASL instruction in a university. Prerequisites: ASL 100, ASL 202; permission of instructor.

ASL 595 Community Placements with Deaf Children and Adults 3(1-3)
Students apply their American Sign Language skills and knowledge of Deaf culture by working in community placements with Deaf children and/or adults. Prerequisites: ASL 202; ASL 100 or 390; permission of instructor.

ASL 597 American Sign Language Teaching Assistantship 3(Spec)
Students apply their American Sign Language skills and knowledge of Deaf culture by assisting in the provision of ASL instruction in a university. Prerequisites: ASL 202; ASL 100 or 390; permission of instructor. Recommendation: Letters of support from university ASL course instructor.

ASL 599 Special Topics 1-6(Spec)
Study of a selected topic, specific application, or current issue related to but not covered by the ASL Minor curriculum. Prerequisites: ASL 100, ASL 202, permission of instructor.

AST - Astronomy

See the Department of Physics for more information.

AST 111 Astronomy 3(3-0)
An overview of modern astronomy which illustrates the basic physical principles and methodologies underlying all the sciences. Topics include the solar system, stars and stellar systems, galaxies and cosmology. This course may be offered in an online or hybrid format. (University Program Group II-A: Descriptive Sciences)

AST 112 Introduction to Astronomical Observations 1(0-2)
The observation and interpretation of the sky using the naked eye, small telescopes, celestial globes, and star maps. Supplements AST 111 by providing observational experience. Satisfies University Program Group II laboratory requirement. This course may be offered in an online or hybrid format. Co-requisite: AST 111/University Program Group II-A: Descriptive Sciences

AST 165 Foundations of Astronomy 1(0-2)
Inquiry-based survey of astronomy including the observation and interpretation of the sky using the naked eye. Topics include solar system, stars, and galaxies.

AST 260 General Astronomy I 4(3-2)
A mathematical treatment of modern astronomy for majors/minors in the sciences. Coordinate systems, astronomical instruments, time, moon and eclipses, earth as a planet, other solar system objects. Prerequisite: PHY 145.

AST 261 General Astronomy II 4(3-2)

AST 311 Vistas in Astronomy 3(3-0)
Descriptive treatment of astronomical topics of most interest. Typical topics include spacecraft results, extraterrestrial life, astroarchaeology, UFOs, pulsars, black holes, quasars, cosmology. Prerequisite: AST 111 or AST 260.

AST 511 Astronomy for Teachers 3(2-2)
Teaching astronomy in the elementary, middle, and secondary schools. Appropriate subject matter, student activities, demonstrations, experiments, sources of astronomical materials, planetary utilization. Prerequisite: AST 111.

AST 562 Observational Astronomy 4(3-2)
Astronomical coordinate systems, astronomical instruments, and the techniques of astronomical observation, photography, and spectroscopy. Prerequisites: AST 260, 261 or graduate standing. Pre/co-requisite: PHY 332 or graduate standing.

AST 563 Astrophysics 3(3-0)
Stellar atmospheres, stellar interiors, interstellar matter and topics of current interest. Prerequisites: AST 261; PHY 332.

AST 580 Special Topics in Astronomy 1-9(Spec)
Topics in astronomy or astrophysics not ordinarily covered in regular courses. Prerequisites: As specified in course syllabus.

AST 590 Independent Study 1-6(Spec)
Individual study in an area not covered in regular courses. Prior permission of the instructor must be obtained. Prerequisites: AST 260 and permission of instructor.

ATR - Athletic Training

See the School of Rehabilitation and Medical Sciences for more information.

ATR 100 Foundations of Athletic Training 3(3-0)
Introduction to the profession of athletic training. Exploration of the professional practice for athletic trainers and performance domains.

ATR 200 Functional Anatomy for Athletic Trainers 3(2-3)

ATR 280 Field Experience in Athletic Training 3(Spec)
Content related to the selection process for the Athletic Training major. Students will be assigned a clinical field experience under the supervision of a preceptor. CR/NC Only. Prerequisites: ATR 200; 24 credits; Submission of Athletic Training Application.

ATR 310 Athletic Training Clinical I 3(Spec)
First of four clinical courses. Introduction to the clinical education environment and clinical decision-making. A clinical field experience under the supervision of a preceptor is required. CR/NC Only. Prerequisite: Selection into the Athletic Training major. Co-requisites: ATR 380, 382.

ATR 315 Injury Prevention 2(2-0)
Theory, selection, and application of preventative devices and the design of physical conditioning programs for the prevention of injury. Prerequisite: ATR 310, 380, 382. Co-requisite: ATR 320, 381, 383.

ATR 320 Athletic Training Clinical II 1(Spec)
Second of four clinical courses incorporating didactic learning and patient care. A clinical field experience under the supervision of a preceptor is required. CR/NC Only. Prerequisites: ATR 310, 380, 382. Co-requisites: ATR 381, 383.

ATR 380 Athletic Training Assessment I 3(2-2)
Knowledge and skills necessary to conduct a clinical examination, recognize signs/symptoms and formulate a clinical diagnosis. Focus primarily on the lower extremity musculoskeletal injury. Prerequisites: Selection into the Athletic Training major. Co-requisites: ATR 310, 382.

ATR 381 Athletic Training Therapeutics I 3(2-2)
Application of therapeutic techniques with primary emphasis on therapeutic modalities. Other topics include tissue healing, pain management, and manual therapy techniques. Prerequisite: ATR 380, 382. Co-requisite: ATR 320, 383.
**ATR-BCA**

**ATR 382 Athletic Training Assessment II 3(2-2)**
Companion course with Assessment I. Knowledge and skills necessary to conduct a clinical examination, recognize signs/symptoms and formulate a clinical diagnosis. Focus primarily on the upper extremity musculoskeletal injury. Prerequisite: Selection to the Athletic Training major. Co-requisites: ATR 310, 380.

**ATR 383 Athletic Training Therapeutics II 3(2-2)**
Application of therapeutic techniques with primary emphasis on therapeutic exercise. Other topics include goal writing, goniometry, and girth. Prerequisites: ATR 380, 382. Co-requisites: ATR 320, 381.

**ATR 384 Athletic Training Assessment III 3(3-0)**

**ATR 385 Special Topics in Athletic Training 1-6(Spec)**
Selected topics/curriculum of interest in athletic training not normally included in existing courses. Current course topic is listed in the semester Class Schedule. Repeatable up to 6 credits when course topic does not duplicate previous topics studied. This course may be offered in an online or hybrid format. Prerequisites: See semester Class Schedule.

**ATR 390 Seminar in Athletic Training 2(2-0)**
Exploration of topics in athletic training using evidence-based concepts and principles. Prerequisite: ATR 320. Co-requisites: ATR 384, 394, 430.

**ATR 394 Pharmacology in Athletic Training 2(2-0)**
Basic pharmacological concepts of common medications used in the treatment of illness and injury encountered in the practice of athletic training. Prerequisites: CHM 120, 127 or 131; ATR 320. Co-require: ATR 384.

**ATR 397 Independent Study in Athletic Training 1-3(Spec)**
Student-initiated study guided by a faculty member. Prerequisites: ATR 320; permission of Athletic Training Program Director and Course Instructor; completion of Contract Course document.

**ATR 430 Athletic Training Clinical III 1(Spec)**
Third of four clinical course integrating didactic learning and patient care. A clinical field experience under the supervision of a clinician preceptor is required. Prerequisites: ATR 320, 381, 382. Co-require: ATR 430, 394, 390.

**ATR 431 Cultural Considerations in Athletic Training 1(Spec)**
Cultural behaviors and issues confronting the athletic trainer. Prerequisites: ATR 320. Co-requisite: ATR 430.

**ATR 440 Athletic Training Clinical IV 1(Spec)**
Fourth of four clinical education course integrating didactic learning, clinical decision-making and patient care. A clinical field experience under the supervision of a preceptor is required. Prerequisites: ATR 430, 394, 390. Co-requisite: ATR 480.

**ATR 441 Pre-Internship and Professional Development 1(Spec)**
Preparation for the AT internship experience; application process for AT certification and state credentials; Final preparation for the prospective entry-level AT professional. Prerequisites: ATR 390, 430. Co-require: ATR 478.

**ATR 478 Research Methods in Athletic Training 2(2-0)**
Introduction to methods of planning, evaluating and conducting research in athletic training. Prerequisites: ATR 390 and 430. Co-require: ATR 441.

**ATR 480 Health Care Administration in Athletic Training 3(3-0)**
Prepares athletic training students to administrate programs and manage facilities that provide health care services to athletes and other individuals. Prerequisites: ATR 430, 384, 430. Co-require: ATR 440.

**ATR 481 Athletic Training Practicum 3(Spec)**
A capstone experience applying athletic training didactic knowledge and clinical skills in a practical ‘on the job’ environment concurrently with student teaching. Prerequisite: ATR 441. Co-requisite: EDU 458.

**ATR 482 Athletic Training Internship 12(Spec)**
A capstone experience applying athletic training didactic knowledge and clinical skills in a practical ‘on the job’ environment. Prerequisite: ATR 441.

**ATR 585 Special Topics 1-3(Spec)**
Exploration of selected topics in the field of athletic training, sports medicine or other health related areas. Topic and prerequisites will be printed in Course Search and Registration materials. Repeatable up to 3 credits with different topics. This course may be offered in an online or hybrid format. Prerequisites: Determined specific to the topic presented. See Course Search and Registration.

**BCCA - Broadcast and Cinematic Arts**

See the School of Broadcast and Cinematic Arts for more information.

**BCA 101 History and Appreciation of the Cinema 3(2-0)**
History and critical analysis of outstanding fiction films and filmmakers. Innovations from early silent to the present. This course may be offered in an online or hybrid format. (University Program Group I-A: Human Events and Ideas)

**BCA 210 Survey of the Mass Media 4(4-0)**
Examination of historical, political, economic, social and legal evolution of mass media. Emphasis on mass media and their content in a social and cultural context.

**BCA 211 Introduction to Writing for Electronic Media 3(3-0)**
Introduction to creating written content for various forms of electronic media. May be offered as Writing Intensive. Prerequisites: ENG 101 with a minimum grade of B or ENG 103/099 with a minimum grade of B or ENG 106 with a minimum grade of C or ENG 201 with a minimum grade of B.

**BCA 222 Audio Production 3(1-4)**
The art and science of sound acoustics and basic audio and radio production. Prerequisites: BCA 210 with a C or better; or a signed minor in Media Design, Production and Technology.

**BCA 223 Video Production 3(1-4)**
Introductory course in video studio systems. Emphasis on structuring and integrating the various production elements that comprise video presentations. Prerequisites: BCA 210 with a C or better; or a signed minor in Media Design, Production and Technology.

**BCA 265QR Understanding Media Measurement 3(3-0)**
Quantitative reasoning skills in electronic media management and media audience measurement: Quantitative Reasoning. (University Program Group III-B: Studies in Social Structures)

**BCA 290 French Film and Other Media 3(3-0)**
French cinema in historical and cultural context; works of Gance, Clair, Renoir, Carne` and New Wave; overview of other media; includes field trip to France. (Taught in English. Does not count toward the French major or minor.) Prerequisites: Not open to first semester freshmen. Because the course involves international travel, all students must apply through the Office of International Education.

**BCA 300 African and African American Film 3(3-0)**
Examination of films by and about Africans and African Americans. First part of course deals with African and second part with African American films. (University Program Group I-B: The Arts)

**BCA 310 Understanding New Communication Technologies 3(3-0)**
A study of new and emerging communication technologies applied in mass media industries with emphasis on industrial, social, political policy, and technological changes. This course may be offered in an online or hybrid delivery format.

**BCA 311 Electronic Media Copywriting 3(3-0)**
Practice in the persuasive short forms of audio and video writing: commercials, continuity, public service announcements, and campaign evolution. May be offered as Writing Intensive. Prerequisite: ENG 101 with a minimum grade of B or ENG 103/099 with a minimum grade of B or ENG 198 with a minimum grade of B or ENG 201 with a minimum grade of B.

**BCA 317 Electronic Media Performance 3(2-2)**
Study of, and laboratory experience in, common electronic media performance situations. Prerequisite: BCA 210 with a grade of C or better.

**BCA 318 Electronic Media Newswriting 3(3-0)**
Techniques and principles of writing and producing news copy for electronic media. May be offered as Writing Intensive. Prerequisites: ENG 101 with a minimum grade of B; or ENG 103/099 with a minimum grade of B or ENG 198 with a minimum grade of B or ENG 201 with a minimum grade of B.

**BCA 320 Special Topics in Electronic Media 1-9(Spec)**
Current topics listed in semester Schedule of Classes. Repeatable when content does not duplicate previous special topics studies. Maximum credit, 9 hours. Prerequisite: BCA 210 with a grade of C or better.

**BCA 329 Practicum in Electronic Media 1-8(Spec)**
Directed experience at approved BCA broadcast, cable and electronic news facilities. Maximum of 8 hours applicable to degree program. Only 4 hours can count toward a BCA major and 2 hours toward a minor. CR/NC only. Prerequisites: Minimum grade of B; or permission of instructor.

**BCA 332 Online Electronic Media 3(2-2)**
Examination of online communication technologies, website productions, and streaming and stored audio/video media and their effects on the electronic media and society. Prerequisites: BCA 210 with a grade of C or better.

**BCA 342 Field Audio Production 3(2-0)**
Study and practice of field audio recording and production techniques for electronic media application and distribution. Prerequisites: BCA 222 with a C or better.

**BCA 399 Electronic Media Career Building 1-1(0)**
Strategies for obtaining entry level electronic media positions, and career building strategies for a successful career progression in electronic media. Prerequisite: BCA 210 with a C or better.

**BCA 411 Long-Form Electronic Media Writing 3(3-0)**
Techniques for writing extended radio/television scripts, emphasizing narrative, structure and characterization, and creative team dynamics in long-form electronic media formats. May be offered as Writing Intensive. Prerequisites: BCA 311 with a C or better.

**BCA 415 Television Advertising Production 3(3-0)**
Advanced television commercials copywriting and production: working with local clientele, identifying target audience, composing, writing, and producing television broadcast/cable commercials for airing. Prerequisites: BCA 210, 233 311 all with a grade of C or better.

**BCA 421 Advanced Audio Production 3(2-2)**
Study and practice in advanced audio recording, mixing and editing for electronic media industries. Prerequisite: BCA 222 with a grade of C or better.
BCA 440 Introduction to Cinematic Production and Post Production 3(2-2)
Introduction to single-camera/cinema-style video production and post production, including producing, directing, lighting, camera operation and nonlinear editing. Prerequisites: BCA 223 with grades of C or better.

BCA 441 Multi-camera Video Producing and Directing 3(2-2)
Introduction to multi-camera video producing and directing, including studio and field-remote production environments. Prerequisites: BCA 210, 223 with grades of C or better.

BCA 451 Practicum in Electronic Media Sales 3(1-4)
Directed sales experience at approved departmental student broadcast, cable and electronic facilities. Classes serve as a capstone for the Electronic Media Sales minor. Prerequisites: BCA 223 or 317, BCA 340 or 420; open only to signed Electronic Media Sales minors. Pre/Co-Requisites: BCA 511.

BCA 490 Independent Study in Electronic Media 1-4(Spec)
Student-initiated study guided by faculty or faculty committee. Maximum of 4 hours may be applied to degree. Does not fulfill requirements for a minimum of six (6) 400-500 level hours of electives in major. Prerequisites: Signed BCA major or minor; minimum BCA GPA of 3.0; Independent Study Project Prospectus approved by the study supervisor.

BCA 499 Senior Seminar 1-10
Capstone assessment of the student's professional strengths and weaknesses plus refinement of strategies for establishing a successful post-graduate career. Prerequisites: Signed BCA major; senior standing; BCA 222, 223, 503, 510; BCA 310 or 332; BCA 311 or 318.

BCA 503 Critiquing Mass Media 3(3-0)
Critical appraisal of mass communications systems and content with special attention to the electronic media's aesthetic properties and economic, political and societal effects. May be offered as Writing Intensive. Prerequisites: BCA 210 with a C or better; or signed Cinema Studies minor or graduate standing.

BCA 506 Series Script Writing for Visual Media 3(3-0)
Techniques for creating episodic scripts emphasizing story structure, characterization, and creative team dynamics for scripts and original electronic media series. May be offered as Writing Intensive. Prerequisites: BCA 210 with a C or better; ENG 201 with a B or better; limited to juniors or above; or graduate standing. Recommended: BCA 411.

BCA 508 Screenwriting for Cinematic Narrative 3(3-0)
Techniques, formatting styles and aesthetic strategies for writing and analyzing short- and feature-length cinematic narratives, emphasizing characterization, plot and structure. May be offered as Writing Intensive. Prerequisites: BCA 311 with a grade of C or better; limited to juniors or above; or graduate standing. In Broadcast and Cinematic Arts.

BCA 510 Electronic Media Law 3(3-0)
Regulation of the electronic media. Examination of legal and administrative matters and cases. Prerequisites: BCA 210 with a C or better and junior standing or above; or graduate standing.

BCA 511 Electronic Media Sales 3(3-0)
Organizational systems and processes of radio, television, and cable sales. Emphasis on selling techniques found most reliable in modern sales practices. Prerequisites: BCA 210 with a grade of C or better; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 512 Electronic Media Promotion 3(3-0)
Tools and techniques of promotion for electronic media. Emphasis on marketing needs, community relations and problems unique to the electronic media promoter. Prerequisites: BCA 210 with a C or better; BCA 311; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 515 Sports Broadcasting 3(2-2)
Overview of the sports broadcasting industry. Emphasis on tools and techniques of live-event production and electronic sports reporting. Prerequisites: BCA 210, 317 each with a C or better; or graduate standing in Broadcast and Cinematic Arts.

BCA 516 Electronic Media Management 3(3-0)
 Discusses management in contemporary American electronic media settings. May be offered as Writing Intensive. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 517 Advanced Audio and Video Performance 3(2-2)
Study and intensive practice in complex media performance situations. Special emphasis on realistic laboratory experience designed to explore the professional requirements of electronic media talent. Prerequisites: BCA 317 with a grade of "C" or better; or graduate standing in Broadcast and Cinematic Arts.

BCA 518 Electronic News Reporting 3(2-2)
Techniques of news gathering, reporting, and interviewing for electronic media. Prerequisites: BCA 318 with a C or better; or graduate standing.

BCA 519 Electronic Media Programming 3(3-0)
Examination of electronic media programming in terms of recent trends and strategies. Emphasis on production on air. Prerequisites: BCA 317 with a grade of "C" or better; or graduate standing in Broadcast and Cinematic Arts.

BCA 520 Special Topics in Electronic Media 1-5(Spec)
Current topics for each semester listed in Course Search and Registration. Repeatable up to 9 hours when content does not duplicate previous special topic studies. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 521 Advanced Electronic Cinematography 3(2-2)
Advanced theory and practice in the production of short and long form narrative video, with emphasis on the aesthetic aspects of lighting, direction and editing. Prerequisites: BCA 210, 223, 440 each with a grade of C or better; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 522 Multimedia Audio Post-Production 3(2-2)
Advanced recording, editing, sweetening, synchronizing and mixing of audio for picture in multimedia applications. Prerequisites: BCA 223, 421 with a grade of C or better in each; or graduate standing in Broadcast and Cinematic Arts.

BCA 524 Producing Television News 3(1-4)
Practical approach to producing live broadcast news. Encompasses gathering, writing, producing, and directing news programming over local cable outlets. Prerequisites: BCA 318 or 223; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 525 Film Genre Study 3-9(Spec)
In-depth examination of selected film genres, themes and trends. Repeatable up to 9 hours when content previously studied is not duplicated. This course may be offered in an online or hybrid format. Prerequisites: Limited to juniors or above; or graduate standing.

BCA 527 Film Directors 3-9(Spec)
Critical examination of selected film directors, focusing on their thematic and stylistic influence. Repeatable up to 9 hours when content previously studied is not duplicated. This course may be offered in an online or hybrid format. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 528 History and Analysis of Nonfiction Film 3(2-2)
History of documentary film, with emphasis on aesthetic and rhetorical dimensions, as well as production, distribution and consumption conditions. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 529 Internship in Electronic Media-Film 2-6(Spec)
Directed work experience at participating media venues. May count 6 hours maximum toward a major, 3 hours toward a minor. Minimum 2.5 GPA required. Prerequisite: prior written approval of BCA Intern Director; limited to juniors or above; open only to signed BCA majors or minors.

BCA 531 Industrial and Educational Video/Media Production 3(2-2)
Lecture and intensive hands-on theory, design and production of video and interactive programming specifically for and within institutional/corporate settings. Prerequisites: BCA 210, 223, 440 with a minimum grade of C or better; limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 532 Advanced Video/Multimedia Post-Production 3(2-2)
Lecture and intensive hands-on theory, design and production of multimedia interactive digital video, with emphasis on advanced post-production technologies and techniques. Prerequisites: BCA 223, 440 with a grade of C or better; or graduate standing in Broadcast and Cinematic Arts.

BCA 533 Advanced Electronic Media Design 3(2-2)
Advanced examination of website production, streaming, and stored audio/video media, specifically for electronic media outlets. Emphasis on design aesthetics, application of technologies, and website maintenance. Prerequisites: BCA 332; or graduate standing in Broadcast and Cinematic Arts.

BCA 540 Recording Industry & Business 3(3-0)
Overview of the music recording industry, music copyrights and music industry business strategies to reach consumers in the physical and online domains. May be offered as Writing Intensive. Prerequisites: Limited to juniors or above; or graduate standing.

BCA 542 Contemporary Recording & Mixing 3(2-2)
Advanced recording, mixing and mastering techniques of contemporary music for multimedia distribution. Summer session only. Laboratory hours arranged with instructor. Prerequisites: BCA 421 with a grade of B or better; or graduate standing in Broadcast and Cinematic Arts.

BCA 560 Radio Operations I 3(1-4)
Preparation and performance in radio broadcast practices, emphasizing daily operations and radio program management. Summer Session I only. Laboratory hours arranged with instructor. Prerequisites: Minimum 2.25 GPA, BCA 222 or 317; or graduate standing in Broadcast and Cinematic Arts.

BCA 561 Radio Operations II 3(1-4)
Preparation and performance in radio broadcast practices, emphasizing radio programming and promotion principles. Summer Session II only. Laboratory hours arranged with instructor. Prerequisites: Minimum 2.25 GPA, BCA 222 or 317, BCA 560; or graduate standing in Broadcast and Cinematic Arts.

BCA 566 Hockey's Cinematic Depictions 1(1-0)
Focused practice in media criticism through analysis of the sport, business and aesthetics of hockey as depicted in benchmark fiction and non-fiction films. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

BCA 601 Theories of Mass Communication 3(3-0)

BCA 602 Mass Communication Research Methods 3(3-0)

BCA 603 Qualitative Mass Communication Research Methods 3(3-0)
BIO 100 Introduction to Field Biology at Beaver Island 3(1-4)
Introduction to methods used in field study and analyses of data. Emphasis on basic relationships between organisms and their environment. At Beaver Island only. Does not count towards any Biology Major.

BIO 101 General Biology 3(2-2)
The study of life processes. Fundamental principles of biology are integrated with local and global issues of current interest. No credit toward Biology major or minor. May be used toward satisfying the requirements of Integrated Science major or minor for students seeking certification in Elementary education only. Students may only earn credit in one of the following: BIO 101, BIO 105, or BIO 110. Satisfies University Program Group II laboratory requirement. This course may be offered in a hybrid or online format. (University Program Group II-A: Descriptive Sciences)

BIO 105QR Introductory Quantitative Biology 3(2-2)
Introduction to basic biological principles, including quantitative treatments of ecology, evolution, cellular processes, genetics and diversity. No credit toward Biology Major or Minor. This course may be offered in an online or hybrid format. Satisfies University Program Group II laboratory requirement. Quantitative Reasoning. (University Program Group II-B: Quantitative and Mathematical Sciences)

BIO 110 Concepts of Biology 4(3-3)
Fundamental concepts of biology including the chemical basis of life, cell structure and function, molecular and transmission genetics, evolution and ecology. May be applied towards fulfilling the requirements for Biology major or minor. Students may only earn credit in one of the following: BIO 101, BIO 105, or BIO 110. Satisfies University Program Group II laboratory requirement. Recommended: High school chemistry or CHM 120 and 127 or 131 or 161. (University Program Group II-A: Descriptive Sciences)

BIO 151 Human Biology 3(3-0)
An introduction to human biology as a scientific discipline, cell biology, genetics, homeostasis, selected organ systems, biotechnology and current issues. This course may not be used to satisfy the requirements for a Biology major or minor. This course may be offered in a hybrid or online format. (University Program Group II-A: Descriptive Sciences)

BIO 165 Life Science for Elementary Teachers 4(3-3)
Survey of life science content aligned with state and national science education standards and introduction to science pedagogy for students seeking elementary teaching certification. Does not count toward Biology major or the Biology minor. This course satisfies the Group II laboratory requirement. (University Program Group II-A: Descriptive Sciences)

BIO 197 Special Topics in Biology 1-4(Spec)
Topics of special interest that are not normally included in existing courses. Prerequisites: Instructor’s prerequisites will be announced in the Course Search and Registration.

BIO 203 General Botany 3(2-3)
Study of the structure, function, physiology, evolution, diversity and ecology of plants. Prerequisite: BIO 110.

BIO 208 Microbiology 3(2-3)
The biology of microorganisms: bacteria, archaea, viruses, fungi, algae, and protozoa. Prerequisite: BIO 101.

BIO 218 General Zoology 3(2-3)
A general survey of the animal kingdom with emphasis on phylogeny, taxonomy, structure, physiology, and ecology of type examples of the major phyla. Prerequisite: BIO 110.

BIO 229 Advanced Independent Study in Electronic Media 1-9(Spec)

BIO 230 Biotechnology 3(3-5)
Intermediate microbiology course focusing on bacterial cell structure and function, metabolism, genetics and phylogeny. Prerequisite: BIO 208.

BIO 302 Cell Biology 3(3-0)
Cellular structure and function, including biological molecules, membranes, signaling, bioenergetics and metabolism, the cell cycle, information flow, and other cellular processes. Prerequisites: BIO 110, 208; One of: CHM 120, 127, 342 or CHM 131, 132 or CHM 161.

BIO 315 Human Genetics 3(3-0)
Fundamental principles of human genetics, including genetic mechanisms, human populations, medical syndromes, eugenics and genetic counseling. Does not count toward Biology major or the Biology minor. This course is approved for offering in a distance learning format.

BIO 316 Genetics 4(3-3)
The principles of heredity dealing with the location, transmission, structure and function of genes and the results of modern genetic techniques. Prerequisites: BIO 208; One of: BIO 101, 105, 110.

BIO 330 Light Microscopy 3(2-2)
Principles and practice of biological light microscopy including sample preparation, use of dissecting, brightfield, and fluorescence microscopes and analysis of anatomy/histology of material. Prerequisite: 6 semester hours of biology.

BIO 334 Soil Science 3(2-2)
An introduction to the physical, chemical, and biotic properties of soils; soil classification and mapping; and soil resource issues. Identical to GEO 334. Credit may not be earned in more than one of these courses. Prerequisites: Six (6) hours of environmental science; CHM 120 or CHM 131.

BIO 337 Comparative Vertebrate Anatomy 4(3-3)
Anatomical survey illustrating major morphological characteristics within phyla. Chordata emphasizing vertebrates. Ontogenetic and evolutionary trends are developed within the framework of functional morphology and adaptation. Prerequisites: BIO 218.

BIO 338 Human Ecology 3(3-0)
The relationship of humans to their environment and the environmental consequences of human activities. Topics include climate change, biological invasions, biodiversity loss, emerging infectious diseases. Does not count toward biology majors or the biology minor. This course may be offered in an online or hybrid format.

BIO 340 Ecology 3(2-3)
Study of the relationships between organisms and their environment. Prerequisites: One of: BIO 101, 105, 110. Recommended: BIO 203 or 218.

BIO 351 Biological Science for Elementary Teachers 3(Spec)
Development of teaching methods and laboratory skills necessary for teaching of grades K-8. Prerequisite: BIO 101 or BIO 105.

BIO 365 Environmental Contaminants 3(3-0)
Survey of pesticide characteristics and residue problems, hazardous wastes, ground and surface water contaminants, air pollution and acid rain, and other environmental pollution concerns. Prerequisites: BIO 110 or 240; CHM 132 or 161. Recommended: CHM 345.

BIO 366 Freshwater Biology 3(2-3)
An introduction to the ecology of freshwater systems with an emphasis on the natural history, identification, and collection of freshwater organisms. Prerequisite: BIO 110.

BIO 367 Introduction to Marine Sciences 3(3-0)
This course will familiarize students with the biology of marine life. Physical factors, communities, and human impacts on the world’s oceans will be presented. Prerequisites: BIO 218. Recommended: CHM 131.

BIO 390 Comparative Animal Physiology 4(3-3)
The study of the diversity of physiological mechanisms in animals, with emphasis on inter-species comparisons to highlight patterns of physiological adaptation. Prerequisites: BIO 218; CHM 132 or 161 or 342.
BIO 391 Plant Physiology 4(3-3)

The study of plant function including processes such as photosynthesis, water movement, growth and development, and plant response to environmental stress. Prerequisites: BIO 203; CHM 120, 127 or 132 or 161.

BIO 392 Mammalian Physiology 4(3-3)

The functioning of the mammalian body and its component parts, with an emphasis on human systems. Prerequisites: 45 credits completed; BIO 208; One of: CHM 132, 161, 342.

BIO 397 Special Topics in Biology 1-6(Spec)

Topics of special interest that are not normally included in existing courses. Prerequisites: Course prerequisites will be announced in the Course Search and Registration.

BIO 403 Undergraduate Research 3-4(Spec)

Research experience for biology majors with 20 hours in biology and a B average. Requires planning with an advisor the semester prior to enrollment. Prerequisites: Permission of department chairperson; 20 credit hours of BIO courses completed with a B average.

BIO 435 Environmental Toxicology 3(3-0)

Introduction to basic principles of environmental toxicology. Students will evaluate toxic responses in people, animals, and the environment and formulate a response to health hazards. Prerequisites: BIO 208; CHM 342 or CHM 345.

BIO 440 Wildlife Ecology 3(3-0)

Examination of wildlife ecology as it pertains to the conservation and management of both game and nongame wildlife populations and their habitats. Prerequisites: BIO 340.

BIO 487 Neuroscience Seminar 1-2(Spec)

Analysis of current research in specified areas of neuroscience; critiquing and discussing primary literature and the students' current research relating to specific topics. Students will repeat this course for a maximum of 2 credits. Identical to PSY 487. Credit may not be earned in more than one of these courses. Prerequisites: Signed Neuroscience Major and prior or concurrent neuroscience research experience through BIO 403 or PSY 496.

BIO 490 Biomedical Sciences Capstone Seminar 1-2(Spec)

Seminar course covering variable topics in an area of biomedical science. Students may take this course for a 2 credit maximum. Repeatable when content previously studied is not duplicated. Prerequisites: BIO 324, 326, 392.

BIO 495 Undergraduate Internship in Biology 1-4(Spec)

An in-depth work experience in the student's area of interest performed under a trained professional in the selected area of biology for 6 to 24 weeks. Prerequisites: Signed Biology Major or Minor; 20 semester hours in Biology completed; minimum 3.0 GPA in biology.

BIO 497 Special Topics in Biology 1-5(Spec)

Topics of special interest that are not normally included in existing courses. Specific topics and instructor's prerequisites will be announced in Course Search and Registration. Repeatable up to 9 credits when content does not duplicate previous special topics.

BIO 500 Biological Statistics 3(2-2)

An introduction to biological statistics; emphasis on concepts of descriptive statistics and central tendency, inferential statistics, one-way ANOVA and correlation/linear regression. Prerequisites: Graduate standing or twelve (12) hours of biology. Recommended MTH 130.

BIO 501 Evolution 3(3-0)

Mechanisms of descent with modification are discussed in a framework of microevolution, speciation, and macroevolution. Prerequisites: BIO 326 or graduate standing.

BIO 502 Teaching Biology 3(2-3)

Development of pedagogical content knowledge for teaching of secondary biology; required training course for prospective teachers of biology. Prerequisites: Completion of at least 22 credits of BIO coursework; GPA of at least 2.7 in BIO classes; admission to the teacher education program.

BIO 509 Ichthyology 4(3-3)

Anatomy, taxonomy, physiology, natural history, and ecology of fishes with laboratory emphasis on fishes of the Great Lakes region. Prerequisites: BIO 218.

BIO 510 Fisheries Biology 4(3-2)

Analysis of fish populations, management of fisheries resources, and other problems related to freshwater fisheries. Prerequisites: BIO 218.

BIO 511 Aquatic Insects 3(1-4)

Natural history and systematic of freshwater insects. Prerequisites: BIO 218 or graduate standing.

BIO 515 Ornithology 4(2-4)

An introduction to avian biology emphasizing evolution, systematics, and the annual cycle. Identification, song, and general ecology are studied through field trips and laboratory work. Prerequisites: BIO 218 or graduate standing.

BIO 518 Animal Behavior 3(2-3)

Behavior in invertebrate and vertebrate organisms related to genetics, morphology, and the ecology of animal populations. Prerequisites: BIO 218 or graduate standing.

BIO 519 Invertebrate Systematics and Ecology 4(2-4)

A review of the evolution and ecology of invertebrates with emphasis on the identification, collection and conservation of organisms in the Great Lakes region. Prerequisites: BIO 218 or Graduate Student Standing. Recommended: BIO 340.

BIO 523 Fresh Water Algae 4(2-4)

Taxonomy, morphology, and ecology including analysis and collection methods.

BIO 524 Molecular Biology 3(3-0)

Molecular nature of genes and recombinant DNA techniques, explored through the analysis of experimental data. Prerequisites: BIO 326, CHM 346; or graduate standing. Recommended: CHM 521, 522.

BIO 525 Plant Ecology 4(2-4)

A study of plants emphasizing physical and biotic interrelationships, and factors which govern their distribution. Field work stressed. Prerequisites: BIO 340; a plant identification course highly recommended.

BIO 526 Limnology 3(3-0)

Examination of physical and chemical properties of lake ecosystems, diversity of aquatic organisms, cycling of essential nutrients, and flow of energy through freshwater food webs. Prerequisites: BIO 340. Recommended: CHM 120 or CHM 131 and 132 or CHM 161.

BIO 527 Limnological Methods 2(0-4)

A quantitative examination of the physical, chemical and biological aspects of lake ecosystems. Pre/Co-Requisite: BIO 526.

BIO 534 Endocrinology 3(3-0)

Hormones, their synthesis, secretion, and their mode of action. Prerequisites: BIO 392 or graduate standing.

BIO 536 Histology 3(2-3)

A study of the principal cells and tissues of humans. Prerequisites: BIO 218 and 392; or graduate standing.

BIO 537 Immunology 3(3-0)

A description of the biological and biochemical mechanisms of the immune response. Emphasis will be placed on adaptive immunity activation, immunobiology, and immune system dysfunction. Prerequisites: BIO 324, 326, 392; CHM 342 or 346; or graduate standing. Recommended: CHM 425 or 521.

BIO 539 Virology 3(3-0)

Basic principles of viral structure and replication. Provides a detailed survey of viruses, including emergent viral pathogens. Explores viral evolution, anti-viral drugs and vaccines. Prerequisites: BIO 324, 326 or Graduate Status in the Biology Department.

BIO 540 Mammalogy 4(3-3)

Survey of evolution, taxonomy, behavioral ecology, physiological ecology, conservation biology, and management as these relate to Class Mammalia. Prerequisites: BIO 218 or graduate status.

BIO 541 Wildlife Biology and Management 4(2-4)

Presents the basic ecological principles and the varied techniques utilized in managing the wildlife resource. Prerequisite: Permission of instructor.

BIO 544 Developmental Biology 4(3-3)

Patterns and cellular/molecular mechanisms of embryonic development, emphasizing animals. Prerequisites: CHM 132 or 161. Pre/Co- requisites: BIO 324, 326.

BIO 545 Molecular Genetics 3(3-0)

Genetic approach to fundamental biological problems. Covers genetic techniques and modern molecular methods, including recombinant DNA technology and functional genomics in model systems and humans. Prerequisites: BIO 324, 326 or CHM 345. Recommended: CHM 346.

BIO 546 Molecular Genetics Laboratory 1(0-3)

Laboratory course, to accompany BIO 545, explores genetic techniques and modern molecular methods, including recombinant DNA technology and functional genomics in model systems. Pre/Co-requisites: BIO 545.

BIO 549 Herpetology 3(2-3)

Survey of extant amphibians and reptiles from standpoint of morphology, behavior, physiology, evolution, and ecology. Local collecting field trips required. Prerequisites: BIO 218 or graduate standing.

BIO 550 Transmission Electron Microscope Technique 4(1-6)

Biological specimen preparation and examination. Photographic aspects of electron micrograph production.

BIO 552 Scanning Electron Microscope Technique 4(2-3)

Principles, practices and techniques of SEM, includes methods of specimen preparation and instruction in generating electron micrographs. Prerequisites: Graduate standing or BIO 330.

BIO 553 Confocal Microscopy 3(2-3)


BIO 554 Advanced Electron Microscopy 3(1-4)

Routine maintenance, alignment and optimization of a TEM and an SEM for high resolution micrographs, as well as advanced techniques in specimen preparation. Prerequisites: BIO 550, BIO 552.
BIO 556 Biological EDS Analysis 3(1-4)
Techniques for elemental analysis of biological specimens using an SEM with an energy dispersive spectrometer (EDS). Includes specimen preparation and operation of an EDS system. Prerequisite: BIO 552.

BIO 557 Dendrology 4(2-4)
The biology of woody plants including: identification, anatomy, physiology, systematics, and ecology. Students will learn Michigan native trees and shrubs and select cultivars. Prerequisites: BIO 203.

BIO 558 Natural Resources Management 2(Spec)
Research and management of fishes, wildlife, forests, and watershed through field trips and presentations by specialists. Prerequisites: Graduate status or BIO 340.

BIO 559 Field Botany 3(2-3)
The collection, identification, and preparation of herbarium specimens from the local flora. Prerequisites: BIO 203.

BIO 560 Avian Ecology 3(2-3)
Relationships among behavior, community organization and ecology of birds are examined through investigative field work. Prerequisites: BIO 340 or graduate standing. Recommended: BIO 515.

BIO 561 Wetland Ecology and Management 3(3-0)
The study of wetland ecosystem structure and function, Chemical, physical, and biological processes will be put into the context of conservation, management, and restoration. Prerequisite: BIO 340.

BIO 562 Plant Systematics and Evolution 4(3-3)
In-depth study, covering important topics in plant identification, evolution and systematics. Prerequisites: BIO 203 or graduate standing.

BIO 570 Cellular Dynamics 3(3-0)
A course that explores advanced topics in cell biology focusing on landmark discoveries and experimental techniques using the primary literature. Prerequisites: BIO 324, 326; or Biology graduate status.

BIO 571 Cellular Dynamics Laboratory 1(0-3)
An advanced laboratory course that explores experimental techniques in cell biology research. This is a laboratory course that accompanies BIO 570. Prerequisites: BIO 324, 326; or Biology graduate status. Co-requisite: BIO 570.

BIO 575 Applied Bioinformatics 4(3-3)
Application of bioinformatics techniques. Topics include: gene finding, pairwise and multiple sequence alignments of DNA and protein sequences, and the use of GenBank and BLAST. Prerequisite: BIO 326 or graduate standing.

BIO 576 Animal Cell Culture 4(1-6)
Practical aspects of animal cell culture, involving media preparation, aseptic manipulation of cell culture, cell maintenance, and cell storage. Recommended: BIO 392.

BIO 580 Medical Microbiology 4(2-4)
Focuses on relationships between humans and pathogenic microbes. Covers major groups of medically important microorganisms, pathological consequences of infection, diagnostic procedures, and clinical case problem-solving. Prerequisites: BIO 208; BIO 392 or HSC 215; or graduate standing.

BIO 585 Conservation Medicine 3(3-0)
Examines various diseases and their importance to wildlife, domestic animals, and humans. Epidemiology and ecology of diseases are discussed within the framework of conservation medicine. Prerequisites: BIO 208, 340; or graduate standing.

BIO 590 Cardiovascular Physiology 3(3-0)
Basic principles of normal mammalian cardiovascular physiology. Prerequisites: BIO 392 or graduate standing.

BIO 591 Neurophysiology 3(3-0)
Principles of nervous system function: cytology, electrophysiology, ion channels, membrane potentials, neurochemistry, synaptic function and its modification, sensory physiology. Prerequisites: BIO 392.

BIO 597 Special Topics In Biology 1-9(Spec)
Topics of special interest that are not normally included in existing courses. Specific topics and instructor’s prerequisites will be announced in Course Search and Registration. Prerequisite: See Course Search and Registration. For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

BIO 600 Biological Research Design and Analysis 3(2-2)

BIO 610 Biological Colloquium 1-9(Spec)

BIO 619 Continuing Registration for Final Research Project 1(1-0)

BIO 620 Biology Practicum 1-9(Spec)

BIO 626 Topics in Genetics 1-3(Spec)

BIO 629 Topics in Eukaryotic Molecular Genetics 1-4(Spec)

BIO 630 Art of Scientific Communication 2(2-2)

BIO 635 Toxicology 3(3-0)

BIO 637 Topics in Immunology 1-3(Spec)

BIO 650 Population Ecology 3(4-2)

BIO 651 Topics in Ethology 1-3(Spec)

BIO 652 Behavioral Ecology 3(2-3)

BIO 653 Stream Ecology 3(2-3)

BIO 656 Fish Ecology 2(2-0)

Course Descriptions approved for University Program are in italics.

BIO 657 Fisheries Management 2(2-0)

BIO 658 Zooplankton Biology 3(2-3)

BIO 670 Concepts in Biological Areas for Educators 3(2-2)

BIO 680 Conservation Biology 3(3-0)

BIO 685 Phylogenetics 3(3-0)

BIO 690 Conservation Genetics 4(3-3)

BIO 691 Landscape Ecology 4(3-3)

BIO 692 Topics in Physiology 1-4(Spec)

BIO 695 Graduate Internship in Biology 1-6(Spec)

BIO 730 Seminar 1(1-0)

BIO 790 Research in Biology 2-4(Spec)

BIO 798 Thesis 1-9(Spec)

BIS - Business Information Systems

See the Department of Business Information Systems for more information.

BIS 100 Introduction to Business 3(3-0)
Introduction to principles and problems of interrelated functions of business. Business organizations as social structures and their interaction with the domestic and global environments.

BIS 101 Essential Business Communications Skills 3(3-0)
A focus on effective business communication skills and their impact on career success. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisite: BUS 100.

BIS 104 Computers and Society 3(3-0)
Fundamental concepts and applications of computers. Impact of the computer on human events and social institutions. Control, predictions, and implications of future computer developments. Does not count on CPS major or minor. Identical to CPS 100. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format.

BIS 118QR Introduction to Quantitative Reasoning for Business 3(2-1)
Fundamental concepts of Quantitative Reasoning. Students will analyze quantitative information in graphs, tables, charts, maps, and other media. Students will apply these concepts to real-world business settings. Quantitative Reasoning.

BIS 147 Introduction to SAP Enterprise Software 1(1-0)
Concepts and fundamental framework of business enterprise software are introduced using SAP. The SAP technical structure is examined. Prerequisites: BIS 104.

BIS 190 Entrepreneurship for Small Business 3(3-0)
Basic entrepreneurship information. For non-business students only. Prerequisite: Permission of instructor.

BIS 197 Special Studies in Business Information Systems 1-12(Spec)
Selected topics not normally included in existing courses, with current topics listed in Course Search and Registration. Repeatable up to 12 credits with different topics. Prerequisites: See Course Search and Registration.

BIS 221 Computers In Business I 3(3-0)
A focus on business communication skills necessary for success in the global business environment. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisite: BUS 100 or BIS 104.

BIS 228 Applications Development 3(3-0)
Introduction to business applications development using rapid development programming tools.

BIS 255 Information Systems 3(3-0)
An introduction to the development and use of Information Systems (IS) in business, including the use of software applications to solve business problems. Prerequisites: GPA of 2.5 or higher; ACC 250; BLR 235; ECO 204; one of MTH 132 or 217 or STA 282 or 382; Co-requisite: ACC 255. For signed Accounting Majors, BLR 235 and ECO 204 may be co-requisites.

BIS 260 Global Business Communication 3(3-0)
A focus on business communication skills necessary for success in the global business environment. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisite: BUS 100 or BIS 104.

BIS 297 Special Studies In Business Information Systems 1-12(Spec)
Selected topics not normally included in existing courses, with current topics listed in Course Search and Registration. Repeatable up to 12 credits with different topics. Prerequisites: See Course Search and Registration.

BIS 300 Digital Entrepreneurship 3(3-0)
The use and management of information systems (IS) by entrepreneurs around the world, creating value from information systems and exploring digital entrepreneurship. Identical to ENT 300. Credit may not be earned in more than one of these courses. Prerequisite: 56 semester hours completed.

BIS 308 Visual Business Communication and Digital Media 3(3-0)
Evaluating and designing visuals and digital media in a business setting. Work of students contributes to a professional portfolio. This course may be offered in an online or hybrid format. Recommended: BIS 104 or CPS 100 or BIS 221 or BIS 255.
BIS 315 Social Media and Emerging Technologies in Business 3(3-0)
Design, implementation, and analysis of social media strategies using emerging technologies in business settings. Prerequisite: BUS 100 or BIS 100.

BIS 321 Computers in Business II 3(3-0)
The advanced study of computer information systems, including transaction processing, management information systems, and systems design and analysis. Prerequisites: BIS 221 or BIS 255; 56 semester hours completed and admission to Professional Business Studies or listed on a signed major or minor with approval from the Office of Undergraduate Business Studies.

BIS 324 Seminar in Applications Development 3(3-0)
Development of business applications using selected programming languages and tools. Prerequisites: BIS 228; 56 hours completed and either admission to Professional Business Studies or listed on a signed major or minor.

BIS 327 Web Site Development 3(3-0)
Development of Internet and Intranet web sites to support business functions including doing business on the Internet with emphasis on issues involved in designing and deploying this information technology by organizations. Prerequisite: 56 semester hours completed or listed on a signed major or minor.

BIS 328 Web Applications Development 3(3-0)
Development of web-based mobile applications to support business functions. Prerequisites: BIS 228, 327; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

BIS 342 Intercultural Business Communication Across 1-9(Spec)
Experiential learning based course incorporating study abroad. Students learn and demonstrate tools and knowledge necessary for interacting in a professional setting within a foreign culture. Prerequisites: May be offered in an online or hybrid format. Prerequisites: ENG 101 or BIS 101 or COM 101 or 195 (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition, Option 2).

BIS 347 Enterprise Software in Business Using SAP Software 3(3-0)
The concepts, fundamentals, technical structure, and implementation issues of enterprise software are introduced using SAP as a tool. Prerequisites: BIS 104 or CPS 100 or BIS 221 or BIS 255.

BIS 357 ABAP Programming Fundamentals 3(3-0)
Application of ABAP programming language to implement business processes using the SAP system as an example of contemporary enterprise software. Prerequisites: BIS 228, 347; 56 semester hours completed and either admission to Professional Business Studies or listed on a signed major or minor.

BIS 360 Applied Business Communication 3(3-0)
Expands understanding of the communication process as students apply business communication principles related to oral, written, and employment communication in a real-world setting. Prerequisite: 56 semester hours completed. Recommended: ENG 201.

BIS 380 Enterprise Architecture 3(3-0)
An in-depth study of infrastructure issues relevant to the design, selection, implementation, and management of an organization's enterprise architecture. Prerequisites: BIS 221 or 255; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

BIS 392 Writing Your Business Plan 3(3-0)
A written business plan will be developed describing a potential business or venture, industry trends, marketing strategies, management plans, financial analysis, and how to put it all together in order to present the plan to a banker. Prerequisites: 56 semester hours earned and be in the semester of completion of the Entrepreneurship minor.

BIS 397 Special Studies in Business Information Systems 1-12(Spec)
Selected topics not normally included in existing courses, with current topics listed in Course Search and Registration. Repeatable up to 12 credits with different topics. Prerequisites: See Course Search and Registration.

BIS 401 Cooperative Occupational Experience 3-6(Spec)
Office work experience under the supervision of the department and participating employer. Includes scheduled classroom instruction. Prerequisites: BIS 280 or concurrent enrollment; 56 hours completed; either admission to Professional Business Studies or listed on signed major or minor.

BIS 420 Systems Analysis and Design 3(3-0)
Fundamentals of business systems analysis and design; study of present system, developing system alternatives. Prerequisites: BIS 221 or BIS 255; 56 semester hours completed and admission to Professional Business Studies or listed on a signed major or minor or with approval from the Office of Undergraduate Business Studies.

BIS 422 Database Management Systems 3(3-0)
Study of database concepts with an emphasis on their application to business systems. Prerequisites: BIS 228; 56 semester hours completed; either admission to Professional Business Studies or listed on signed major or minor.

BIS 423 Decision Support Systems & Business Intelligence 3(3-0)
Analysis and design of information systems permitting the computer to become an integral part of the managerial decision-making process. Prerequisites: 56 semester hours completed; either admission to Professional Business Studies or listed on a signed major or minor.

BIS 424 E-Business Applications Development 3(3-0)
Study of the development and use of e-business applications. Special emphasis will be given to current development technologies and tools. Prerequisites: BIS 228, 327, 422; 56 semester hours completed; either admission to Professional Business Studies or listed on signed major or minor.

BIS 425 Information Systems Development Project 3(3-0)
Project course requiring students to develop and implement a computer-based information system. Prerequisites: BIS 420, BIS 422; 86 semester hours completed; either admission to Professional Business Studies or listed on signed major or minor.

BIS 445 Small Business Organization and Operation 3(3-0)
Practical study of location, layout, organization, buying, and merchandising as applied to marketing education. Project method will be used. Prerequisites: MGT 312; MKT 300 or MKT 220; 56 semester hours completed; either admission to Professional Business Studies or listed on a signed major or minor.

BIS 456 Business Analytics Using SAP Software 3(3-0)
A study of business intelligence solutions using SAP software. Tools covered include SAP BusinessObjects, Tableau, and others. Prerequisite: BIS 424; this course may be offered in an online or hybrid format. Prerequisites: BIS 247 or BUS 301.

BIS 458 Configuration and Implementation using SAP Software 3(3-0)
Concepts and application configuring SAP solution deployment in business organizations. SAP functions matched with business requirements are configured using the implementation guide. Prerequisites: BIS 221 or BIS 301; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

BIS 470 Business Practices, Communication, and Collaboration 3(3-0)
Using effective business practices and collaboration in preparing and delivering appropriate business reports and communication as a logical approach to solving business problems. Prerequisite: BIS 360.

BIS 490 Internship in Information Systems 3(Spec)
A full-time or part-time experience (400+ hours) over one or more semesters in an information systems environment. A written report (Internship Portfolio) is required. Prerequisites: Permission of department chairperson; 56 semester hours completed; either admission to Professional Business Studies or listed on a signed major or minor.

BIS 491 Independent Study 1-3(Spec)
Student-initiated study guided by a faculty member. Prerequisites: 86 semester hours completed; minimum GPA of 3.0; permission of department chairperson; either admission to Professional Business Studies or listed on signed major or minor.

BIS 492 Practicum in Small Business 3(Spec)
Provides the student an opportunity to analyze the accounting, finance, marketing, management, and production systems of an ongoing small business. Credit equal to ACC/FIN/MGT/MKT 492. Credit may not be earned in more than one of these courses. Prerequisites: permission of instructor; 56 semester hours completed; either admission to Professional Business Studies or listed on a signed major or minor.

BIS 495 Integrated Capstone: Applied Business Practices 3(3-0)
An integrative capstone course focusing on business practices in a real-world setting. Students work in small teams to generate positive outcomes for a fictitious organization. Prerequisites: BIS 470.

BIS 497 Special Studies in Business Information Systems 1-12(Spec)
Selected topics not normally included in existing courses, with current topics listed in Course Search and Registration. Repeatable up to 12 credits with different topics. Prerequisites: See Course Search and Registration.

BIS 502 Network Fundamentals 3(3-0)
Basic concepts of network communication using the Open Systems Interconnection (OSI) model, as well as media, access protocols, routing, reliability, and network services. This course maybe be offered in an online or hybrid format. Prerequisite: Graduate student status or 86 hours undergraduate credits completed.

BIS 510 Network & Security Systems Fundamentals 3(3-0)
Developing effective and accurately analyze security risks related to networks and related systems, including issues of authenticity, confidentiality, integrity, and availability. This course may be offered in an online or hybrid format. Prerequisites: BIS 380 or BIS 565.

BIS 520 Teaching & Training at the Post-Secondary Level 3(Spec)
A full-time or part-time experience (400+ hours) over one or more semesters in an information systems environment. A written report (Internship Portfolio) is required. Prerequisites: Permission of department chairperson; 56 semester hours completed; either admission to Professional Business Studies or listed on a signed major or minor.

BIS 521 Governance, Risk, & Compliance in Cybersecurity 3(Spec)
Investigating external and internal threats that compromise data and digitalized intellectual property. Implementing effective policies for mitigating risks and security and remediation measures in organizations. This course may be offered in an online or hybrid format. Prerequisite: BIS 510.
BIS 523 Cybercrime Forensics 3(3-0)
Introduction to cybercrime and computer forensics. Exploring laws regulating electronic evidence along with establishing the basis for gathering biological digital evidence and artifacts. This course may be offered in an online or hybrid format. Prerequisite: BIS 510.

BIS 525 Managing Security & Privacy in the Cloud 3(3-0)
Exploring cloud computing concepts, frameworks, and security/privacy issues related to cloud deployments. Evaluating relevant security approaches, security architecture, and cloud security policy and requirements. This course may be offered in an online or hybrid format. Prerequisite: BIS 510.

BIS 530 Cybersecurity, Systems, and Network Certification 3(3-0)
Building upon the ten security domains, uses the essential preparation tools and techniques to become a Certified Information Systems Security Professional. This course may be offered in an online or hybrid format. Prerequisite: BIS 510.

BIS 597 Special Studies in Business Information Systems 1-12(Spec)
Selected topics not normally included in existing courses, with current topics listed in Course Search and Registration. Repeatable up to 12 credits with different topics. This course may be offered in an online or hybrid format. Prerequisites: See Course Search and Registration.

BIS 599 Integration of Business Processes Using SAP Software 4(Spec)
Examination of how ERP fundamental business processes interact using SAP software. A course supported by SAP software taken at CMU or permission of BIS Chairperson.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

BIS 601 Information Systems 3(3-0)

BIS 619 Continuing Registration for Final Research Project 1(1-0)

BIS 625 Research in Information Systems 3(3-0)

BIS 627 Web Site Development 3(3-0)

BIS 628 Application Development 3(3-0)

BIS 630 Systems Analysis and Design 3(3-0)

BIS 632 Business Network Systems Management 3(3-0)

BIS 633 Business Intelligence/Analytics 3(3-0)

BIS 634 Seminar in Information Systems Issues 3(0)

BIS 635 Business Systems Applications 3(3-0)

BIS 638 Database Management for Business Systems 3(3-0)

BIS 647 Enterprise Systems for Management Using SAP Software 3(3-0)

BIS 656 Business Intelligence Using SAP BW 3(3-0)

BIS 657 ABAP Programming for ES 3(3-0)

BIS 658 Enterprise System Configuration Using SAP Software 3(3-0)

BIS 660 Administrative Business Communication 3(3-0)

BIS 667 Electronic Business Systems for e-Commerce 3(3-0)

BIS 688 Directed Work/Observation/Internship 1-6(Spec)

BIS 697 Special Studies in Business Information Systems 1-12(Spec)

BIS 791 Independent Research 3(Spec)

BIS 798 Thesis 1-6(Spec)

BLR - Business Law and Regulation

See the Department of Finance and Law for more information.

BLR 197 Special Topics 1-6(Spec)
Selected topics of interest to students which are not normally included in existing courses. Specific topic will be listed on the student's transcript.

BLR 202 Legal Environment of Business 3(3-0)
Introduction to the concept and use of law as a social institution. Open to both nonbusiness and business students. BLR 202 may not be applied toward the University Program requirements if a student is earning the Bachelor of Science in Business Administration degree. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Global Cultures)

BLR 222 The Search for Racial Justice through Law 3(3-0)
Chronicles and evaluates the use of law by racial minorities in America in the search for justice. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

BLR 235 Business Law 3(3-0)
Introduction to law applicable to business transactions; case studies in torts, property, contracts, sales, agency, business organizations, employment law. May be offered as Writing Intensive. Prerequisites: BLR 101, Tier 1 Continuing Admission to Professional Business Studies.

BLR 297 Special Topics 1-6(Spec)
Selected topics of interest to students which are not normally included in existing courses. Specific topic will be listed on the student's transcript.

BLR 302 Law of Agreements 3(3-0)
Topics include common law contracts, sales, commercial paper, secured transactions. Special topics or issues upon the economic setting and development of the legal doctrines. Prerequisites: BLR 202 or BLR 235; 56 semester hours.

BLR 310 Alternative Dispute Resolution in Business 3(3-0)
Techniques of negotiation, mediation, and arbitration as compared to litigation are examined and illustrated with student participation. Legal research and writing skills emphasized. Prerequisite: BLR 202 or 235.

BLR 325 Women and the Law 3(3-0)
Examines perceptions and behavior toward women and their struggle for change so as to achieve gender equality through use of the law. Identical to WST 325. Credit may not be earned in more than one of these courses.

BLR 327 Legal Research 3(3-0)
Focuses on the importance of legal research as well as teaching methods of finding, analyzing, and evaluating the law. Open to both business and nonbusiness students. Prerequisites: BLR 202 or BLR 235; 56 semester hours.

BLR 328 Employment Law 3(3-0)
A survey of the regulation of employment and personnel function, nationally and internationally. Prerequisites: BLR 202 or BLR 235; 56 semester hours.

BLR 330 Real Estate Law 3(3-0)
The fundamentals of the law relating to land ownership and use, including possessory and non-possessory rights and interests in land. May be offered as Writing Intensive. Prerequisites: BLR 202 or 235.

BLR 337 Sports Law 3(3-0)
This course identifies and applies various areas of law to the sport business including discrimination in sport with respect to race, gender, and disability. Prerequisites: BLR 202 or 235.

BLR 350 Law and Economics 3(3-0)
Theory and application of analytical tools of law and of economics in an integrative approach to both subjects. Identical to ECO 350. Credit may not be earned in more than one of these courses. Prerequisites: BLR 202 or 235, ECO 202 or 203.

BLR 360 Construction Law 3(3-0)
Law and legal issues most commonly encountered in the construction industry studied primarily through case studies. Common construction contract clauses reviewed. May be offered as Writing Intensive. Prerequisites: 56 semester hours.

BLR 365 Native American Justice Through Law 3(3-0)
Examines the legal and historical foundations and current application of the law with respect to the Native American's struggle for recognition and autonomy. Prerequisite: 56 semester hours.

BLR 390 Law of Enterprise Organization 3(3-0)
Survey of laws regulating the creation, operation, and termination of agencies, partnerships, and corporations. Prerequisites: BLR 202 or BLR 235; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

BLR 397 Special Topics in Business 1-6(Spec)
Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the student's transcript. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

BLR 410 Regulatory Law 3(3-0)
Survey of major regulatory programs affecting business decision-making, including antitrust, securities regulation, labor-employment law, environmental-land use regulation, utility regulation, administrative law. Prerequisites: BLR 202 or BLR 235; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

BLR 420 Legal Aspects of New Ventures 3(3-0)
Introduces entrepreneurs to legal requirements for forming a business. Identical to ENT 420. Credit may not be earned in more than one of these courses. Prerequisites: 86 semester hours completed; signed major or minor in Entrepreneurship.

BLR 445 Personal Estate Planning 3(3-0)
Fundamentals of estate planning for personal use and professional training. Professional topics target applications in trust administration, accounting, and personal financial planning. Identical to FIN 445. Credit may not be earned in more than one of these courses. Prerequisites: FIN 347; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

BLR 491 Independent Studies 1-6(Spec)
Directed reading or research on an approved topic. Open to seniors in good academic standing. Prerequisites: prior permission of instructor and department chairperson; 86 semester hours.

BLR 521 Environmental Law and Policy 3(3-0)
Survey of environmental laws and policies that affect business decision making, stressing macroenvironmental considerations and major Michigan environmental issues. Prerequisites: BLR 202 or BLR 235 or ENV 101; completion of 86 hours; admission to Professional Business Studies or listed on a signed major or minor or permission of MBA director or MBE advisor.

BLR 565 The International Legal Environment of Business 3(3-0)
Examines global legal environments that affect business and international business relationships. Prerequisites: BLR 202 or BLR 235; 86 semester hours completed and admission to Professional Business Studies or listed on a signed major or minor or graduate status.

Course Descriptions approved for University Program are in italics.
BUS - Business

See the College of Business Administration for more information.

BUS 100 Essential Business Skills 3(3-0)
Introduction to business. Its concepts, its disciplines, and essential business skills including decision making, team work, and oral and written communication. This course is approved for offering in a distance learning format.

BUS 300OR Applied Business Statistics 3(3-0)
Applications of statistical analysis to support business decision making. Covers collection of business data, analysis of business datasets, and presentation of results. Quantitative Reasoning. Prerequisites: STA 282 or 382; 26 hours completed.

BUS 301 Integrated Business Experience 3(2-1)
Enterprise Resource Planning (ERP) applications emphasizing functional integration of business activities. An integrated business simulation experience links management decisions across organizations. This course may be offered in an online or hybrid format. Prerequisites: Tier 2 Admission to Professional Business Studies; ACC 255, BIS 255, MGT 258. Prerequisites/Co-requisites: FIN 302, MGT/MKT 301, MKT 304.

BUS 501 Project Management Fundamentals 3(3-0)
Covers foundational terms, concepts, and processes of project management, providing an opportunity to apply key elements of project management to a simulated project. This course may be offered in an online or hybrid format. Prerequisite: Graduate student status or 86 hours undergraduate credit completed.

BUS 503 Business Process Improvement 3(3-0)
This course applies principles and practices of Lean Six Sigma (LSS) and other operations improvements that have been demonstrated to bring value to business. LSS builds on a business statistics foundation. Prerequisites: STA 282 or 382; 56 hours completed.

BUS 505 Application of Project Management Principles 3(3-0)
Building on fundamentals, students analyze and apply project organization, staffing, and behavioral and qualitative skills in a simulated project to develop core project management competencies. This course may be offered in an online or hybrid format. Prerequisite: BUS 501.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

BUS 619 Voice of the Customer 3(3-0)
BUS 629 Corporate Governance & Social Responsibility 3(3-0)
BUS 639 Process Improvement 3(3-0)
BUS 691 Management Consulting: Client Relations 2(2-0)
BUS 692 Management Consulting: Diagnosis 2(2-0)
BUS 693 Management Consulting: Measurement 2(2-0)
BUS 694 Management Consulting: Implementation 2(2-0)
BUS 697 Special Topics in Business 1-12(Spec)
BUS 698 Integration of Business Processes for Management using SAP Software 4(Spec)

CDO - Communication Disorders

See the Department of Communication Disorders for more information.

CDO 130 Normal Speech and Language Acquisition 3(3-0)
Investigation of normal acquisition of language and speech in children as the core social dimension of human life, approached from several scientifically validated perspectives. (University Program Group III-A: Behavioral Sciences)

CDO 230 Introduction to Speech, Language, and Hearing Disorders 3(3-0)
Aspects of speech-language pathology and audiology for elementary, secondary, and special education teachers, parents, and allied professionals in the management of speech, language, and hearing disorders. This course is approved for offering in a distance learning format.

CDO 278 Normal Speech Development/Descriptive Phonetics 3(3-0)
Study of speech sound acquisition emphasizing broad and narrow transcription of normal and disordered American English speech sound production using the International Phonetic Alphabet.

CDO 297 Special Topics in Communication Disorders 1-12(Spec)
Contains subject matter not included in courses currently listed in the Bulletin.

CDO 330 Language Development 3(3-0)
Study of language development in normally developing children from birth through adulthood; oral language sample analysis; language characteristics in disordered language learners. This course is approved for offering in a distance learning format.

CDO 331 Introduction to Audiology 3(3-0)
Anatomy and basic psychophysics of hearing; pathologies causing hearing loss; quantitative measurements of hearing; practice in testing. This course is approved for offering in a distance learning format.

CDO 335 The Anatomy and Physiology of Speech and Hearing 3(3-0)
Anatomical structures and functions for speech and hearing.

CDO 338 Introduction to Speech Sound Disorders 3(3-0)
The study of formal and informal assessment of speech sound system disorders, associated factors and intervention approaches applied to various etiologies. Prerequisites: Admission to the CDO Major; CDO 278, 335. Co-requisites: CDO 340, 431.

CDO 390 Child Language Assessment and Intervention 3(3-0)
Formal/informal assessment of language, cognition, and communication functioning in infants through school-aged children not developing normal language parameters; intervention approaches for deficits in language. Prerequisites: Admission to the CDO Major; CDO 330. Co-requisites: CDO 338; CDO 431.

CDO 402 Diagnostics in Communication Disorders 2(2-0)
Exploration of the diagnostic process in speech and language including formal and informal assessment methods and tools and strategies for analysis/interpretation of diagnostic findings. Prerequisites: CDO 230, CDO 278, CDO 330, CDO 335, CDO 338, CDO 340.

CDO 417 Introduction to Adult Communication Disorders 3(3-0)
Overviews neuroanatomical bases of acquired adult communication disorders and reviews nature and impact of such disorders including aphasia, dementia, apraxia, dysarthria, and traumatic brain injury. Prerequisites: Admission to the CDO major; CDO 335, 340. Co-requisites: CDO 439, 494.

CDO 431 Audiologic Rehabilitation 3(3-0)
Habilitation and rehabilitative issues/approaches for persons with hearing loss, including hearing aids, cochlear implants, speechreading, conversational strategies, auditory training, speech/language intervention, psychosocial adjustment, and education. Prerequisite: CDO 331.

CDO 438 Language Disorders in Special Education Populations 3(3-0)
To assist special education, elementary, and secondary teachers in the management of language disorders in mentally impaired, emotionally impaired, learning disabled, and autistic populations. Prerequisite: one course in the area of CDO.

CDO 439 Diagnostic and Intervention Methods in Speech Language Pathology 3(3-0)
Classroom lecture integrating the clinical interaction process with clinical principles and techniques. Prerequisites: Admission to the CDO major; CDO 278, 338, 340. Co-requisites: CDO 494, 417.

CDO 463 Introduction to Acoustic Phonetics 3(3-0)

CDO 490 Independent Study 1-4(Spec)
Student-initiated study guided by faculty member or faculty committee. Prerequisites: an overall B average, permission of advisor and instructor (completion of form).

CDO 494 Mentored Practicum in Communication Disorders 4(2-4)
Supervised clinical assignment with an experienced student mentor encompassing up to 4 hours per week; with required weekly lectures regarding clinical procedures, issues, and cases. CR/NC only. Prerequisites: Admission to the CDO major; CDO 338, 340. Co-requisites: CDO 417, 439.

CDO 495 Clinical Experience: Communication Disorders 3-6(Spec)
Enables students in communication disorders to carry out directed clinical practicum. Weekly discussion of clinical problems and cases. Prerequisites: Admission to the CDO major; CDO 278, 338, 340, 402. Prerequisites: at least 3.0 in CDO major courses, and a grade point of at least 3.0 in CDO major courses, and a grade point of at least 3.0 in CDO major courses, and a grade point of at least 3.0 in CDO major courses.

CDO 525 Research Design in Communication Disorders 3(3-0)
Study of critical evaluation of scientific literature. Research in evidence-based practice related to clinical decision-making. Exploration of quantitative, qualitative and mixed-methods in research design procedures. Prerequisites: Admission to the CDO major; CDO 494, 439; a statistics course; or admission to the graduate program in Speech-Language Pathology or Audiology. Co-requisites: For Undergraduates Only: CDO 463, 551.

CDO 537 Special Topics in Communication Disorders 1-9(Spec)
Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours.

CDO 545 Communication Disorders and Aging 3(3-0)
Theoretical foundations of communication disorders and aging. Functional communication approaches to: gerontological audiology and speech-language pathology; a continuum of care incorporating prevention and intervention. This course is approved for offering in a distance learning format.
CDO 550 Communication Assessment and Intervention in Children with Autism Spectrum Disorders 3(3-0)
This course examines procedures for assessment of communication, language, and speech of students with autism spectrum disorders, and reviews strategies for enhancing communication and language. Prerequisites: SPE 530; senior or graduate status.

CDO 551 Autism Spectrum Disorders: A Clinical Focus 3(3-0)
This course examines clinical procedures and evidence-based practice for assessment and intervention of communication skills of clients with autism spectrum disorders. Prerequisites: Signed CDO major, 30 hours CDO coursework; or admitted SLP or AuD.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

CDO 619 Continuing Registration for Final Research Project 1(1-0)

CDO 632 Counseling Issues in Communication Disorders 3(3-0)

CDO 637 Special Topics in Communication Disorders 3(Spec)

CDO 638 Seminar: Adult and Pediatric Swallowing and Feeding Disorders 3(3-0)

CDO 639 Hypopharyngeal Visualization 2(1-2)

CDO 640 Cadaveric Anatomy for Communication 3(2-2)

CDO 643 Disorders of Hearing 3(3-0)

CDO 702 Infant-Toddler Communication: Assessment and Intervention 2(2-0)

CDO 704 Language Disorders in Preschool Children 3(3-0)

CDO 705 Cognitive-Communicative Disorders of Traumatic Brain Injury 3(3-0)

CDO 708 Language Disorders in School-Age Children 3(3-0)

CDO 711 Craniofacial Disorders 2(2-0)

CDO 712 Physiological Phonetics 2(2-0)

CDO 713 Voice/Resonance Disorders/Laryngectomy Rehabilitation 3(3-0)

CDO 714 Motor Speech Disorders 3(3-0)

CDO 717 Aphasia 3(3-0)

CDO 720 Anatomy and Physiology Underlying Neuro-otology 3(3-0)

CDO 721 Audiological Aspects of Pharmacology and Microbiology 3(3-0)

CDO 722 Cognitive-Communicative Disorders of Dementia 3(3-0)

CDO 730 Experimental Studies in Communication Disorders 3(3-0)

CDO 731 Diagnostic Audiology 3(3-0)

CDO 734 Applied Speech Science 3(3-0)

CDO 735 Augmentative and Alternative Communication 3(3-0)

CDO 736 Speech Sound Disorders in Children 3(3-0)

CDO 739 Stuttering 3(3-0)

CDO 740 Neuroanatomy 3(3-0)

CDO 741 Special Topics in Audiology 1-9(Spec)

CDO 744 Occupational and Environmental Hearing Conservation 3(3-0)

CDO 749 Clinical Practicum in Speech-Language Pathology or Audiology 1-15(Spec)

CDO 750 Advanced Hearing Science 3(3-0)

CDO 752 Amplification for the Hearing Impaired 3(3-0)

CDO 754 Pediatric Audiology 3(3-0)

CDO 756 Early Identification and Management of Hearing Loss 3(3-0)

CDO 757 Geriatric Audiology 3(3-0)

CDO 759 Introduction to Clinical Practicum: Audiology 2-6(Spec)

CDO 762 Advanced Amplification for the Hearing-Impaired 3(3-0)

CDO 763 Audiological Rehabilitation Considerations in Education 3(3-0)

CDO 764 Audiolonic Rehabilitation for Adults 3(3-0)

CDO 765 Cochlear Implants and Other Implantable Technologies 3(3-0)

CDO 769 Intermediate Clinical Practicum: Audiology 3-9(Spec)

CDO 771 Advanced Auditory Assessment 3(3-0)

CDO 772 Advanced Technology & Practice Aspects of Amplification 3(3-0)

CDO 773 Advanced Amplification Fitting Strategies 3(2-2)

CDO 778 Electrophysiological Techniques in Audiology 3(2-2)

CDO 782 Evaluation and Management of Vestibular Disorders 3(3-0)

CDO 783 Advanced Electrophysiological and Vestibular Techniques in Audiology 3(3-0)

CDO 785 Auditory Processing Disorders 3(3-0)

CDO 790 Advanced Independent Study 1-9(Spec)

CDO 795 Internship 3-6(Spec)

CDO 798 Thesis 1-6(Spec)

CDO 849 Advanced Clinical Practicum: Audiology 4-12(Spec)

CDO 853 Psychosocial Aspects of Hearing Loss 3(3-0)

CDO 863 Professional Issues in the Practice of Audiology 3(3-0)

CDO 898 Doctoral Project 1-12(Spec)

CDO 995 Clinical Externship 5-23(Spec)

Course Descriptions approved for University Program are in italics.
CGL - Cultural and Global Studies
For more information, contact the College of Humanities and Social & Behavioral Sciences.

CGL 496 Seminar in Cultural and Global Studies 3(3-0)
An interdisciplinary capstone seminar in Cultural and Global Studies integrating themes in current research and practice, focusing on global movements, cultural institutions, and current issues. May be offered as Writing Intensive. Prerequisites: ANT 170. Minors must have completed at least 12 hours of additional course work for the program. Majors must have completed at least 21 hours of additional course work.

CHM - Chemistry
See the Department of Chemistry and Biochemistry for more information.

CHM 101 Armchair Chemistry 3(2-2)
An introductory course in chemistry for science majors. Not open to the general public or students who have taken a course in elementary chemistry. Prerequisites: CHM 120.

CHM 111 The Interaction of Chemistry and Society 3(3-0)
The impact of chemistry on our environment. Emphasis on water, air, and environmental pollution. Recommended for elementary school teachers. No credit toward chemistry or biochemistry major or minor. No previous chemistry required.

CHM 112 Chemistry and Society Laboratory 1(0-3)
Introduction to the science of chemistry, using equivalent portions of laboratory experiments and directed discussions. No credit toward chemistry or biochemistry major or minor. Satisfies University Program laboratory requirement. Pre/Co-requisite: CHM 111 or CHM 120. (University Program Group II-B: Quantitative and Mathematical Sciences)

CHM 120 Survey of Chemistry 4(4-0)
Elementary concepts in chemistry. For students on curricula needing minimal chemical background or students who need additional preparation for CHM 131. This course provides suitable preparation for the successful completion of the laboratory courses, CHM 112 or CHM 127. Cannot be counted on a Chemistry/Biochemistry major or minor. This course may be offered in an online or hybrid format. Recommended: High school Algebra II or MTH 105. (University Program Group II-B: Quantitative and Mathematical Science)

CHM 127 Introductory Chemistry Laboratory 1(0-2)
Elementary laboratory experiments which parallel CHM 111 and 120 lectures and investigations. The impact of chemistry on our environment. Emphasis on water, air, and environmental pollution. Recommended for elementary/middle school education majors. No credit toward chemistry or biochemistry major or minor. Satisfies University Program Group II laboratory requirement. Pre/Co-requisite: CHM 120. (University Program Group II-B: Quantitative and Mathematical Science)

CHM 211QR Quantitative Analysis 4(3-5)
An introduction to the science of chemistry, using equivalent portions of laboratory experiments and directed discussions. No credit toward chemistry or biochemistry major or minor. Satisfies University Program laboratory requirement. Pre/Co-requisite: CHM 111 or CHM 120. (University Program Group II-B: Quantitative and Mathematical Sciences)

CHM 250 Water as Life, Death, and Power 3(2-2)
An interdisciplinary capstone seminar in Cultural and Global Studies integrating themes in current research and practice, focusing on global movements, cultural institutions, and current issues. May be offered as Writing Intensive. Prerequisites: ANT 170. Minors must have completed at least 12 hours of additional course work for the program. Majors must have completed at least 21 hours of additional course work.

CHM 161 Principles of Chemistry 5(4-4)
Intensive introduction to chemical principles for the well-prepared, motivated student. Satisfies University Program Group II laboratory requirements. Recommended: High school Algebra II or MTH 107 (preferably with a B or better); high school chemistry or CHM 120.

CHM 171 Perspectives in Chemistry 1(6-Spec)
Selected topics in chemistry for the nonscientist. May be repeated for a total of 6 credits when the content is not a duplication of previous topics. No credit toward major or minor.

CHM 172 Introduction to the Techniques of Research 1-3(Spec)
Introduction to laboratory techniques used in research for beginning studies in chemistry and for participants in other summer research programs at the beginning level.

CHM 211QR Quantitative Analysis 4(3-5)
Analysis and interpretation of quantitative chemical information from volumetric, electrochemical, spectroscopic, and chromatographic techniques. This course may be offered in an online/hybrid format. Prerequisite: CHM 132 or 161. Recommended: MTH 107. Quantitative Reasoning.

CHM 250 Water as Life, Death, and Power 3(2-2)
Problems of water access, water-borne pathogens, water treatment, and power relationships in global cultures from anthropology, biology, and chemistry perspectives, via lecture and seminar. Identical to BIO 250 and ANT 250. Credit may not be earned in more than one of these courses. No credit on biology or chemistry major or minor. Recommended: ANT 171 or 170; BIO 101 or 110; CHM 111, 120, or 131.

CHM 265QR Chemical Physical Science for Elementary Teachers 2(0-6)
Chemical science with an emphasis on chemical concepts for elementary teachers. Chemical reactivity and atomic structure principles are explored along with methods of K-8 instruction. May not be applied to Chemistry or Biochemistry majors or minor. Quantitative Reasoning. Prerequisite: MTH 152 with a B- or better.

CHM 331 Inorganic Chemistry 3(2-4)
Descriptive chemistry of selected main group and transition elements, coordination complexes, structures and properties of solids. Synthesis and characterization of inorganic compounds. Prerequisites: CHM 132 or CHM 161.

CHM 342 Survey of Organic Chemistry 4(3-3)
Elementary course covering the field of organic chemistry. Course meets the needs for entrance to some professional schools. No credit toward chemistry major or minor. Prerequisites: One of: CHM 120, 127, or CHM 132 or CHM 161.

CHM 345 Organic Chemistry I 3(3-0)
Overview of common organic reactions. Reactions of alkanes, alkenes, alkynes, and alkyl halides, Ultraviolet/Visible, Infrared, and Nuclear Magnetic Resonance spectroscopy, mass spectrometry. Prerequisite: CHM 132 or 161.

CHM 346 Organic Chemistry II 3(3-0)
Continuation of CHM 345. Overview of common organic reactions of aromatic compounds, alcohols, carbonyl compounds, and amines. Prerequisite: CHM 345.

CHM 349 Organic Chemistry Laboratory 2(0-6)
Laboratory techniques in organic chemistry; methods of synthesis, separation, purification, structure determination - spectroscopic methods; utilization of electronic database (Scifinder) searching techniques. Prerequisite: CHM 345, Pre/Co-requisite: CHM 346.

CHM 351 Physical Chemistry I 3(3-0)
Fundamental principles of physical chemistry based on a quantitative approach. Classical thermodynamics of gases and solutions, chemical equilibria, and electrochemistry. Prerequisites: CHM 211, PHY 146; Corequisite: MTH 233.

CHM 352 Physical Chemistry II 3(3-0)
Fundamental principles of chemistry based on a quantitative approach. Quantum mechanics, spectroscopy, and kinetics. Prerequisite: CHM 351.

CHM 355 Biophysical Chemistry 3(3-0)
Application of physical theories to the understanding of energetics, kinetics, and spectra of biochemically relevant structures and reactions. Prerequisites: CHM 211; MTH 133; Pre/Co-Requisite: PHY 131 or 146.

CHM 357 Physical Chemistry Laboratory 2(0-4)
Laboratory techniques with advanced data analysis and error propagation in thermochemistry, phase equilibria, kinetics, spectroscopy, surface effects and computational chemistry. Pre/Co-Requisite: CHM 352.

CHM 371 Special Topics in Chemistry 1(6-Spec)
Special topics in chemistry presented at an undergraduate level. Course may be taken for credit more than once as long as course content is not duplicated; total credit not to exceed six hours. Prerequisites: CHM 132 or 161.

CHM 421 Survey of Biochemistry 3(3-0)
Introductory one-semester Biochemistry course. Intended for students in allied health fields, dietetics, and some biology programs. No credit toward Chemistry/Biochemistry major, Biology/Biomedical Sciences major or Chemistry minor. Prerequisites: CHM 342 or 346.

CHM 425 Introductory Biochemistry 3(3-0)
Structure, function, and metabolism of proteins, carbohydrates, lipids, and nucleic acids. Prerequisites: CHM 346.
Course Descriptions approved for University Program are in italics.

CHM 491 Undergraduate Research 1-3(Spec)
A program of independent research for chemistry majors and minors and others in related fields which is the capstone experience for chemistry and biochemistry majors. Faculty advisor must be selected prior to enrollment. Prerequisite: permission of instructor.

CHM 505 Teaching Chemistry and Physics in Secondary Schools 3(3-0)
Exposes pre-service secondary chemistry and physics teachers to theory and practice of teaching in secondary schools, design of instructional units, and safety practices. Must be completed prior to student teaching, identical to PHY 505. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: Students must be accepted in the Teacher Education Program and have Junior or Senior standing. Graduate students must be enrolled in a teaching masters program. Pre/Co-Requisite: CHM 535, PHY 505.

CHM 509 Environmental Chemistry for Science Teachers 4(3-3)
For science teachers and prospective teachers of grades 4-12. Emphasis on environmental chemistry concepts and laboratory/field activity development for use in middle and high school. This course may be offered in an online or hybrid format. Prerequisites: 8 credit hours of college level Chemistry; 6 credit hours of education coursework; Senior or Graduate standing; admission to Teacher Education Program or valid teaching certificate. Recommended: College level Organic Chemistry and a Teaching Methods course.

CHM 511 Advanced Analytical Chemistry 4(1-4)
Spectroscopic, electrochemical, and other techniques as applied to analytical chemistry. Prerequisites: CHM 211. Recommended: CHM 352 or 355.

CHM 513 Chemistry of Natural Waters 3(1-6)
Fundamentals of laboratory and field analysis of water and their application to environmental studies. Prerequisites: CHM 211.

CHM 521 Fundamentals of Biochemistry 3(3-0)
Structure, function, and metabolism of proteins, carbohydrates, lipids, and nucleic acids. Prerequisites: CHM 346.

CHM 522 Intermediate Biochemistry 3(3-0)
Continuation of CHM 521. Material covered will include in-depth exploration of metabolism of biomacromolecules and biochemical processes requiring their utilization. Prerequisites: CHM 521.

CHM 527 Biochemistry Laboratory 1(0-4)
Isolation, characterization, and analysis of proteins, carbohydrates, lipids, vitamins, and nucleic acids using chromatographic, electrophoretic, and spectroscopic techniques. Prerequisite: CHM 211, CHM 349. Pre/Co-Requisite: CHM 425 or CHM 521.

CHM 528 Bioanalytical Techniques Laboratory 2(1-3)
Laboratory analysis of biochemical materials using volumetric, electroanalytical, spectroscopic, and chromatographic techniques. Prerequisites: CHM 425 or 521, Pre/Co-Requisite: CHM 527.

CHM 531 Advanced Inorganic Chemistry 3(3-0)
Molecular structure and symmetry, acid-base and oxidation-reduction chemistry, reactivity of inorganic compounds, from a thermodynamic, acid-base, catalysis, solid state and organometallic compounds. Prerequisites: CHM 331. Recommended: CHM 352.

CHM 541 Intermediate Organic Chemistry 3(3-0)
Mechanisms of organic reactions, emphasizing methods by which these are determined, including kinetics, principles of bonding, stereochemistry, and nuclear magnetic resonance in depth. Prerequisites: CHM 346. Recommended: CHM 351 or 355.

CHM 547 Advanced Chemistry Laboratory 2(1-3)
Advanced synthesis, separation, and structure determination of organic and inorganic compounds. Prerequisite: CHM 349, 331.

CHM 551 Materials Chemistry: Inorganic and Nanomaterials 3(3-0)
This course will provide a detailed survey of metals, semiconductors, ceramics, and nanomaterials, with a special emphasis on structure-property relationships. Students cannot receive credit for both SAM 500 and CHM 551. Prerequisites: CHM 331 or graduate status. Recommended: CHM 346.

CHM 555 Advanced Physical Chemistry 3(3-0)
Advanced development and application of physical theories using a statistical mechanistic approach to understanding of molecular energetics and kinetics. Prerequisites: CHM 352 or 355; MTH 233.

CHM 561 Polymer Chemistry 3(3-0)
An introductory course on polymer synthesis, polymer theory, and basic characterization techniques. Prerequisites: CHM 346, 352.

CHM 562 Industrial Chemistry 3(3-0)
Treatment of the following three primary areas: 1) actual chemistry of industry, 2) the technology of industry, and 3) the industrial chemical environment. Prerequisite: CHM 346.

CHM 564 Polymer Technology 3(3-0)
A consideration of the major groups of technologically important polymers, including raw material base, the important methods of manufacture, properties, processing, compounding, uses and testing. Prerequisite: CHM 506.

CHM 566 Introduction to Biomaterials 3(3-0)
Introduction to biomaterials science, including materials properties, interactions between materials and living tissues, and materials and biological tissues. Must be completed prior to student teaching, identical to CHM 346 or graduate standing. Recommended: CHM 352 or 355, CHM 425 or 521, CHM 561, BIO 110.

CHM 567 Polymer Science Laboratory 2(1-3)
Treatment of laboratory techniques common to polymer science: synthesis of polymers and the characterization of these materials by spectroscopic, thermal, and mechanical methods. Prerequisites: CHM 349. Corequisite: CHM 561.

CHM 568 Pharmaceutical Chemistry 3(3-0)
Interdisciplinary introduction to the science of drug formulation, delivery and efficacy. Prerequisites: CHM 346 or 342 or graduate standing. Recommended: CHM 425 or 521, CHM 355, BIO 392.

CHM 571 Topics in Chemistry 1-9(Spec)
Special topics in chemistry presented at an advanced undergraduate - beginning graduate level. Course may be taken for credit more than once; total credit not to exceed nine hours. Prerequisites: See Course Search and Registration.

CHM 572 Selected Topics in Chemistry 1-9(Spec)
Special topics in chemistry, presented in short course or workshop format. Course may be taken for credit more than once; total credit not to exceed nine hours. CR/NC only. Prerequisites: Senior level undergraduate or graduate standing in chemistry or biochemistry programs.

CHM 583 Seminar in Chemistry 1-5(Spec)
Presentation of technical material and training in the use of chemical literature. Prerequisites: 25 credit hours of chemistry courses or graduate standing.

CHM 601 Chemistry Seminar Presentations 2(2-0)

CHM 602 Scientific Writing in Chemistry 1(1-0)

CHM 611 Advanced Topics in Analytical Chemistry 1-9(Spec)

CHM 612 Techniques in Nuclear Magnetic Resonance Spectroscopy 3(2-3)

CHM 619 Continuing Registration for Final Research Project 1(1-0)

CHM 621 Advanced Biochemistry 3(3-0)

CHM 624 Advanced Topics in Biochemistry 1-9(Spec)

CHM 631 Coordination Chemistry 3(3-0)

CHM 632 Advanced Topics in Inorganic Chemistry 1-9(Spec)

CHM 641 Advanced Topics in Organic Chemistry 1-9(Spec)

CHM 643 Physical Organic Chemistry 3(3-0)

CHM 644 Organic Reactions and Synthesis 3(3-0)

CHM 651 Advanced Topics in Physical Chemistry 1-9(Spec)

CHM 655 Quantum and Computational Chemistry 3(3-0)

CHM 663 Polymer Synthesis 3(3-0)

CHM 665 Advanced Topics in Polymer Chemistry 1-9(Spec)

CHM 667 Polymer Additives 3(3-0)

CHM 669 Polymer Processing 3(3-0)

CHM 781 Chemistry Teaching Practicum 2(Spec)

CHM 791 Directed Research 1-6(Spec)

CHM 793 Chemistry Teaching Internship 1-9(Spec)

CHM 794 Experimentation in the Teaching of Chemistry 1-6(Spec)

CHM 798 Thesis 1-6(Spec)

CHN - Chinese

See the Department of Foreign Languages, Literatures, and Cultures for more information.

CHN 101 Elementary Chinese I 4(4-0)
Designed for students who have had no Chinese. Basic Mandarin Chinese language skills and introduction to the cultures of China. Students who have had one year of Chinese study may not enroll without permission of instructor. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

CHN 102 Elementary Chinese II 4(4-0)
COM - Communication

See the Department of Communication and Dramatic Arts for more information.

COM 100 Communication and Society 1(1-0)
This course introduces students to a variety of communication concepts and career possibilities in addition to the role communication plays in contemporary society.

COM 101 Introduction to Communication 3(3-0)
General education approach to theory and process of human communication with practicum opportunities. Does not count toward a major or minor in Communication and Dramatic Arts.

COM 103 Oral Communication in the Online Environment 3(3-0)
This course addresses the implications of communicating in virtual worlds. Concepts to be addressed include: identity construction, online relationships, collaborative work environments, and ethics.

COM 251 Foundations of Communication Theory 3(3-0)
This course explores the role of spoken symbolic interaction, focusing mainly on the psychological and sociological aspects of interpersonal communication and public address.

COM 255 Special Topics in Communication 1-6(Spec)
Varied topics of current interest; course is repeatable for up to 6 hours when content previously studied is not duplicated.

COM 264 Organizational Communication 3(3-0)
Current communication theories and practices in the modern formal organization. Especially recommended for students on preprofessional curricula.

COM 267 Introduction to Debate 3(3-0)
Prepares students without experience to gain understanding of theory and practice of debate. Recommended for prelaw, prebusiness, urban government students, and teachers.

COM 269 Practicum in Debate/Forensics 2-8(Spec)
Opportunities for intensive research on topics in debate and various forms of forensics for students in the University forensics program. Prerequisite: permission of instructor.

COM 301 Survey of Research in Communication 3(3-0)
An introduction to the research and its methodologies in speech communication. Students will read and write about primary research in the discipline. May be offered as Writing Intensive. Prerequisite: a grade of C (2.0) or better in COM 251.

COM 352 Communication and Social Influence 3(3-0)
This course explores how language and public speeches shape decisions, create political support, define presidential leadership, repair public images, and celebrate community values.

COM 353 Small Group Communication 3(3-0)
Theories and application of the methods surrounding small-group interaction processes.

COM 357 Public Speaking 3(3-0)
Theories and techniques for creating public speeches. Designed for students who seek to improve public-speaking skills.

COM 361 Interpersonal Communication 3(3-0)
Assists the student in understanding the interpersonal communication process and in analyzing barriers to its effectiveness.

COM 362 Gender Communication 3(3-0)
Focuses on the role of communication in the creation and perpetuation of gender stereotypes. Emphasis on personal growth and awareness in a variety of contexts. Identical to WST 362. Credit may not be earned in more than one of these courses.

COM 363 Principles and Types of Interviewing 3(3-0)
Study of establishing and achieving communication goals in a variety of formalized interviewing contexts. Emphasis given to question development and interviewing skills.

COM 365 Persuasion and Social Influence 3(3-0)
Application of theories and principles underlying attitude change. This course is approved for offering in a distance learning format.

COM 367 Nonverbal Communication 3(3-0)
Examines the non-language dimensions of communication in several social settings: dyadic, small group, crosscultural, and subcultural.

COM 369 Health Communication 3(3-0)
This course will assist students in increasing their understanding of and the skills of communication as applied to the health professions.

COM 401 Capstone in Communication 3(3-0)
Designed to help students integrate their communication knowledge and demonstrate higher-order thinking, decision-making, and interaction skills by applying them to professional and real-world situations. Students must achieve a C or better to count COM 401 toward the COM major and satisfy requirements for graduation. Prerequisites: COM 251, 301 with a grade of C or better; COM 353, 357, 361; 9 additional hours toward the COM major; senior status.

COM 461 Communication in Leadership 3(3-0)
Theory and practice in leadership skills with special emphasis on oral communication. Examines leadership in both voluntary and non-voluntary organizations. Prerequisites: Grades of C (2.0) or better in COM 251, COM 301; or LDR 200 and junior standing. This course is approved for offering in a distance learning format.

COM 464 Communication Internship 1-6(Spec)
Designed to apply a variety of classroom concepts and skills within a supervised organizational setting. Prerequisite: prior written approval of COM internship coordinator. Limited to junior and senior COM majors and minors.

COM 468 Advanced Interpersonal Communication 3(3-0)
Survey of interpersonal communication theories. Focuses on current issues and concepts in the area of interpersonal relationships. Prerequisites: COM 251, COM 301, with a grade of C (2.0) or better; and COM 361.

COM 490 Independent Study 1-4(Spec)
Student-initiated study guided by faculty member. Prerequisites: overall B average; signed Independent Study Form with faculty member.

COM 492 Speech Methods in Secondary School 4(4-0)
Philosophy, principles, and methods. Curricular and co-curricular responsibilities of secondary teachers (grades 7-12). Students also will work as a teaching assistant in COM 101. Prerequisites: Student must be accepted into the Teacher Education program and must be taken the spring semester prior to student teaching at the secondary level in Speech.

COM 493 Field Experience in Speech Education 1(Spec)
Individual one-week assignment in a public school of on-site observation and participation under the supervision of the department and a secondary speech communication teacher. CR/NC only. Prerequisites: permission of instructor; EDU 107. Corequisite: COM 492.

COM 495 Communication Facilitation 2-6(Spec)
Guided experience as a teaching assistant in a communication class. Students will have the opportunity to develop interpersonal, small group, public speaking, and supervisory communication skills in an applied setting. Prerequisite: Interview and contract with instructor.

COM 523 Dark Side of Communication 3(3-0)
This course examines negative communication behaviors such as expression of jealousy, gossip and rumor, embarrassment, criticism, deception, coercion, and obsession. Prerequisites: COM 251, 301 with grades of C or better; junior standing.

COM 527 Political Communication 3(3-0)
This course considers the influence of political communication in American society. The course addresses the connections between political discourse, the American people, and the media. Prerequisites: COM 251, 301 with a grade of C or better; junior standing.

COM 555 Special Topics in Communication 3-9(Spec)
Current topics of each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours. Prerequisites: grades of C (2.0) or better in COM 251, 301.

COM 558 Historical Backgrounds of Communication Theory 3(3-0)
Theories of rhetoric and communication from the classical, medieval, and Renaissance periods studied in a comprehensive historical philosophical survey. Prerequisite: COM 251, 301 with grades of C or better.

COM 560 Communication and Social/Organizational Change 3(3-0)
Research and methods of communicating changes into existing social systems. This course is approved for offering in a distance learning format. Prerequisites: grades of C (2.0) or better in COM 251, COM 301.

COM 561 Communication in Conflict Management 3(3-0)
Theory, research, and practical application of managing conflicts through communication. Focuses on conflict between people in the contexts of family, group, and organizations. Prerequisites: COM 251, 301 with grades of C or better.

COM 562 Family Communication 3(3-0)
The study of verbal and nonverbal communication processes, patterns, and problems in the family. The uniqueness of the family system as a communication context is emphasized. Prerequisites: COM 251, 301 with grades of C or better.

COM 563 Health Communication Campaigns 3(3-0)
Research and methods of communicating health messages for education and disease prevention. This course may be offered in an online or hybrid format. Prerequisites: COM 251, 301 each with a grade of C or better; or graduate standing.

COM 565 Communication Training in Organizations 3(3-0)
This course examines the role of training in improving communication in organizations. The course discusses the design, development, implementation, and evaluation of organizational communication training. Prerequisites: COM 251, 301 with grades of C or better; COM 264.
Course Descriptions approved for University Program are in italics. 

COM 569 Communication in the Classroom 3(3-0) 
Integrates research from several fields describing communication patterns between students and teacher-to-student within school settings. Designed for students interested in teaching or administration. Prerequisite: completion of 56 hours of undergraduate credit.

COM 591 Oral Communication with Children 3(3-0) 
Study and practice of adult/child communication patterns. Course will include State objectives for speaking/listening. Designed for teachers and people working with children.

COM 594 Directing Speech Activities 3(3-0) 
Designed to provide the student or the professional teacher with the skills needed to coach and administer forensic activities on the high school level. Prerequisites: COM 251, 301 with grades of C or better.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

COM 600 Introduction to Research and Graduate Study in Communication 3(3-0)

COM 601 Research Design in Communication 3(3-0)

COM 602 Qualitative Research Methods 3(3-0)

COM 603 Professional Seminar in Communication 1-3(Spec)

COM 619 Continuing Registration for Final Research Project 1(1-0)

COM 660 Special Topics: Graduate Seminar 3-9(Spec)

COM 661 Contemporary Communication Theory 3(3-0)

COM 662 Seminar in Persuasion 3(3-0)

COM 664 Seminar in Organizational Communication 3(3-0)

COM 665 Seminar in Communication and Negotiation in Employee Relations 3(3-0)

COM 667 Seminar in Intercultural Communication 3(3-0)

COM 668 Seminar in Interpersonal Communication 3(3-0)

COM 750 Seminar in Rhetorical Criticism 3(3-0)

COM 764 Communication Internship 1-6(Spec)

COM 790 Advanced Independent Study 1-4(Spec)

COM 795 Seminar: Teaching College Communication 3(2-2)

COM 798 Thesis 1-6(Spec)

CPS - Computer Science

See the Department of Computer Science for more information.

CPS 100 Computers and Society 3(3-0) 
Fundamental concepts and applications of computers. Impact of the computer on human events and social institutions. Control, predictions, and implications of future computer developments. Identical to BIS 104. Credit may not be earned in more than one of these courses. Does not count on CPS major or minor. This course is approved for offering in a distance learning format.

CPS 105 Word Processing Concepts 1(1-0) 
Introduction to word processing and desktop publishing concepts. Features common to most word processing software. Evaluation of software packages. Identical to BIS 105. Credit may not be earned in more than one of these courses. Recommended: BIS 112.

CPS 106 Spreadsheet Concepts 1(1-0) 
Introduction to spreadsheets and report generation. Features common to most spreadsheets. Evaluation of software packages. Recommended: Familiarity with personal computer use. This course is approved for offering in a distance learning format.

CPS 107 Database Concepts 1(1-0) 
Introduction to database and report generation. Features common to most database products. Evaluation of software packages. Identical to BIS 107. Credit may not be earned in more than one of these courses. Recommended: Familiarity with microcomputer use.

CPS 108 Computer Graphics Concepts 1(1-0) 
Introduction to computer graphics. Use of one or more graphics programs. Concepts needed for design and generation of computer images. Evaluation of software. Identical to BIS 108. Credit may not be earned in more than one of these courses. Recommended: Familiarity with microcomputer use.

CPS 109 Computer Communication Concepts 1(1-0) 
Introduction to concepts needed for computer communications. Local and wide area networks, electronic mail, file transfer, electronic bulletin boards, conferences. Use of several communication programs. Identical to BIS 111. Credit may not be earned in more than one of these courses. Recommended: Familiarity with use of a computer.

CPS 110 Information Technology Programming I 3(3-0) 
Introduction to operating a computer and writing computer programs. First programming course in the information technology major/minor. Language used is Visual Basic.

CPS 150 FORTRAN Programming 3(3-0) 
Algorithms, programs, and computers. Computer solution of several numerical and nonnumerical problems. Does not count toward a major or minor in CPS. Prerequisites: One of: MTH 106, 107, 130, 132.

CPS 165 Modern Website Design 3(3-0) 

CPS 170 Operating Systems Fundamentals 1-3(Spec) 
Intensive introduction to using one or more operating systems (VMS, CMS, UNIX, etc.). Operating systems presented will be announced in Course Search and Registration.

CPS 180 Principles of Computer Programming 3(3-0) 
Algorithm development and problem solving methods. Design and development of computer programs in a structured programming language. Pre/Co-requisite: One of MTH 130, 132, 133, 217. (University Program Group II-B: Quantitative and Mathematical Sciences)

CPS 181 Introduction to Data Structures 3(3-0) 
Continuation of CPS 180. Dynamic storage allocation, recursion, abstract data types (such as stacks, queues, linked lists, and binary trees), sorting and searching. Prerequisites: CPS 180; Corequisite: MTH 175.

CPS 196 Special Topics in Computer Science 1-6(Spec) 
Selected topics in computer science not otherwise available in a course regularly offered. Topic(s) are listed in Course Search and Registration. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Pre/Co-requisites: See Course Search and Registration. Determined by the specific topics presented.

CPS 210 Assembly Language and Computer Organization 3(3-0) 
Topics in assembly language concepts, introduction to computer organization, machine representation of information, models of computer architecture, instruction and addressing fundamentals, control structures. Pre/co-requisite: CPS 181. Recommended: One of: MTH 132 or MTH 216.

CPS 240 Object-Oriented Programming, Analysis and Design 3(3-0) 
Detailed coverage of the object-oriented programming paradigm and concepts, design patterns, distributed objects, graphical user interfaces and event handling. Software design in teams. Prerequisite: CPS 181 with a C or better.

CPS 280 Alternative Programming Languages 1-6(Spec) 
Intensive study of one or more selected programming languages. Languages presented will be announced in Course Search and Registration. Students may not earn credit for a language in which they already have credit in one of the primary programming sequences. Prerequisite: CPS 181 or ITC 111.

CPS 282 Introduction to Multimedia Design 3(3-0) 
Introduction to multimedia concepts. Survey of multimedia applications in fields such as education, business and entertainment. Introduction to multimedia authoring tools. Hands-on projects.

CPS 296 Special Topics in Computer Science 1-6(Spec) 
Selected topics in computer science not otherwise available in a course regularly offered. Topic(s) are listed in Course Search and Registration. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Pre/Co-requisites: See Course Search and Registration. Determined by the specific topics presented.

CPS 340 Advanced Data Structures and Algorithms 3(3-0) 
Theory and advanced techniques for representation of information; lists, trees, graphs; analysis of algorithms; sorting and hashing techniques. Prerequisites: CPS 181, CPS 210 or EGR 396; MTH 223 or 232.

CPS 360 Computer Design and Architecture 3(3-0) 
Theory of and advanced techniques for representation of information; lists, trees, graphs; analysis of algorithms; sorting and hashing techniques. Prerequisites: CPS 181, CPS 210 or EGR 396; MTH 223 or 232.

CPS 370 File Manipulation Techniques 3(3-0) 
Creation and manipulation of program and data files, scientific and industrial applications of file-oriented systems, prominent computer languages having file processing capabilities. Prerequisite: CPS 181.

CPS 380 Microcomputer Architecture 3(3-0) 
Concepts and operation of microprocessors and microcomputers to include input/output, mass storage, memory, and small read-only memory operating systems. Prerequisites: CPS 210, CPS 360.

CPS 395 Internship in Computer Science 1-9(Spec) 
Supervised work experience in computer science. Only 3 hours may count toward the major. Any additional hours must provide a significantly different educational experience. CR/NC only. Prerequisites: CPS 210 or ITC 291; permission of department chairperson.

CPS 396 Special Topics in Computer Science 1-6(Spec) 
Selected topics in computer science not otherwise available in a course regularly offered. Topic(s) are listed in Course Search and Registration. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Pre/Co-requisites: See Course Search and Registration. Determined by the specific topics presented.

CPS 410 Software Engineering 3(3-0) 
Software specification, design methods, programming and testing techniques and CASE tools. Developing large software systems in a group environment using modern software engineering techniques. Prerequisites: CPS 340.
CPS 420 Web Application Development - Web Services SOA 3(3-0)
Web-based applications focusing on server-side processing, data persistence, use of web services, Service Oriented Architecture, remote procedure calls, asynchronous messaging, transactions and security considerations. Prerequisite: CPS 340 or ITC 320. Recommended ITC 341.

CPS 450 Programming Language Concepts 3(3-0)
Formal definition of programming languages including specification of syntax and semantics. Prerequisite: CPS 340.

CPS 468 Systems Programming and Software 3(3-0)
Systems concepts--file system, shell, system calls; software such as assemblers, linkers, loaders; systems programming in a modern programming environment such as UNIX. Prerequisites: CPS 340.

CPS 470 Introduction to Operating Systems 3(3-0)
Operating systems as resource manager. Study of the strategies used to manage system resources such as devices, files, memory, processors. Prerequisites: CPS 340, 360.

CPS 480 Introduction to Artificial Intelligence 3(3-0)
The intelligent behavior of machines and the control strategies, knowledge representation, game playing, expert systems, machine learning and perception; applications. Prerequisites: CPS 340.

CPS 482 Advanced Multimedia Design 3(3-0)
Interactive multimedia projects will be designed using advanced authoring tools. Issues concerning representation, storage, compression, transmission, and manipulation of various multimedia components will be discussed. Prerequisites: CPS 282.

CPS 496 Special Topics in Computer Science 1-6(Spec)
Selected topics in computer science not otherwise available in a course regularly offered. Topic(s) are listed in Course Search and Registration. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Pre/Co-requisites: See Course Search and Registration. Determined by the specific topics presented.

CPS 497 Independent Study 1-6(Spec)
Open to students with permission of instructor. May be taken for credit more than once, total credit not to exceed 6 hours.

CPS 501 Survey of Computer Science 3(3-0)
Computer organization, low and high level computer languages, various computer applications. Does not count toward CPS major or minor or the M.S. in Computer Science except the Teaching Minor in Computer Science on the secondary education curriculum. This course is approved for offering in a distance learning format.

CPS 510 Software Systems Engineering 3(3-0)
Covers requirements analysis and techniques to develop a system from those requirements. Credit will not be given for both CPS 410 and CPS 510. Does not count toward the M.S. in Computer Science. Prerequisites: CPS 340, MTH 175. This course is approved for offering in a distance learning format.

CPS 520 Software Architecture 3(3-0)
Study of software architecture styles and quality attributes; achieving software quality; designing, documenting, and restructuring software architecture evaluation; tools for architectural design. Prerequisite: CPS 410 or graduate status.

CPS 530 Simulation of Discrete Event Systems 3(3-0)
Development of computer models for discrete systems using computer simulation languages. Performance evaluation of computer, industrial and engineering systems. Prerequisite: CPS 181; STA 282 or STA 382.

CPS 531 Distributed Programming 3(3-0)
Study of design and implementation issues in distributed programming, including event model, client/server, distributed data processing, remote objects, network services, and security. Prerequisite: CPS 340 or admission into CPS graduate program. Recommended: CPS 280/3.

CPS 541 Databases 3(3-0)
Physical and logical organizations of databases, database management systems, project involving a student-designed database. Prerequisites: CPS 340 and CPS 370; or ITC 441 and permission of instructor.

CPS 542 Analysis and Design of Algorithms 3(3-0)
Models of computation. Analysis of algorithms including computing time and space requirements. Efficient algorithm design techniques. Introduction to parallel algorithms. Prerequisite: CPS 340.

CPS 550 Digital Computer Design 3(3-0)
Design of basic components of a general purpose computer such as CPU, memory, I/O systems. Instruction set design. CISC versus RISC debate. Parallel Architectures. Prerequisite: CPS 360.

CPS 565 Computer Networks I 3(3-0)

CPS 575 Computer Graphics 3(3-0)
Representation of line drawings, handwritings, and three-dimensional surfaces in computers. A plotter and graphics terminal are used. Prerequisites: CPS 181 or MTH 175.

CPS 576 Digital Image Processing 3(3-0)

CPS 585 Applied Data Engineering 3(3-0)
Study of data engineering concepts and techniques, including data preparation, storage and warehousing, analysis and mining, security, visualization, and applications. Use of data analysis tools. Prerequisites: STA 382.

CPS 596 Special Topics In Computer Science 1-6(Spec)
Selected topics in computer science not otherwise available in a course regularly offered. Topic(s) are listed in Course Search and Registration. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Prerequisite: See Course Search and Registration. Determined by the specific topics presented.

CPS 597 Independent Study 1-6(Spec)
Open to students with permission of instructor. May be taken for credit more than once, total credit not to exceed 6 hours.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

CPS 603 Computer Information Systems 3(3-0)

CPS 610 Advanced Software Design and Development 3(3-0)

CPS 611 Software Verification and Validation 3(3-0)

CPS 612 Software Project Management 3(3-0)

CPS 613 Specification of Software Systems 3(3-0)

CPS 614 Principles and Applications of Software 3(3-0)

CPS 615 Software Generation and Maintenance 3(3-0)

CPS 616 Continuing Registration for Final Research Project 1(1-0)

CPS 641 Advanced Topics in Databases 3(3-0)

CPS 650 Theory and Practice of Compiler Construction 3(3-0)

CPS 665 Computer Networks II 3(3-0)

CPS 670 Operating Systems 3(3-0)

CPS 675 Advanced Topics in Computer Graphics 3(3-0)

CPS 680 Artificial Intelligence 3(3-0)

CPS 685 Pattern Recognition and Data Mining 3(3-0)

CPS 691 Graduate Seminar 3(3-0)

CPS 695 Professional Field Experience 1-6(Spec)

CPS 696 Special Topics in Computer Science 1-6(Spec)

CPS 697 Independent Study 1-6(Spec)

CPS 710 Software Engineering Metrics, Models and Management 3(3-0)

CPS 798 Thesis 1-6(Spec)

DAN - Dance

See the Department of Communication and Dramatic Arts for more information.

DAN 104 Latin Dance I 1(1-0)
Introduction to the social dances of Central and South America and other Latin cultures. Emphasis on basic steps; rhythmic patterning and development of style.

DAN 105 Social Dance I 1(Spec)
Introduction to social dance forms and styles.

DAN 106 Country Line Dance I 1(Spec)
Introduction to the basic elements and skills used in the performance of country line dance.

DAN 107 Swing Dance I 1(Spec)
Introduction to the basic steps and styles of swing dance.

DAN 125 Introduction to Alexander Technique 2(1-1)
This class is a body awareness and movement class based on the Alexander Technique.

DAN 126 Hip Hop 2(1-2)
Introduction to hip hop forms and styles.

DAN 127 Ballroom Dance 1(1-0)
An introduction to the various techniques and styles of ballroom dance.

DAN 133 Modern I 2(1-2)
An introduction to and beginning instruction in the various techniques and styles of modern dance.

DAN 136 Ballet Technique I 2(Spec)
To familiarize the beginning student with the basics of ballet.

DAN 137 Tap I 2(1-2)
An introductory dance course of basic tap instruction.

DAN 138 Jazz I 2(Spec)
An introductory course in jazz dance that builds from traditional jazz into the contemporary.

DAN 175 Dance Appreciation 3(3-0)
An introduction to dance designed to develop an aesthetic awareness, appreciation, and understanding of the art of dance.

DAN 230 Movement-Rhythmic Form and Structure 3(3-0)
An in-depth study of the dynamic functions of movement and dance.

DAN 231 Fundamental Concepts 2(2-0)
An introduction to the basic analysis of locomotor and nonlocomotor movement. Emphasis on skills, posture, and physical development of the individual.
**DAN - ECO**

**DAN 232** *Dance Composition I (2-0)*
Introduction to the basic elements of dance choreography through the use of creative problem solving. Prerequisite: DAN 133.

**DAN 233** *Dance Technique II (2-1-2)*
Intermediate technique. Prerequisite: DAN 133.

**DAN 236** *Ballet II (2-2)*
To afford students the opportunity to use skills learned in Ballet I to progress to a higher level of proficiency in ballet movement. Recommended: Ballet I.

**DAN 237** *Tap II (2-1-2)*
Continuation of DAN 137, Tap I, leading to the development of intermediate tap techniques. Prerequisites: DAN 137.

**DAN 305** *Studio: Dance Performance 1-4 (Spec)*
Major participation in faculty/staff-supervised university theatre activity in the areas of dance performance or choreography. Prerequisite: Permission of the instructor.

**DAN 332** *Dance Composition II (3-3)*
Continuation of DAN 232 with the inclusion of historical approaches to dance choreography. Prerequisite: DAN 232.

**DAN 333** *Modern Dance III 2-4 (1-2)*
Advanced modern dance technique. Only offered for 2 credits per semester; may be repeated up to 4 hours. Prerequisite: DAN 233 with a grade of B or better.

**DAN 334** *Teaching of Folk, Square, and Social Dance 3 (3-0)*
Skills, techniques, and materials for teaching.

**DAN 337** *Tap III 1 (Spec)*
Development of intermediate to advanced tap techniques in various combinations with jazz styling. Prerequisites: DAN 237; intermediate techniques.

**DAN 340** *Dance Repertory Theatre and Tour Company 2-8 (Spec)*
Study of choreography created by members of the dance faculty and guest artists, leading to public performance. Prerequisite: Audition.

**DAN 430** *Dance Production 3 (2-2)*
Basic techniques of lighting, costumes, make-up, programming, and general design of a dance concert. Class, projects, guest speakers, and field trips.

**DAN 435** *Methods of Creative Movement 2 (Spec)*
Techniques and procedures for teaching rhythm and dance activities for the physical education and dance teacher in grades K-12.

**DAN 480** *Dance Practicum 1-3 (Spec)*
Cummer planning and teaching of K-12, college, or adults in a laboratory setting. GL/NC only. Prerequisites: permission of instructor; senior standing.

**DAN 494** *Field Study in Dance 1-3 (Spec)*
An approved individual, survey, study, or description observation in some area of dance performed off-campus. Prerequisites: permission of instructor; junior standing.

**DAN 530** *History of Dance 3 (3-0)*
Dance history from its primitive beginning to the present. Relationships of dance forms to the societies in which they developed.

**DAN 578** *Special Topics In Dance 1-9 (Spec)*
Current topics in dance for each semester listed in Course Search and Registration. This course may be repeated for up to 6 credit hours. Prerequisite: 1 undergraduate course in Dance with a C or better.

**DHA - Degrees in Health Administration**

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

**DHA 700** *Leadership Strategies for Healthcare Policy and Organizations 3 (3-0)*

**DHA 702** *Probability and Statistics for the Health Professions 3 (3-0)*

**DHA 704** *Population Health 3 (3-0)*

**DHA 705** *Seminar in Public Health 1 (1-0)*

**DHA 706** *Quantitative Analysis in Health Organization 3 (3-0)*

**DHA 708** *Organizational Theory and Behavior for the Health Professions 3 (3-0)*

**DHA 709** *Seminar in Health Dynamics: Current Issues, Trends and Change 1 (1-0)*

**DHA 710** *Qualitative Analysis in Health Care 3 (3-0)*

**DHA 712** *Research Methods and Practice for the Health Professions 3 (3-0)*

**DHA 713** *Seminar in Health Services Research 1 (1-0)*

**DHA 714** *Health Systems Thinking and Practice 3 (3-0)*

**DHA 716** *Communication in Health Organizations 3 (3-0)*

**DHA 717** *Seminar in Healthcare Dynamics: Stakeholder Relations 1 (1-0)*

**DHA 718** *Healthcare Law, Regulations and Ethics 3 (3-0)*

**DHA 720** *Health Economics 3 (3-0)*

**DHA 721** *Seminar in Healthcare Policy and Politics 1 (1-0)*

**DHA 722** *Health Informatics 3 (3-0)*

**DHA 724** *Fiscal Responsibility and Accountability for Health Entities 3 (3-0)*

**DHA 725** *Seminar in Strategic Planning for Health Organizations 1 (1-0)*

**DHA 726** *Applied Leadership 3 (3-0)*

**DHA 728** *Comparative Health Systems 3 (3-0)*

**DHA 898** *Dissertation 1-12 (Spec)*

**ECE - Early Childhood Education**
See the Department of Teacher Education and Professional Development for more information. For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

**ECE 625** *Foundations of Early Childhood Education 3 (3-0)*

**ECE 628** *Language and Literacy Development of Young Children 3 (3-0)*

**ECE 629** *Promoting Parent Involvement in Early Childhood Education 3 (3-0)*

**ECE 630** *Culturally Responsive Early Childhood Programs 3 (3-0)*

**ECE 644** *Early Childhood Concept Development and Creativity 3 (3-0)*

**ECE 657** *Cognitive and Psycho-Motor Development of Young Children: Theory & Practice 3 (3-0)*

**ECE 777** *Seminar: Current Issues in Early Childhood Education 3 (3-0)*

**ECO - Economics**
See the Department of Economics for more information.

**ECO 101** *Economics as a Way of Thinking 3 (3-0)*
Introduction to the economic way of thinking and its applications to decision making in daily living. Emphasis on basic understanding of the economic aspects of current issues. Credit on the Economics major will be given only if this course is taken prior to ECO 201 or ECO 202 or ECO 203.

**ECO 110** *Economics and Society 3 (3-0)*
An examination of the development of economic thought and institutions with emphasis on the application of this knowledge to the understanding of today’s world. Credit on the economics major will not be given if this course is taken after ECO 201 or ECO 202 or ECO 203.

**ECO 150** *Current Economic Problems 3 (3-0)*
Economic topics of current national and international concern. Economic issues with which informed voters must deal. No credit if credit has been earned in ECO 201 or ECO 202 or ECO 203 or ECO 204. (University Program Group III-B: Studies in Social Structures)

**ECO 201** *Principles of Macroeconomics 3 (3-0)*
Provides understanding of basic principles of economics, methods of National Income accounting, inflation, unemployment, role of government, money and banking, monetary policy, and international economics. Credit may not be earned in more than one of ECO 201 and 204. ECO 201 may not be applied toward the University Program requirements if a student is earning the Bachelor of Science in Business Administration degree. This course may be offered in an online or hybrid format. (University Program Group III-B: Studies in Social Structures)

**ECO 202** *Principles of Microeconomics 3 (3-0)*
An introduction to scarcity, choice, and opportunity cost; supply and demand; welfare economics; household and firm behavior; competition and monopoly; resource markets. Credit may not be earned in more than one of ECO 202 and ECO 203. ECO 202 may not be applied toward the University Program requirements if a student is earning the Bachelor of Science in Business Administration degree. This course may be offered in an online or hybrid format. (University Program Group III-B: Studies in Social Structures)

**ECO 203** *Microeconomic Principles for Business 3 (3-0)*
Introduction to economic decision-making by consumers and managers within a market system. Topics include supply, demand, elasticity, production, costs, price, market structure, and resource markets. Credit may not be earned in more than one of ECO 203 and ECO 202. Prerequisites: BUS 100 admission to Professional Business Studies.

**ECO 204** *Principles of Macro- and Global Economics 3 (3-0)*
An introduction to GDP, inflation, unemployment, business cycles, interest rates, money and banking, monetary and fiscal policy, economic growth, international trade for business students. Credit may not be earned in more than one of ECO 201 and ECO 204. Prerequisites: ECO 203, Tier 1 continuing introduction to Professional Business Studies.

**ECO 211** *Economics of Professional Team Sports 3 (3-0)*
Study of the economics and industrial relations systems of professional sports leagues in baseball, football, basketball, and hockey in North America.

**ECO 212** *Economics for Entrepreneurs 3 (3-0)*
Introduction to the economic way of thinking and its applications to decision making in the business world. Emphasis on understanding and applying economic concepts. Identical to EN1 213. Credit may not be earned in more than one of these courses. Does not count as credit for the Economics major or minor.

**ECO 222QR** *Behavioral Economics 3 (3-0)*
Examines the roles of self-interest, altruism, expectations and information in individual and group decision-making. In-class experiments simulate market behavior and test theoretical predictions. Quantitative Reasoning. (University Program Group III-A: Behavioral Sciences)

Course Descriptions approved for University Program are in italics.
ECO 230 Women in the Economy 3(3-0)
A study of the past and present role of women in the economy, as workers, both inside and outside the labor market. Identical to WST 230. Credit may not be earned in more than one of these courses.

ECO 235 Economics of Poverty and Discrimination 3(3-0)
Ecological analysis of the causes of poverty and alternative government solutions. Discrimination in education, housing and labor markets and their relationship to other social problems.

ECO 280 Economics of the World 3(3-0)
Overview of economics, with emphasis on comparison of their economic performance, the system used for production and distribution, and economic agreements among nations.

ECO 281 Economic Development of the Pacific Rim 3(3-0)
Rapid development of Pacific Rim economies and its impact on our country. The roles of history and culture in economic policy are studied. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

ECO 285 Statistical Methods in Economics 3(3-0)
Fundamental statistical techniques emphasizing application of statistical methods to economic analysis, index numbers, seasonal and cyclical variations in economic data. Prerequisites: ECO 201 or ECO 204 or ECO 213 or ENT 213; math competency.

ECO 301 Environmental Economics 3(3-0)
Basic understanding of environmental/ecological problems arising from a free enterprise system. Economists' solutions presented without advanced economic theory or mathematical computation. Recommended: ECO 202 or 203.

ECO 306 Money and Banking 3(3-0)
The nature of money and credit; history, structure, and functions of banking institutions, with emphasis upon Federal Reserve System and questions of appropriate public policy. Prerequisites: ECO 201 or 204; ECO 202 or 203.

ECO 310 American Economic Development 3(3-0)
Realistic interpretation, with emphasis on economic change and its significance in social, cultural, and political evolution. Recommended: ECO 201 or ECO 202 or ECO 203.

ECO 315 Economics of Immigration 3(3-0)
The economics of immigration: U.S. immigrant characteristics, impact of immigration on the U.S. economy, and public policies towards immigration. Prerequisite: ECO 202 or 203.

ECO 320 European and Asian Economic History 3(3-0)
Comparative study of economic institutions in a world of politico-economic change. The roles of history and culture in economic policy are studied. Recommended: ECO 201 or ECO 202 or ECO 203.

ECO 350 Law and Economics 3(3-0)
Realistic interpretation, with emphasis on economic change and its significance in social, cultural, and political evolution. Recommended: ECO 201 or ECO 202 or ECO 203.

ECO 360 Public Economics 3(3-0)
Appropriate and actual roles of government in market economies, and how government influences the use of resources and distribution of income. Prerequisites: ECO 202 or ECO 203.

ECO 365 Intermediate Microeconomic Theory 3(3-0)
An intensive treatment of the theories of supply and demand, consumer and producer behavior, market structure, and other micro theories and issues. Prerequisites: ECO 202 or 203.

ECO 370 Intermediate Macroeconomic Theory 3(3-0)
National income accounting; income, employment, interest rate and inflation theory and policy; theory and problems of economic growth. Prerequisites: ECO 201 or 204; ECO 202 or 203.

ECO 372 International Economics 3(3-0)
Basic background in international trade theory and practices, exchange rates and balance of payments, and international monetary arrangements. Prerequisites: ECO 201 or ECO 204; ECO 202 or ECO 203.

ECO 375 Economics of Cities and Regions 3(3-0)
Elementary theories of regional economic analysis used in solving specific problems such as pollution, housing, segregation, and conservation. Emphasizes urban regions. Prerequisites: ECO 201 or ECO 202 or ECO 203.

ECO 380 Comparative Economic Systems 3(3-0)
Comparative study of economic institutions in a world of politico-economic change. An analysis of capitalism, fascism, socialism, and communism. Recommended: ECO 201 or ECO 202 or ECO 203.

ECO 381 Patterns of Economic Development 3(3-0)
A study of the problems, processes, and theories of economic change in today's less developed countries. Recommended: ECO 201 or ECO 202 or ECO 203.

ECO 385 Introduction to Econometrics 3(3-0)
Introduction to the theory and practice of linear regression analysis in economics focusing on single equation methods. Extensive computer applications. Prerequisites: ECO 202 or ECO 203; STA 282 or STA 382.

ECO 397 Special Studies in Economics 1-6(Spec)
Experimental courses to cover materials of special interest not covered by courses in the regular curriculum. Prerequisite: permission of instructor.

ECO 410 Government and Business 3(3-0)
Relations of industry, especially corporations, to government, antitrust laws and their enforcement; public policy toward business; problems of unfair competition; patents and trademarks. Prerequisites: ECO 202 or ECO 203.

ECO 411 The Economics of Slavery in the U.S. 3(3-0)
The economic indictment of southern slavery; new challenges to this indictment; implications of the existence of southern slavery for present economic policy decisions. Recommended: ECO 201 or 202.

ECO 414 Labor Economics 3(3-0)
Labor market operations and wage determination; human capital investment; labor market discrimination; wage differentials; impact of unionization on wages; collective bargaining. Prerequisite: ECO 202 or 203.

ECO 425 The Economics of Industrial Organization 3(3-0)
Complements ECO 524. Recommended: permission of instructor.

ECO 430 Views of the Future of the U.S. Economy 3(3-0)
An analysis of economic thought, projections and institutional changes suggested for the future by various schools of thought. Institutional rather than quantitative emphasis. Recommended: ECO 202 or ECO 203.

ECO 440 Managerial Economics 3(3-0)
Application of microeconomic theory to a variety of management decisions such as internal resource allocation, pricing, market entry and the boundaries of the firm. Prerequisite: ECO 202 or ECO 203.

ECO 490 Economics Internship 1-3(Spec)
Provides a bridge between academic training and work experience. Allows application of principles of economics to a job and job experiences to classes. CR/NC only. Prerequisites: 56 semester hours completed; signed agreement with employer; 90 hours worked per week; supervised by a qualified personnel supervisor.

ECO 503 Seminar in Urban Economics 3(3-0)
Economic aspects of urban regions; their growth; household location; pollution; poverty. Solutions-oriented discussion of urban problems. Complements ECO 504. Recommended: ECO 201 or ECO 203.

ECO 508 Monetary Theory 3(3-0)
Further development of theories of money supply, money demand, the options of monetary policy, and the effects of monetary policy on the economy. Prerequisite: ECO 306 or ECO 307.

ECO 515 Collective Bargaining and Labor Law 3(3-0)
Development of various phases of labor law, especially under statutes such as the Wagner Act; Taft-Hartley Act, and Landrum-Griffin Act. Prerequisites: ECO 202 or ECO 203. Recommended: ECO 201 or ECO 204.

ECO 532 Economic Forecasting 3(3-0)
Nature and causes of economic fluctuations. Methods of predicting price levels and economic activity. Prerequisites: ECO 201 or ECO 204; ECO 202 or ECO 203.

ECO 535 Fundamentals of Mathematical Economics 3(3-0)
Application of mathematical techniques in economics. Emphasizes marginal analysis, market models, comparative static equilibrium, and maximization. Prerequisites: ECO 365; MTH 132 or MTH 217 or graduate standing in Economics.

ECO 572 International Monetary Economics 3(3-0)
International monetary and financial markets are studied. Topics include exchange rate policy, international capital flow and purchasing power parity theory. Prerequisites: ECO 372.

ECO 585 Econometrics 3(3-0)
Thorough treatment of statistical estimation methods and their properties for simultaneous equation systems. Also includes discussions of types of systems, solution methods and identification. Prerequisites: STA 580 and MTH 132; or graduate standing in Economics.

ECO 590 Seminar Readings 1-3(Spec)
Elective honors course for majors or minors in economics. Recommended: 12 hours of economics with 8 average.

ECO 591 Seminar Research Studies 1-3(Spec)
Independent study on special problems for majors and minors in economics. Prerequisite: permission of instructor. Recommended: 9 hours of 300- to 500-level economics.

ECO 597 Special Studies in Economics 1-3(Spec)
Experimental courses to cover materials of special interest to both undergraduate and graduate students and graded according to courses in the regular curriculum. Prerequisite: permission of instructor.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

ECO 600 Introduction to Advanced Economic Analysis 3(3-0)
ECO 601 Advanced Environmental Economics 3(3-0)
ECO 603 Economic Effects of Urbanization and Technology 3(3-0)
ECO 606 Seminar in Economic History 3(3-0)
ECO 610 Seminar in Economic Thought 3(3-0)
ECO 614 Seminar in Labor Economics 3(3-0)
ECO 616 Advanced Microeconomic Theory 3(3-0)
ECO 619 Continuing Registration for Final Research Project 1(1-0)
EDL - Educational Leadership

See the Department of Educational Leadership for more information.

EDL 360 Leading Diverse Teams 3(3-0)
Exploration of the uniqueness of socially-constructed identities by learning the process of leading diverse teams within an educational setting. This course may be offered in an online or hybrid format. Prerequisite: LDR 200.

EDL 452 Immersive Leadership in Educational Settings 3(3-0)
Examination of inclusion-based leadership tenets and efforts at an off-site educational institution. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 and 56 earned semester hours.

EDL 476 Outcome-Based Learning 3(3-0)
Development and assessment of learning outcomes within higher education settings. This course may be offered in an online or hybrid format. Prerequisite: LDR 200.

EDL 512 Assessment in Higher Education 3(3-0)
This course will examine assessment in higher education settings. Students will conduct assessments used in evaluation and accreditation protocols. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 and 80 earned semester credits or graduate standing.

EDL 516 Leadership for Social Justice 3(3-0)
Examination of social justice perspectives and their application to complex relationships found in and among institutions of learning. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 or graduate standing.

EDL 557 Helping Skills in Student Affairs 3(3-0)
Examination of the role of student affairs professionals as helpers through theoretical explorations and practical simulations. This course may be offered in an online or hybrid format. Prerequisites: EDU 107. Recommended: EDL 280 Education of Children 3(3-0) and 56 earned semester credits or graduate standing.

EDL 592 Professional Development in Educational Leadership 1-9(Spec)
Identification and study of emerging problems of educational leadership. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 and EDL 557 or graduate standing.

EDL 598 College Student Development 3(3-0)
Examination and application of relevant developmental theories and models for facilitating holistic student development. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 and EDL 557 or graduate standing.

EDL 600 Research for Educational Leadership 3(3-0)
For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

EDL 609 Administration of Volunteer Programs 3(3-0)

EDL 610 Grants and Fund Procurement 3(3-0)

EDL 612 Methods and Techniques of Training and Development 3(3-0)

EDL 615 Educational Technology for Administrators 3(3-0)

EDL 619 Continuing Registration for Final Research Project 1(1-0)

EDL 620 Administration Within Diverse Populations 3(3-0)

EDL 622 Adult Literacy and Society 3(3-0)

EDL 624 Planning for Instruction in Nontraditional Settings 3(3-0)

EDL 626 The Adult Learner 3(3-0)

EDL 626 Higher Education Law 3(3-0)

EDL 645 Charter School Leadership 3(3-0)

EDL 650 Professional Studies: Special Topics 1-6(Spec)

EDL 651 Program Review and Evaluation 3(3-0)

EDL 652 Global Education Studies 3-12(Spec)

EDL 656 Public School Law 3(3-0)

EDL 658 Teacher Leadership 3(3-0)

EDL 660 Principles of Educational Administration 3(3-0)

EDL 661 School and Community Relations 3(3-0)

EDL 662 School Business Administration 3(3-0)

EDL 663 Human Resources Administration 3(3-0)

EDL 667 Administration of Community Education 3(3-0)

EDL 669 Rural School Leadership 3(3-0)

EDL 670 The Principalship 3(3-0)

EDL 675 Administration of Special Education 3(3-0)

EDL 676 Administration of Community Colleges 3(3-0)

EDL 677 The American College Student 3(3-0)

EDL 678 Emerging Issues and Reform Efforts in Educational Leadership 3(3-0)

EDL 680 Teaching in Higher Education Settings 3(3-0)

EDL 681 Teaching with Technology in Higher Education Settings 3(3-0)

EDL 685 Introduction to Problem Solving in Educational Leadership 3(3-0)

EDL 687 Independent Study 1-6(Spec)

EDL 688 Independent Study 1-6(Spec)

EDL 689 Independent Study 1-6(Spec)

EDL 690 Administration of School Curriculum 3(3-0)

EDL 694 Educational Leadership Capstone 3(3-0)

EDL 695 Readings in Educational Leadership 1-3(Spec)

EDL 696 Higher Education Practicum 3(3-0)

EDL 697 College Teaching Internship 3(3-0)

EDL 698 Master's Colloquium 3(3-0)

EDL 699 Leadership Internship 1-15(Spec)

EDL 700 Advanced Administrative Research 3(3-0)

EDL 710 Action Research 3(3-0)

EDL 731 Strategic Planning 3(3-0)

EDL 745 Administration of the School District 3(3-0)

EDL 750 Professional Studies: Special Topics 1-6(Spec)

EDL 752 Social Justice in Global Studies Education 1-12(Spec)

EDL 757 Student Development Theory 3(3-0)

EDL 760 Leadership Theory and Practice 3(3-0)

EDL 761 School and Community Relations for the District Leader 3(3-0)

EDL 763 The Academic Profession 3(3-0)

EDL 764 Financing of Higher Education 3(3-0)

EDL 765 Organizational Change in Educational Institutions 3(3-0)

EDL 766 Advanced Educational Law 3(3-0)

EDL 767 Public School Finance 3(3-0)

EDL 768 Advanced Higher Education Law 3(3-0)

EDL 769 Negotiations in Education 3(3-0)

EDL 770 Advanced Elementary School Leadership 3(3-0)

EDL 772 Advanced Administration of Secondary Schools 3(3-0)

EDL 773 Instructional Supervision and Leadership 3(3-0)

EDL 774 Women in Education 3(3-0)

EDL 775 Educational Policy Analysis 3(3-0)

EDL 776 Administration of Higher Education 3(3-0)

EDL 777 Student Affairs Administration 3(3-0)

EDL 778 Contemporary Issues in Higher Education 3(3-0)

EDL 790 Critical Issues: Elementary School Leadership 3(3-0)

EDL 792 Critical Issues: Administration of Secondary Schools 3(3-0)

EDL 797 Field Study 1-6(Spec)

EDL 798 Thesis 1-6(Spec)

EDL 800 Qualitative Research in Educational Leadership 3(3-0)

EDL 801 Quantitative Analysis in Educational Leadership 3(3-0)

EDL 815 Ethical Leadership 3(3-0)

EDL 816 Social Justice in Education 3(3-0)

EDL 820 Critical Perspectives of Development Theory 3(3-0)

EDL 825 Culture of Educational Organizations 3(3-0)

EDL 830 Educational Foundations of Philosophy 3(3-0)

EDL 855 Organizational Culture and Change in Educational Institutions 3(3-0)

EDL 860 Organizational Theory in Educational Institutions 3(3-0)

EDL 864 Economics and Finance of Higher Education 3(3-0)

EDL 870 Issues in Educational Leadership 3(3-0)

EDL 876 Higher Education Policy 3(3-0)

EDL 880 Doctoral Internship 3-6(Spec)

EDL 886 Advanced Problem Solving in Educational Leadership 3(3-0)

EDL 897 Dissertation Colloquium 3(3-0)

EDL 898 Dissertation 1-15(Spec)

EDL 899 Doctoral Seminar 3-6(Spec)

EDL 900 Advanced Qualitative Analysis in Educational Leadership 3(3-0)

EDL 901 Advanced Quantitative Analysis in Educational Leadership 3(3-0)

EDU - Teacher Education

See the Department of Teacher Education and Professional Development for more information.

EDU 107 Introduction to Teaching 3(3-1)

An introductory course designed to provide prospective teacher education students with the opportunity to explore the teaching profession. Exploration includes a minimum of ten hours of field experience.

EDU 280 Education of Children 3(3-0)

Growth and development of the child, prenatal to adolescent. Includes application to educational settings. Prerequisite: EDU 107. Recommended: Sophomore standing.
EDU 290 Technology in Education 3(1-4)
Students will learn to operate various technology-based equipment; select and assess instructional media materials, coursework, and software; and integrate technology and media into K-12 instruction. Requires C+ or higher.

EDU 310 Psychological Foundations of Education 3(3-0)
Principles of learning, adolescent development and behavior, mental health; emphasis on application to teaching. Prerequisite: admission to Teacher Education program.

EDU 320 Elementary Mathematics Methods 3(3-0)
Objectives, content, materials, organization, and methods of teaching mathematics in the elementary school. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education Program. Objectives: EDU 280 or HDF 100; PSY 220 [general education students take EDU 280 or HDF 100; special education majors take PSY 220]; EDU 290, 393; MTH 151. Co-requisites: EDU 330, 343, 345; EDU/MLE 361. Pre/ Co-requisites: MTH 151.

EDU 325 Middle Level and High School Teaching Methods 3(3-0)
Prepares future secondary teachers to plan and deliver effective, learner-centered, developmentally-appropriate, and culturally-responsive instruction that provides a safe and caring classroom climate for all students. Requires C+ or higher. Prerequisite: Admission to Teacher Education Program. Pre/Co-requisites: EDU 310.

EDU 330 Reading in the Elementary School 3(3-0)
Materials, organization, and methods of teaching reading in the elementary school. Students are required to receive the C+ or better in this course. Prerequisite: Admission to Teacher Education Program. Objectives: EDU 280 or HDF 100; PSY 220 [general education students take EDU 280 or HDF 100; special education majors must take PSY 220]; EDU 290, 393. Co-requisites: EDU 330, 343, 345; EDU/MLE 361.

EDU 334 Social Studies Methods in Elementary Education 3(3-0)
Objectives, content, materials, organization and methods of teaching social studies in the elementary school. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [general education students take EDU 280 or HDF 100; special education majors must take PSY 220]; EDU 290, 393. Co-requisites: EDU 320, 330, 345; EDU/MLE 361.

EDU 345 Science Methods in Elementary Education 3(3-0)
Objectives, content, materials, organization and methods of teaching science in the elementary school. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [general education students take EDU 280 or HDF 100; special education majors must take PSY 220]; EDU 290, 393. Co-requisites: EDU 320, 330, 343; EDU/MLE 361.

EDU 361 Pre-Student Teaching Practicum 2(1-4)
Pre-service teachers will gain practical experience through observing, interacting, collaborating, and teaching in a pre-K-12 classroom setting. Identical to MLE 361. Credit may not be earned in more than one of these courses. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [general education students take EDU 280 or HDF 100; special education majors must take PSY 220]; EDU 290, 393. Co-requisites: EDU 320, 330, 343, 345.

EDU 362 Mathematics and Reading Practicum 1(0-2)
Pre-service teachers will gain practical experience through observation, interaction, collaboration, preparation, and delivery of reading and mathematics instruction in a pre-K-8 classroom setting. Identical to MLE 362. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: Admission to Teacher Education Program; EDU 280 or HDF 100 (students with a major in “teachers of students with emotional impairment” or a major in “teachers of students with cognitive impairment” are required to have SPE 126 and PSY 220); EDU 290, 393. Co-requisites: EDU 320, 431.

EDU 363 Science and Social Studies Practicum 1(0-2)
Pre-service teachers will gain practical experience through observation, interaction, collaboration, preparation, and delivery of science and social studies instruction in a pre-K-8 classroom setting. Identical to MLE 363. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: Admission to Teacher Education Program; EDU 280 or HDF 100 (students with a major in “teachers of students with emotional impairment” or a major in “teachers of students with cognitive impairment” are required to have SPE 126 and PSY 220); EDU 290, 320, 330, 393, 431; EDU/MLE 362. Co-requisites: EDU 343, 345, 495.

EDU 380 Pre-Student Teaching 10(10-5)
Preparation for student teaching. Consists of coursework in pedagogy and teaching in K-12 classrooms. Co-requisite semester before student teaching. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [general education students take EDU 280 or HDF 100; special education majors must take PSY 220]; EDU 330, 393. Co-requisites: SPE 504.

EDU 393 Learning Theory in Elementary Education 3(3-0)
Principles of learning, cognitive development, behavior, social and emotional development, and evaluation in children as related to the practice of teaching. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [general education students take EDU 280 or HDF 100; special education majors must take PSY 220]; EDU 290.

EDU 431 Corrective Reading in the Classroom 3(3-0)
Classroom diagnosis of students’ reading strengths and weaknesses. Analysis of corrective and remedial techniques. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [general education students take EDU 280 or HDF 100; special education majors must take PSY 220]; EDU 290, 320, 330, 343, 345, 393; EDU/MLE 361. Co-requisite: EDU 495.

EDU 434 Learning and Evaluation in Elementary Education 3(3-0)
This course reinforces the components of the CLEAR Conceptual Framework as it pertains to transferring theory to practice while students are in student teaching. Students are required to receive a C+ or better in this course. Prerequisites: Students must have completed the requirements for student teaching and be enrolled in EDU 458 Student Teaching. Co-requisites: EDU 434.

EDU 436 Global Pre-Student Teaching Elementary Field Experience 1(1-0)
Preparation for global pre-student teaching elementary field experience. Co-requisites: EDU/MLE 362.

EDU 434 Global Pre-Student Teaching Secondary Field Experience 1(1-0)
Preparation for global pre-student teaching secondary field experience. Co-requisites: EDU 310, or 325, or 450, or 495.

EDU 450 Content Area Literacy 3(3-0)
Study and development of teaching strategies to improve literacy (reading, writing, and thinking for learning) in all disciplines. Prerequisites: admission to Teacher Education; EDU 310; Pre- or Corequisite: EDU 325 or a music pedagogy course approved by the program for students seeking the Bachelor of Music Education degree.

EDU 458 Student Teaching 10(Spec)
This experiential course in which student integrates theory into practice is the activity-based culminating activity of the Pre K-12 regular education teacher education program. CR/NC only. Prerequisites: Admission to Teacher Education and the following criteria based on the specific certification requirements:

- Elementary:
  - A CMU overall GPA of 2.70 or higher.
  - Department approval of major(s) and minor(s) with a minimum 2.70 major AND minor GPA
  - C+ or higher in ALL professional education and methods courses
  - Courses REQUIRED before student teaching: EDU 107; EDU 280 or HDF 100 or PSY 220 [general education students take EDU 280 or HDF 100; special education majors must take PSY 220]; EDU 290, 320, 330, 343, 345, 393, 431, and 495; EDU/MLE 361; SPE 504; and all major and minor requirements listed in the bulletin (additional requirements for special Education Majors: SPE 455 and SPE 456 or SPE 458).

- Secondary:
  - A CMU overall GPA of 2.70 or higher
  - Department approval of major(s) and minor(s) with a minimum 2.70 major AND minor GPA
  - C+ or higher in ALL professional education and methods courses
  - Courses REQUIRED before student teaching: EDU 107; EDU 280 or HDF 100 or PSY 220 [general education students take EDU 280 or HDF 100; special education majors must take PSY 220]; EDU 290, 320, 330, 343, 345, 393, 431, and 495; EDU/MLE 361; SPE 504; and all major and minor requirements listed in the bulletin (additional requirements for special Education Majors: SPE 455 and SPE 456 or SPE 458).

EDU 458 Teaching with Distance Learning Technologies 3(3-0)
This course is an experience in which students integrate learning and teaching based on the balance between technology and pedagogy. Co-requisite: EDU 432.

EDU 459 Foundations of Education 3(3-0)
Examine the historical events and social bases of American education. Major emphasis on political, judicial, and legislative activities; social issues; and current policy affecting schools. Students are required to receive a C+ or better in this course. Prerequisites: Admission to Teacher Education; EDU 280 or HDF 100 or PSY 220 [general education students take EDU 280 or HDF 100; special education majors must take PSY 220]; EDU 290, 320, 330, 343, 345, 393; EDU/MLE 361. Co-requisite: EDU 431 (elementary students) or EDU 450 (secondary students).
EDU 505 Diagnostic Literacy Assessments & Instruction: K-3 (3-0)
Diagnostic literacy assessments will be introduced including appropriate administration, data analysis, and related instructional practices. State literacy assessment certification: MLPP K-3. Prerequisites: EDU 330 or graduate status.

EDU 506 Principles and Techniques for Individualizing Instruction 3(3-0)
Examination of individualized instruction and its classroom implications. Prerequisite: EDU 330 or EDU 340.

EDU 508 Education Workshop 1-6(Spec)
Identification and study of educational theory, topics and/or issues in contemporary education. Prerequisites: Senior Standing or Graduate Status.

EDU 515 Managing Classrooms and Learning Environments 3(Spec)
Engages students in the design and management of the classroom environment. This course may be offered in an online or hybrid format. Prerequisite: Admission to Teacher Education Program or graduate status.

EDU 525 Early Childhood Education 3(3-0)
Content, methods, materials, and curriculum planning for teaching pre-kindergarten through primary grades. Prerequisites: Junior Standing or Graduate Status.

EDU 528 Emergent Literacy: Theory and Practice 3(3-0)
Analysis of literacy development in preschool through primary grades. Methods, materials, organization, and evaluation techniques for fostering beginning reading and writing consistent with current research. Prerequisites: EDU 330 or Graduate Status.

EDU 532 Reading in the Content Areas 3(3-0)
Emphasizes teaching of reading skills in content areas focusing on the middle and upper grades. Prerequisites: EDU 330 or EDU 316.

EDU 533 Diagnosis and Treatment of Reading Difficulties 3(2-3)
Diagnostic procedures and use of remedial and developmental techniques. Exploration of the role of the specialist. Prerequisites: EDU 431, 532; Pre/Co-Requisite: EDU 538.

EDU 538 Coordination of the Language Arts with Reading 3(2-0)
Building the elements of listening, speaking, writing, and reading into a K-8 language arts program. Techniques of instruction for the exceptional child will be examined. Prerequisite: EDU 330.

EDU 540 Literacy Education: Theory and Practice 3(3-0)
Emphasizes a broad view of literacy within a comprehensive approach and authentic contexts; effective literacy instruction across content, all learners, skill integration, and assessment. This course is approved for offering in a distance learning format. Prerequisites: EDU 330 or Graduate Status.

EDU 542 Interdisciplinary Processes and Strategies in Teaching Reading, Writing, Thinking, and Learning 3(3-0)
Reinforces the integration of content knowledge with reading, writing, and thinking strategies and emphasizes a conceptual framework for learning through thematic or collaborative instruction. This course may be offered in an online or hybrid format. Prerequisites: EDU 330 or Graduate Standing.

EDU 550 Driver Education I: Driver Task Analysis 3(3-0)
First of four courses to prepare driver education instructors and provide them with the content knowledge and skills necessary to teach driver education. Prerequisites: Permission of instructor.

EDU 551 Driver Education II: Developing Classroom Instructional Knowledge 3(3-0)
Second of four courses to prepare driver education instructors; knowledge and skills needed to implement classroom instruction, classroom management, and appropriate student evaluation. Prerequisites: EDU 550.

EDU 552 Driver Education III: Developing Vehicle Operational Skills 3(2-1)
Third of four courses to prepare prospective driver education instructors to conduct instruction which develops vehicle operational skills for the novice driver. Prerequisites: EDU 551.

EDU 553 Driver Education IV: Practicum 3(1-2)
Fourth of four courses preparing driver education instructors; classroom and in-car instruction in approved driver education programs under mentoring of cooperating driver education teachers. Prerequisites: EDU 552.

EDU 556 Independent Study in Elementary Education 1-6(Spec)
Research or project. Prerequisites: 15 semester hours of professional education and approval of unit coordinator.

EDU 590 Advanced Technology in Education 3(2-3)
Students will study and practice the integration of technology in classroom instruction and management, with emphasis upon software evaluation and lesson design. Identical to SPE 510. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: EDU 290 or Graduate Status.

EDU 595 Telecommunication in Education 3(2-2)
The study and laboratory exploration of telecommunication as used in schools and classrooms: e-mail, educational and general networks, collaborative lessons. This course is approved for offering in a distance learning format. Prerequisites: EDU 590.

EDU 602 Strategies and Techniques for Teaching 3(3-0)
Course Descriptions approved for University Program are in italics.
EGR 120 Introduction to Engineering 3(2-2)
A general introduction to engineering with an emphasis on problem solving, engineering tools, engineering design processes, and teamwork. Pre/Co-requisite: MTH 130 or higher.

EGR 190 OR Digital Circuits 3(3-0)
Boolean algebra, logic functions, truth tables and Karnaugh maps, combinational circuits, sequential circuits, and finite state machines. Quantitative Reasoning. Prerequisites: MTH 130 or 132 with a grade of C- or better. Pre/Co-requisite: EGR 120.

EGR 200 Computer Aided Problem Solving for Engineers 3(2-2)
Engineering problem solving involving circuit elements, batteries, one-link robot, two-link robots, springs, and cables using physical experiments, MATLAB and/or equivalent. Pre-requisites/Co-requisites: MTH 132; permission of E&T advisor.

EGR 211 Engineering Statics 3(3-0)
The course will cover free body diagrams and equilibrium of particles and rigid bodies, internal forces in machines, and beams, friction, and application to machines. Prerequisite: MTH 132 with a grade of C- or better; PHY 145 with a grade of C- or better; permission of E&T advisor; Pre-Co-Requisite: EGR 120.

EGR 253 Engineering Dynamics 3(3-0)
Fundamentals of engineering dynamics covering kinematics and kinetics of particles and rigid bodies. Prerequisites: EGR 251 with grade of C- or better; MTH 133 with a grade of C- or better; permission of E&T advisor.

EGR 255 Strength of Materials 3(3-0)
Introductory course in mechanics of materials that covers mechanical stress and strain, deformation, torsion, bending and shearing stresses, and deflections of beams. Prerequisites: EGR 251 with grade of C- or better; MTH 133 with grade of C- or better; permission of E&T advisor.

EGR 290 Circuit Analysis I 3(3-0)
Introduction to circuit elements, variables, resistive circuits, circuit analysis techniques, network theorems, inductance and capacitance, sinusoidal steady state analysis and power calculations. Prerequisites: MTH 133 with a grade of C- or better; PHY 145 with a grade of C- or better; permission of E&T advisor; Pre-Co-Requisite: EGR 120; PHY 146.

EGR 292 Circuit Analysis II 3(3-0)
First- and second-order circuits, Laplace circuit analysis, transfer function, step and impulse responses, Fourier series, Fourier transforms, and three-phase circuits. Prerequisite: EGR 290 with a grade of C- or better; permission of E&T advisor; Pre/Co-requisite: MTH 232 or MTH 334.

EGR 298 Microelectronic Circuits I 3(3-0)
Introduction to diode, bipolar and MOS transistors and their circuit models; analysis and design of bipolar, CMOS and Op-Amp based amplifier circuits. Prerequisites: EGR 290 with a grade of C- or better; permission of E&T advisor; signed engineering major.

EGR 300 Engineering Economic Analysis 3(3-0)
An introduction to financial and economic decision-making for engineering projects, with an emphasis on problem solving, life cycle costs, and the time value of money. Prerequisites: MTH 132; One of: STA 282, 382, or 392; Permission of E&T advisor.

EGR 355 Engineering Materials 3(3-0)
Covers fundamentals of engineering materials including metals, alloys, ceramics, polymers, and composites. Materials processing, properties and structures, and their role in design and production. Prerequisites: CHM 131 or 161; EGR 251 with grade of C- or better; MTH 132 with grade of C- or better; PHY 146 with grade of C- or better; permission of E&T advisor; signed engineering major.

EGR 356 Thermodynamics I 3(3-0)
Fundamentals of engineering thermodynamics are covered which include: general energy concepts, first and second laws of thermodynamics, entropy, processes, power cycles, refrigeration cycles. Prerequisite: CHM 131 or 161; EGR 251 with grade of C- or better; MTH 133 with grade of C- or better; PHY 146 with grade of C- or better; permission of E&T advisor; signed engineering major.

EGR 358 Fluid Mechanics 3(3-0)
Study of the principles of fluid statics and dynamics including Bernoulli's equation, control volume analysis, similitude, dimensional analysis, viscous flow, and flow over immersed bodies. Prerequisites: EGR 253; MTH 133 with grade of C- or better; permission of E&T advisor; signed engineering major.

EGR 359 Machine Design I 3(3-0)
The study of relative motion of machine parts, forces acting on them, and motions resulting from these forces. Prerequisites: EGR 253; IET 154; signed engineering major; permission of E&T advisor. Pre/Co-requisite: MTH 233.

EGR 360 Solid Mechanics Laboratory 3(1-4)
Experimental skills and measurement techniques are developed in the areas of material behavior, static and dynamic stress and strain analysis. Prerequisites: EGR 253, 255; PHY 175 with grade of C- or better; permission of E&T advisor; signed engineering major. Pre/Co- Requisite: EGR 355.

EGR 371 Robotics & Automation 3(2-2)
An introduction to the theory and application of robotics including robot fundamentals, kinematics, trajectory planning, actuators, sensors, and industrial robot programming. Prerequisites: CPS 180; EGR 251, 290; MTH 232 or MTH 223, 334; permission of E&T advisor.

EGR 388 Introduction to Electromagnetics 3(3-0)
A study of static and time-variant electric and magnetic fields, plane waves, guided waves, transmission line theory, radiation and antennas. Prerequisites: MTH 232 or MTH 223, 334; MTH 253 with a grade of C- or better; PHY 146 with a grade of C- or better; permission of E&T advisor.

EGR 390 Computer System Design using HDL 3(3-0)
Review of combinational and sequential circuits, digital functional units, micro-operations and register transfers, Memory organization, Datapath and control units. Verilog Hardware Description Language. Prerequisites: EGR 190 with a grade of C- or better; permission of E&T advisor. Pre-requisite/ Co-requisite: EGR 396.

EGR 391 Signal and System Theory 3(3-0)
Continuous and discrete-time linear systems, time and frequency domain analysis of signals and systems, Laplace, Fourier and z-transforms. Applications to problems in electrical engineering. Prerequisites: EGR 290 with a grade of C- or better; permission of E&T advisor.

EGR 392 Microelectronic Circuits II 3(3-0)
Design and analysis of electronic circuits including current mirrors, cascode amplifiers, differential amplifiers, feedback amplifiers, amplifier frequency response, and analog filters. Prerequisites: EGR 298; permission of E&T advisor.

EGR 393 Circuit Lab 3(1-4)
Basic experimentation consistent with the theory in EGR 190, EGR 290 and EGR 292. Use laboratory equipment to investigate electrical and digital circuits. Prerequisites: EGR 190; permission of E&T advisor. Pre/Co-requisite: EGR 292.

EGR 394 Computer Circuit Simulation 3(2-2)
This course reinforces basic circuit analysis principles using computer software and teaches students various computer circuit analysis and design techniques. Prerequisite: permission of E&T advisor. Pre/Co-Requisite: EGR 392.

EGR 396 Microprocessor Fundamentals 3(3-0)
Introduction to architecture, operation, and application of microprocessor systems and microcontrollers. Prerequisites: CPS 180; EGR 190 with grade of C- or better; permission of E&T advisor.

EGR 397 Special Topics in Engineering 1-6(Spec)
Intensive study of selected engineering topics not included in a regular course. Repeatable up to 6 hours when content previously studied is not duplicated. Prerequisite: Permission of Instructor.

EGR 398 Microelectronics and Computer Lab 3(2-2)
Laboratory exploration of semiconductor devices, discrete and integrated amplifiers; feedback; microcomputer systems including input/output, assembly language programming and interrupt processing. Prerequisite: permission of E&T advisor. Pre/Co-Requirements: EGR 392, 396.

EGR 437 Directed Research in Engineering 1-3(Spec)
Project research under guidance of a faculty advisor to focus on a topic of current interest. Self-directed readings, analysis, laboratory experiments and/or experimental techniques. Prerequisite: Permission of instructor.

EGR 456 Thermodynamics II & Heat Transfer 3(3-0)
Continuation of engineering thermodynamics and fundamentals of heat transfer. Topics covered include combustion and gas mixing, steady state and transient heat conduction, convection, and radiation. Prerequisites: EGR 356, 358; MTH 233; permission of E&T advisor.

EGR 458 Measurement and Instrumentation Laboratory 3(1-4)
Theory and application of mechanical measurements, instrumentation, and computer-based data acquisition. Prerequisites: EGR 290, 355; EGR 360 or CHM 349; STA 392; permission of E&T advisor.

EGR 459 Machine Design II 3(3-0)
Theories of static and dynamic failure, fatigue design, and design of mechanical elements such as gears, shafts, bearings, fasteners, welded joints, and other mechanical elements. Prerequisites: EGR 255, 355, 359; permission of E&T advisor.

EGR 460 Thermal Fluids Laboratory 3(1-4)
Experimental skills and measurement techniques are reinforced in the areas of fluid flow, thermodynamics, and heat transfer using modern sensors, instrumentation, and data acquisition systems. Prerequisite: EGR 358; permission of E&T advisor. Pre Co-requisite: EGR 456.

EGR 470 Engineering Biomechanics 3(3-0)
Fundamental mechanics and engineering principles applied to understanding biological tissues and systems. Prerequisites: EGR 253, 255, 355.

EGR 477 Finite Element Analysis 3(3-0)
Mathematical modeling and formulation techniques of finite element equations. Solid modeling and meshing. Solution strategies with applications to fluid mechanics, heat transfer and solid mechanics. Prerequisites: EGR 255, 355; IET 154; MTH 232 or MTH 223, 334; permission of E&T advisor.
EGR 479 Fracture and Fatigue Analysis 3(3-0)
Fracture mechanics and fatigue crack nucleation and propagation, stress intensity factors, fracture toughness and design philosophy concepts. Fracture and fatigue tests. Statistical and reliability analysis. Prerequisites: EGR 255, 355; MTH 233, STA 382.

EGR 480 Digital Integrated Circuit Design with FPGAs 3(3-0)
Design and application of digital integrated circuits using programmable logic devices and field programmable gate arrays (FPGAs). Prerequisites: EGR 390; permission of E&T advisor.

EGR 481 Embedded System Design 3(3-0)
Introduction to designing microcontroller-based embedded computer systems using assembly and C programs. Examination of real-time operating systems and their impact on performance. Prerequisites: CPS 180; EGR 398; permission of E&T advisor.

EGR 482 Design and Organization of Computer Hardware Systems 3(3-0)
Structural organization and hardware design of digital computers. Processing and control units, arithmetic algorithms, input-output systems and memory systems. Prerequisites: EGR 396; permission of E&T advisor.

EGR 484 Digital Signal Processing 3(3-0)
Mathematical description of digital signals and systems via difference equations, discrete time Fourier transform, z-transform, and filter design techniques. Prerequisites: EGR 391; permission of E&T advisor.

EGR 487 Introduction to VLSI Systems 3(3-0)
CMOS process technologies, logic families, custom, and semi custom design. Design of adders, counters, and arithmetic logic units. System design method and VLSI design tools. Prerequisites: EGR 392; permission of E&T advisor.

EGR 489 Senior Design I 3(3-2)
First course in the senior capstone design sequence integrating design methods and engineering techniques in the context of a realistic engineering project. May be offered as writing intensive. Prerequisites: Senior standing with a passing grade in all required 200 and 300 level EGR courses in declared engineering major; permission of E&T advisor.

EGR 490 Computer Data Acquisition & Instrumentation 3(3-0)
Introduction to data acquisition using A/D converters; fundamentals of transducers; dynamic response; amplifiers; theory of A/D and D/A converters; error analysis-statistics. Prerequisites: EGR 396, STA 382; permission of E&T advisor.

EGR 492 Automatic Control Systems 3(3-0)
Theory and design of automatic control systems including control system characteristics, system performance analysis, system stability analysis, frequency response analysis, and controller design. Prerequisites: EGR 391; permission of E&T advisor.

EGR 496 Communication Systems 3(3-0)
Overview of communication systems, Hilbert transform, analog AM/FM (de)modulation, probability and noise in analog communications, A/D conversion, digital pulse and carrier (de)modulation, introductory information theory. Prerequisites: EGR 391; STA 392; permission of E&T advisor.

EGR 497 Special Topics In Engineering 1-6(Spec)
Intensive study of selected engineering topics not included in a regular course. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisite: Permission of instructor.

EGR 499 Senior Design II 3(1-4)
Second course in the senior capstone design sequence integrating design methods and engineering techniques in the context of a realistic engineering project. May be offered as Writing Intensive. Must be taken in the semester immediately following EGR 489. Prerequisites: EGR 489; permission of E&T advisor.

EGR 553 Mechanical Vibrations 3(3-0)
Modeling, design, and analysis of mechanical vibrations: natural frequency, damping, excitation, higher order systems, modal analysis, experimental testing, and continuous systems. Prerequisites: EGR 253; MTH 232; CPS 180; or Graduate Student in Engineering.

EGR 554 Mechanical Controls 3(3-0)
Design and analysis of control for mechanical systems, including modeling, transient and steady-state, root locus, frequency response, PID control, and state space. Prerequisites: EGR 253; MTH 232; CPS 180; or Graduate Student in Engineering.

EGR 576 Mechanics of Composite Materials 3(3-0)
Covers composite material mechanics with emphasis on selection, analysis, and use. Stiffness and strength theories Treats composite beams and plates for static and dynamic loads. Prerequisites: EGR 255, 355; MTH 232; or Graduate Student in Engineering.

EGR 578 Advanced Mechanics of Materials 3(3-0)
Stress and strain in three dimensions, constitutive laws, failure theories. Advanced beam theories, curved beams, shear deformation, beams on elastic foundations, plates and shells, energy methods. Prerequisites: EGR 255, 355; MTH 233; or Graduate Student in Engineering.

EGR 588 Photonics 3(3-0)
A study of optical phenomena and its application to engineering problems. Topics include ray optics, beam optics, guided wave optics, lasers and applications thereof. Prerequisite: EGR 388 or Graduate Student in Engineering.

EGR 591 CMOS Circuit Design 3(2-2)
Design and simulation of analog integrated circuits and systems using transistor level differential amplifiers, operational amplifiers, oscillators, and data converters. Prerequisites: EGR 292, 392; or Graduate Student in Engineering.

EGR 594 Power Electronics 3(3-0)
Fundamentals of power electronics including switch-mode DC-DC converters, feedback controllers, rectifiers, semiconductor switches and magnetic circuit in power electronics. Prerequisites: EGR 398 or Graduate Student in Engineering.

EGR 595 Nanoscale Transistors 3(3-0)
Conceptual framework that underlies the microscopic viewpoint using examples related to emerging field of nanoscale transistors. Prerequisites: EGR 487 or 491 or graduate standing.

EGR 597 Special Topics In Engineering 1-6(Spec)
Intensive study of selected engineering topics not included in a regular course. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisite: Permission of instructor.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

EGR 600 Advanced Engineering Analysis 3(3-0)
EGR 601 Advanced Engineering Experimentation 3(2-2)
EGR 637 Directed Research in Engineering 1-6(Spec)
EGR 685 Seminar: Current Topics in Engineering 1-3(Spec)
EGR 697 Special Topics In Engineering 1-6(Spec)
EGR 798 Thesis Research 1-6(Spec)

ELI - English Language Institute
See the English Language Institute in the Index for more information.

ELI 051 Integrated Skills I 5(5-5)
Development of basic English speaking, listening, reading, writing, and pronunciation skills through study of cultural themes. For intensive level ELI students. CR/NC. Prerequisites: Admission to the ELI equivalent placement on the ELI Placement Test.

ELI 052 Reading and Writing I 4(4-4)
A high-beginning course in composition and reading skills for international students, with focus on vocabulary development, reading and writing fluency, and paragraph development. CR/NC Only. Prerequisite: ELI Department Approval.

ELI 053 Grammar for International Students I 3(3-1)
An intensive English grammar class for non-native speakers enrolled in the English Language Institute at the high-beginning level. CR/NC Only. Prerequisite: ELI Department Approval.

ELI 061 Integrated Skills II 5(5-3)
Development of intermediate English speaking, listening, reading, writing, and pronunciation skills through study of cultural themes. For intensive ELI students. CR/NC. Prerequisites: Admission to the ELI equivalent placement on the ELI Placement Test, or ELI 051.

ELI 062 Reading and Writing II 4(4-4)
Intermediate composition and reading skills course for international students, focusing on vocabulary development, reading and writing fluency, and writing paragraphs and basic essays. CR/NC Only. Prerequisite: ELI Department Approval.

ELI 063 Grammar for International Students II 3(3-1)
An intensive English grammar class for non-native speakers enrolled in the English Language Institute at the intermediate level. CR/NC Only. Prerequisite: ELI Department Approval.

ELI 071 Integrated Skills III 5(5-3)
Intensive development of high intermediate/low advanced English speaking, listening, reading, writing, and pronunciation skills through study of cultural themes. For intensive ELI students. CR/NC. Prerequisite: Admission to ELI equivalent placement on the ELI Placement Test, or ELI 061.

ELI 072 Reading and Writing III 4(4-4)
High-intermediate course for international students, focusing on development of reading and essay writing skills, including an introduction to writing with sources. CR/NC Only. Prerequisite: ELI Department Approval.

ELI 073 Grammar for International Students III 3(3-1)
An advanced speaking course for international graduate students who require further instruction in oral proficiency skills necessary to succeed in graduate studies. CR/NC Only. Prerequisites: TOEFL score of 500-547 (173-210 computer-based TOEFL) and/or placement into ELI 091 on the CMU English Language Institute placement test, or successful completion of ELI 081, or permission of the ELI director.

Course Descriptions approved for University Program are in italics.
ELI 094 Writing Seminar for Graduate Students 3(3-0)
For non-native speakers of English at the graduate level, this course focuses on developing proficiency in the academic styles of writing encountered in graduate studies. CR/NC Only. Prerequisites: TOEFL score of 500-547 (173-210 computer-based TOEFL) and/or placement test into ELI 094 or determined by CMU English Language Institute placement test, or successful completion of ELI 084, or permission of the ELI director.

ELI 099 ELI Writing Workshop 1-4(Spec)
Writing Center individualized writing workshop for English language learners to be taken with at least one other ELI class. Course may be taken more than once as long as course content is not duplicated; total credit not to exceed four hours. CR/NC Only. Co-requisite: Enrollment in at least one ELI course.

ELI 181 Listening and Speaking for International Students 4(4-0)
An advanced speaking and listening course for international undergraduates and graduate students who require further instruction in oral proficiency and aural comprehension skills. This course may be offered in an online or hybrid format. Prerequisite: ELI Department approval.

ELI 182 Academic Reading Skills for International Students 3(3-0)
This is a course for non-native speakers of English focusing on developing proficiency in reading for academic purposes through improving reading comprehension, strategies, speed and vocabulary development. This course may be offered in an online or hybrid format. Prerequisites: ELI Department approval.

ELI 183 Advanced Grammar for International Students 3(3-0)
An advanced course in English grammar for international students who require further instruction to alleviate problems associated with speaking, writing, reading and listening tasks. This course may be offered in an online or hybrid format. Prerequisites: ELI Department approval.

ELI 184 Academic Writing for International Students 3(3-0)
This is a course for non-native speakers of English at the undergraduate and graduate levels which focuses on developing proficiency in writing English for academic purposes. This course may be offered in an online or hybrid format. Prerequisites: ELI Department approval.

ELI 198 American Language for International Students: Writing Component 3(3-0)
Development of nonfiction prose writing for non-native English speakers. Students prepare various texts by applying knowledge of composing processes, rhetorical strategies, and textual conventions. Alternative to ENG 101 or ENG 103/099. Prerequisites: Department approval.

ELI 199 American Language for International Students: Speech Component 3(3-0)
An introductory course in analytic writing and the conventions of Standard Written English designed as the first semester of a two-semester sequence of freshman composition.

ENG 101 Freshman Composition 3(3-0)
Development of nonfiction prose writing skills. Students prepare a variety of texts by applying knowledge of composing processes, rhetorical strategies, and textual conventions. This course may be offered in an online or hybrid format. Recommended: Students with a Writing Placement Score of 58 or lower are encouraged to enroll in ENG 103 and ENG 099 or ENG 101 and ENG 299. Students with a Writing Placement Score above 58 should enroll in ENG 101 and may add ENG 299 if they require additional help with their writing.

ENG 103 First Year Writing 3(3-0)
Development of skills in nonfiction prose writing. Small class sizes and substantial individualized support help students gain knowledge of composing processes, strategies, and conventions. With ENG 099, meets university requirements for first-year writing competency; alternative to ENG 101 and ELI 198. Co-requisite: ENG 099 must be taken simultaneously with ENG 103. Recommended: Students with a Writing Placement score of 58 or lower are encouraged to enroll in ENG 103 and ENG 099. Students with a Writing Placement score above 58 should enroll in ENG 101 and may add ENG 299 if they feel they might need additional help with their writing.

ENG 134 Introduction to Literature 3(3-0)
Examination of the novel, short story, poetry and drama in a range of cultural and historical contexts. May be offered as Writing Intensive. This course may be offered in an online or hybrid format. (University Program Group I-B: The Arts)

ENG 141 Comics, Graphic Novels, and Other Illustrated Texts 3(3-0)
Study of the history and meaning of comics, graphic novels, and other illustrated texts from a literary and cultural perspective. May be offered in an online or hybrid format. May be offered as Writing Intensive. (University Program Group I-B: The Arts)

ENG 142 Literary Interpretation of Sport 3(3-0)
Introduction to the art, history, and literary interpretation of sport. May be offered as Writing Intensive. (University Program Group I-B: The Arts)

ENG 175 The Nature of Language 3(3-0)
Introduction to the study of language and social systems. Topics include linguistic structures, acquisition, varieties, and change. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

ENG 201 Intermediate Composition 3(3-0)
An intensive writing course intended to prepare students for writing in their upper-level major courses and beyond. May be offered in an online or hybrid format. Prerequisite: Grade of C or better in ENG 101, ENG 103/099, or ELI 198. Recommended: Students who feel they might need additional help with their writing should consider enrolling in ENG 299 as a co-requisite.

ENG 234 Introduction to Literary Analysis 3(3-0)
Intensive study of methods and perspectives for interpreting and evaluating texts of various literary genres, including fiction, drama, and poetry. May be offered as Writing Intensive. Prerequisites: ENG 101 or ENG 103/099 or ELI 198 with grade of C or better.

ENG 235 English Literature: Beginning to Romantic Period 3(3-0)
Beginning to Romantic Period. Primarily for sophomores; open to freshmen. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

ENG 236 British Literature 3(3-0)
Examines British literature from the Romantic period to present day in light of literary, historical, and philosophical influences. Primarily for sophomores; open to freshmen. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

ENG 251 American Literature: Colonial Through the Romantic Period 3(3-0)
Survey of major American writers and literary trends. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

ENG 252 American Literature: Realistic Period to the Present 3(3-0)
Survey of major American writers and literary trends. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

ENG 261 Masterpieces of Ancient Literature 3(3-0)
Major world literature to the medieval period including Greek and Roman works. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

ENG 262 European Literatures 3(3-0)
Survey of significant European literature from the medieval through modern periods. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

ENG 271 Modern Grammar 3(3-0)
Linguistic description of the grammar of standard American English. Prerequisites: Grade of “C” or better in ENG 101, ENG 103/099 or ELI 198.

ENG 294 Introduction to Creative Writing 3(3-0)
The basic methods and techniques in creative writing, including, but not limited to, poetry and fiction. May be offered as Writing Intensive. Recommended: ENG 101 or ENG 103/099 or ELI 198 with grade of C or better.

ENG 299 Writing Workshop I 1-3(Spec)
Writing Center individualized writing workshop; assistance in planning, drafting, and revising writing, grammar, citations, etc. May be repeated for three hours, one credit per semester. May be offered in an online or hybrid format. CR/NC Only. Pre-Co-requisite: Enrollment in at least one other CMU course.

ENG 301 Nonfiction Writing 3(3-0)
Development of nonfiction writing skills through individual projects in diverse genres. May be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisites: ENG 201 with a grade of “C” or better.

ENG 303 Technical Writing 3(3-0)
Writing technical documents common in business, industry, government agencies, and non-profit organizations, e.g., reports, proposals, and instructions. Emphasis on readability, accessibility, suitability, and usability. May be offered as Writing Intensive. May be offered in an online or hybrid format. Prerequisites: ENG 201 with a C or better; 56 credit hours completed.

ENG 309 Teaching Literature in the Secondary School 3(3-0)
Methods of teaching students to read extensively and critically. Prerequisites: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better; acceptance to the Teacher Education Program; must have completed 56 credit hours.

ENG 315 Teaching Writing in Elementary and Middle Schools 4(3-1)
Introduction to theories and pedagogies on writing in elementary and middle schools. Pre-student teaching field experience. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisites: ENG 201 with a grade of C or better; Admission to the Teacher Education program.
ENG 319 Teaching Composition in the Secondary School 4(3-1)
Methods for teaching students to communicate clearly in writing. Open to only to juniors and seniors preparing to teach. Prerequisites: ENG 101 with a minimum grade of C or ENG 103 with a minimum grade of C and ENG 099 with a grade of C or better. Special emphasis with a grade of C or better. ENG 101 or 103/099 or ELI 198 with a grade of C or better. Must have completed 15 credit hours; Admission to Teacher Education program required.

ENG 321 20th Century British and American Poetry 3(3-0)
Study of major twentieth-century poets such as Yeats, Frost, Williams, Pound, Eliot, and more recent poets; examination of significant trends. Prerequisites: Grade of C or better in ENG 101, ENG 103/099 or ELI 198 and ENG 201.

ENG 323 Fantasy and Science Fiction 3(3-0)
History, meaning, and influence of fantasy and science fiction. Emphasis on 19th-21st century literature and film. May be offered in an online or hybrid format. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

ENG 324 Popular Culture in America 3(3-0)
A study of popular American art forms in relation to their historical, social, cultural, technological, critical, and/or theoretical contexts. Prerequisites: ENG 201 with a grade of C or better.

ENG 325 Folklore 3(3-0)
Discussion and comparison of folktales, songs, superstitions and customs preserved in both oral and literary traditions. Prerequisites: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better.

ENG 326 The Literary Dimensions of Film 3(2-2)
Study of film from viewpoints of formal literary criticism and cultural history through analysis of original screen plays, genre movies, and adaptations. This course may be offered in an online or hybrid format. (University Program Group I-B: The Arts)

ENG 327 Women Writers 3(3-0)
Readings in fiction, poetry, and autobiography by women writers of the nineteenth and twentieth centuries, approached through contemporary feminist views. Identical to WST 327. Credit may not be earned in more than one of these courses.

ENG 328 Native American Literature and Film 3(3-0)
A study of Native American literature and film within their cultural contexts. Prerequisites: ENG 201 with a grade of C or better. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

ENG 329 African American Literature 3(3-0)
Examines the literary and cultural contributions of African Americans from colonial times to present through written and oral forms of expression. Prerequisites: ENG 201 with a grade of C or better. (University Program Group IV-C: Studies in Racism and Cultural Diversity)

ENG 330 Gods, Monsters, and Immortality: Mythic Literature 3(3-0)
The origins and development of mythic patterns with major emphasis on the adaptation and interpretation of classical and Northern mythic to literary usage. (University Program Group I-A: Human Events and Ideas)

ENG 332 Contemporary Language and Thought 3(3-0)
Readings in contemporary (post-World War II) literary genres relative to contemporary thought and theory. Prerequisites: Grade of C or better in ENG 101, ENG 103/099 or ELI 198, Grade of "C" or better in ENG 201.

ENG 333 Literatures of Non-Western Cultures 3(3-0)
Introduction to literatures of non-Western cultures, such as African, Asian, Middle Eastern, Aboriginal, Caribbean, or Latin American. Prerequisites: Grade of "C" or better in ENG 101, ENG 103/099 or ELI 198, Grade of "C" or better in ENG 201.

ENG 334 Literary and Cultural Theory 3(3-0)
Study of historical and contemporary theories of literature and culture with attention to theoretical issues as well as application to literary, cultural, and other theoretical texts. Prerequisites: Grade of "C" or better in ENG 101, ENG 103/099 or ELI 198.

ENG 335 Topics in Ancient or Medieval Literature 3-6(3-0)
Topics that introduce key literary movements and historical contexts from antiquity to 1500 in one of the following traditions: B. British; C. World. Prerequisite: ENG 101 or 103/099 or ELI 198.

ENG 336 Topics in Early Modern Literature 3-9(3-0)
Topics that introduce key literary movements and historical contexts from 1500-1800 in one of the following traditions: A. American; B. British; C. World. Prerequisite: ENG 201.

ENG 337 Topics in Romantic or Realist Literature 3-9(3-0)
Topics that introduce key literary movements and historical contexts from 1790-1910 in one of the following traditions: A. American; B. British; C. World. Prerequisite: ENG 201.

ENG 338 Topics in Modern or Contemporary Literature 3-9(3-0)
Topics that introduce key literary movements and historical contexts from 1890-present in one of the following traditions: A. American; B. British; C. World. Prerequisite: ENG 201.

ENG 339 Victorian Literature and Thought 3(3-0)
Social, economic, industrial, philosophical, and religious ideas as expressed in the literature of the nineteenth century. Prerequisites: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better.

ENG 340 Modern British Literature 3(3-0)
Selected works in British literature since the 1920s, including poetry, fiction, drama, and general prose.

ENG 345 Studies in Authors 3(3-0)
Intensive reading of one or more of three authors investigating the way a body of work develops and reflects the author’s interests, concerns, and changing literary skills. Prerequisite: ENG 234.

ENG 349 Shakespeare 3(3-0)
A study of selected sonnets and a variety of comedies, histories, and tragedies with consideration of their Elizabethan and Jacobean background. Prerequisites: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better.

ENG 351 American Literature: Colonial and Early National Periods 3(3-0)
The various literary genres from the formative years of America.

ENG 352 American Literature: Romantic Period 3(3-0)
Major American literary movements and major authors of the first half of the nineteenth century. Prerequisites: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better.

ENG 353 American Literature: Realistic Period 3(3-0)
Significant trends in later nineteenth-century and early-twentieth-century American literature; local colorists, major realists, early Naturalists. Prerequisite: ENG 201 with a grade of C or better. Recommended: ENG 134 or 234.

ENG 354 American Literature: Modern Period 3(3-0)
Major literary movements and authors from the early twentieth century to WWII. Special emphasis on literary modernism. Prerequisites: ENG 201 with a grade of C or better; and ENG 134 or 234.

ENG 362 Literature of the Medieval World 3(3-0)
The study of epic tradition during the medieval period and the rise of the romance. Prerequisites: ENG 201 with a grade of C or better. Recommended: ENG 134 or ENG 234.

ENG 365 The Bible as Literature 3(3-0)
A study of the content and literary forms of Biblical literature.

ENG 371 Teaching Grammar 3(3-0)
Focuses on the study of college-level grammar and its application in the classroom. Focuses on both professionally written and student-generated texts. Prerequisites: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better. Recommended: ENG 271.

ENG 375 Introduction to Linguistics 3(3-0)
A survey of the field of linguistics, including discussion of sounds, word structure, sentence structure, meaning, acquisition, social use and historical change of language. Prerequisites: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better.

ENG 381 Children's Literature 3(3-0)
Literary analysis of prose and poetry suitable for children grades K through nine. Prerequisite: ENG 201 with a grade of C or better. Recommended: ENG 134 or 234.

ENG 391 Creative Writing: Fiction 3(3-0)
Discussion and critical evaluation of student fiction. May be offered as Writing Intensive. Prerequisite: ENG 204 with a grade of B or better.

ENG 392 Creative Writing: Poetry 3(3-0)
Discussion and critical evaluation of student poetry. Prerequisite: Grade of "B" or better in ENG 294.

ENG 395 Special Topics 1-6(Spec)
Consideration of subjects not listed in the regular department offerings. May be repeated when content is not a duplication of a previous special topic offering. English majors and minors, see general statement. This course may be offered in an online or hybrid format. Prerequisite: ENG 201 with a grade of C or better.

ENG 397 Independent Study 1-9(Spec)
Explores of special problems in language and literature individually agreed upon by student and instructor. Prerequisites: Approval of the instructor and department chairperson required before registration; ENG 201 with a grade of C or better; ENG 134 or 234.

ENG 402 Argumentation and Expository Writing 3(3-0)
Study of and practice using modern theories and techniques of argumentation and persuasive writing in contemporary civic, disciplinary, and professional discourse, contexts, and media. May be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisites: ENG 201 with a grade of C or better; senior standing. Recommended: ENG 301 or 303 or COM 352.

ENG 435 Studies in Texts 3(3-0)
Intensive reading of one, two or three major literary works in English, with historical and critical backgrounds and biographical and creative contexts. Prerequisite: ENG 234.

ENG 439 English Romantic Poetry and Prose 3(3-0)
Emphasis on Blake, Wordsworth, Coleridge, Keats, Shelley, and Byron. Recommended: 6 hours of literature.

ENG 441 Contemporary English Prose 3(3-0)
Important novelists and dramatists in contemporary Britain. Prerequisites: Grade of "C" or better in ENG 101, ENG 103/099 or ELI 198; grade of "C" or better in ENG 201; ENG 134 or 234.
ENG 442 The British Novel 3(3-0)
The development of the British novel considered historically and thematically. Prerequisites: ENG 101 or 103/099 or ELI 198 with C or better; ENG 201 with C or better; ENG 134 or ENG 234.

ENG 444 In Her Own Words: Global Feminist Perspectives 3(3-0)
Theories, methodologies, and applications of Global Feminisms to women-authored texts in an international context. May include a study abroad component. Prerequisite: ENG 201 with a grade of C or better; ENG 234 or WST 296.

ENG 454 Contemporary American Prose 3(3-0)
Important novelists and dramatists in contemporary United States. Prerequisites: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better; ENG 134 or 234.

ENG 455 The American Novel 3(3-0)
The development of the novel as seen in the works of representative authors. Prerequisites: Grade of "C" or better in ENG 101, ENG 103/099, or ELI 198; Grade of "C" or better in ENG 201; ENG 134 or 234.

ENG 460 Senior Seminar: Current Issues in English 3(3-0)
Explores current scholarly, theoretical, or pedagogical issues in English studies culminating in a major creative and/or written academic paper presented orally. Prerequisites: Open to senior English majors only; ENG 101, 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better; ENG 134 or 234.

ENG 481 International Literature for Children and Young Adults 3(3-0)
Exploration of the literary and cultural heritage of countries other than the U.S. through modern and folk literature suitable for today's youth. Prerequisites: ENG 201 with a grade of C or better; ENG 234 or 381.

ENG 482 Fantasy for Youth 3(3-0)
Study of the nature, purpose, and value of poetry for children and young adults; emphasis on interpretation and performance. Prerequisites: ENG 201 with a C or better; ENG 134 or 234 or 381.

ENG 485 Poetry for Children and Young Adults 3(3-0)
Concentration upon individual projects in poetry writing. May be repeated up to 6 hours. Prerequisites: Grade of "C" or better in ENG 101, ENG 103/099 or ELI 198; Grade of "C" or better in ENG 201; ENG 234 or ENG 381.

ENG 491 Advanced Fiction Writing 3-6(3-0)
Concentration upon individual projects in fiction. May be repeated up to 6 hours. May be offered as Writing Intensive. Prerequisites: ENG 201 with a grade of C or better; ENG 134 or 234; ENG 291 with a grade of B or better.

ENG 492 Advanced Poetry Writing 3-6(3-0)
Concentration upon individual projects in poetry writing. May be repeated up to 6 hours. Prerequisites: Grade of "C" or better in ENG 101, ENG 103/099 or ELI 198; grade of "C" or better in ENG 201; ENG 392.

ENG 493 Creative Nonfiction 3-6(3-0)
Concentration upon individual projects in creative nonfiction. Course may be repeated up to six hours. May be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisites: ENG 201 with a grade of C or better; ENG 294 or 301.

ENG 503 Document Design 3(3-0)
Theories and applications of information design and visual rhetoric for print and electronic documents. This course may be offered in an online or hybrid format. Prerequisites: Graduate standing or ENG 201 with a C or better. Recommended: ENG 303.

ENG 504 Technical Editing 3(3-0)
Methods and technologies used in editing and publishing technical documents in print and electronic media; production. This course may be offered in an online or hybrid format. Prerequisites: Graduate standing or ENG 201 with a B or better and 86 credit hours completed. Recommended: ENG 303.

ENG 510 Writing Center Practicum 1-3(Spec)
Examines key issues in writing and teaching writing and provides a mediated, instructional experience for working one-on-one with writing. May be offered as Writing Intensive. Prerequisites: Permission of Instructor.

ENG 513 Special Topics 1-6(Spec)
Subjects not part of regular department offerings. May not be a duplication of a previous section. This course may be offered in an online or hybrid format. Prerequisites: 86 credit hours completed; or graduate standing.

ENG 514 Language and Media Discourse 3(3-0)
Examination and application of rhetorical and discourse theory and techniques in media. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisites: Graduate standing or completion of 56 credit hours. Recommended: ENG 301.

ENG 517 Reading and the English Classroom 3(3-0)
The relationship of reading to the teaching of English through an introduction to the reading process, the needs of reluctant readers, and k-12 and ESL literacy issues.

ENG 519 Teaching of Composition 3(3-0)
Research and methodology in the teaching of composition.

ENG 520 Diachronic Linguistics and the History of English 3(3-0)
Theory and methodologies of diachronic linguistics, with a focus on the development of the English language. Prerequisite: Graduate standing or ENG 375.

ENG 535 History of Literary Criticism 3(3-0)
Review of critical attitudes and approaches of enduring significance. Prerequisite: 6 hours of literature.

ENG 539 Seminar in Major Nonfiction Writers 3-6(Spec)
Creative and critical approaches to the study of representative works by selected major nonfiction writers. May be repeated to a maximum of nine hours. May be offered in a hybrid or online format. May be offered as Writing Intensive. Prerequisites: ENG 201 with a C or better; ENG 134 or 234; or graduate standing.

ENG 545 Chaucer 3(3-0)
Middle English grammar and pronunciation. The life and works of Chaucer with emphasis on the Canterbury Tales and Troilus and Criseyde.

ENG 547 Seminar in Major British Writers 3-9(Spec)
A study of one or more British writers, selected by the instructor. May be repeated for a maximum of nine credit hours. Prerequisites: Graduate status or the following: Grade of "C" or better in ENG 101, ENG 103/099 or ELI 198; Grade of "C" or better in ENG 201; either ENG 134 or ENG 234.

ENG 549 Advanced Shakespeare 3(3-0)
Close study of a selection of Shakespearean texts. May be offered in an online or hybrid format. Prerequisites: Graduate standing or ENG 201 with a grade of C or better; ENG 234; ENG 349.

ENG 559 Seminar in Major American Writers 3-9(Spec)
A study of one or more American writers selected by the instructor. May be repeated a maximum of nine hours. Prerequisites: Graduate status or the following: ENG 201 with a grade of C or better; ENG 134 or ENG 234. Recommended: 6-9 hours of American Literature.

ENG 561 European Romanticism 3(3-0)
Comparative exploration of the Romantic movement in literature and philosophy with special attention to Germany and France. Prerequisites: Graduate status or ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better; either ENG 134 or ENG 234. Recommended: 6 hrs of literature courses.

ENG 566 Human Rights in Literature, Art, and Film 3(3-0)
Exploration of the history, development, and application of human rights as represented in literature, the arts, and film. Prerequisite: Admission to any of the English department's MA programs or ENG 201 with a grade of C or better, ENG 134 or 234.

ENG 569 Seminar in Major World Writers 3-9(Spec)
A study of one or more writers, selected by the instructor, from various regions of the world. May be repeated for a maximum of nine credit hours. Prerequisites: Graduate status or the following: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better; ENG 134 or ENG 234. Recommended: 6-9 hours of ENG 300 and/or ENG 400 level courses.

ENG 570 Old English 3(3-0)
Study of the grammar and pronunciation of Old English and analysis of Old English literary texts. Prerequisites: Graduate Status or ENG 201 with a grade of C or better; ENG 134 or 234.

ENG 571 Teaching of English to Speakers of Other Languages 3(3-0)
Principles and techniques for teaching English to students whose first language is not English. Prerequisite: ENG 375.

ENG 573 Linguistics and Reading 3(3-0)
The reading process, the effects of language on reading, the relation between language and writing, and the ways people process information. Prerequisite: ENG 375 or ENG 576.

ENG 574 TESOL Materials, Assessment, Curriculum 3(3-0)
Techniques for designing curricula, teaching materials, and tests and other assessment tools for ESL/EFL or bilingual/bicultural classrooms. Prerequisites: ENG 571; Graduate status or the following: ENG 101 or 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better.

ENG 577 Introduction to Second Language Acquisition 3(3-0)

ENG 578 Applied Sociolinguistics 3(3-0)
Topics include cross cultural aspects of conversation, speech act theory, language and gender, non verbal behavior and the role of socio cultural variables in language acquisition. Prerequisites: Graduate status or the following: ENG 201 with a grade of C or better; ENG 134 or ENG 234.

ENG 580 Literature for Young Adults 3(3-0)
Reading interests and library materials of junior and senior high students; methods of stimulating reading. Subject grouping of books related to adolescent reading interests/needs. Identical to LMT 580. Credit may not be earned in more than one of these courses. Prerequisites: Completion of 86 hours, ENG 201 with a grade of C or better, One of: ENG 134 or ENG 234 or ENG 381; or graduate status.

ENG 581 The History of Children's Literature 3(3-0)
Major trends in the history of children's literature as they emerged under certain philosophical, educational, and social influences in England, America, and Europe. Emphasis on current analysis. Prerequisites: ENG 201 with a grade of C or better, One of: ENG 134 or ENG 234 or ENG 381; or graduate status.

ENG 582 History of the Modern Novel 3(3-0)
The development of the novel as seen in the works of representative authors. Prerequisites: Open to senior English majors only; ENG 101, 103/099 or ELI 198 with a grade of C or better; ENG 201 with a grade of C or better; ENG 134 or 234.
**ENT - Entrepreneurship**

*See the Department of Entrepreneurship for more information.*

**ENT 101 Discovering the Entrepreneur Within 3(3-0)**
Introduction to entrepreneurship. Emphasis on business fundamentals, successful entrepreneurial characteristics, communications, ethics, leadership, and team work. Only one of ENT 101, BUS 100 or BIS 100 may be applied to the ENT major or minor. This course may be offered in an online or hybrid format.

**ENT 201 Entrepreneurship Launch Pad 3(3-0)**
Recognize, develop, and act on individual potential for creativity and innovation. Shape and evaluate business opportunities, perform market research, and "pitch" an idea. Identical to MGT 210. Credit may not be earned in more than one of these courses. This course may be offered in an online or hybrid format. Prerequisites: ENT 101 or BUS 100 or BIS 100.

**ENT 210 Accounting Information for Entrepreneurial Decision Making 3(3-0)**
Introduction to principles of financial and managerial accounting, design of accounting systems, techniques of analysis and cost control. Interpretation of accounting information for decision making. Does not count for the School of Accounting majors or minors. Identical to ACC 210. Credit may not be earned in more than one of these courses. ENT 210 may not be used as a substitute for ACC 201 or ACC 250. This course may be offered in an online or hybrid format.

**ENT 213 Economics for Entrepreneurs 3(3-0)**
Introduction to the economic way of thinking and its applications to decision making in the business world. Emphasis on understanding and applying economic concepts. Identical to ECO 213. Credit may not be earned in more than one of these courses. Does not count as credit for the Economics major or minor.

**ENT 221 Marketing Strategies for Entrepreneurs 3(3-0)**
General marketing principles applied to the entrepreneurial venture including daily activities, long-term branding/position strategy, inexpensive ways to conduct research, and utilizing networks to identify/ reach customers. Identical to MKT 221. Credit may not be earned in more than one of these courses. This course may be offered in an online or hybrid format. Recommended: ENT 101, ENT/MKT 210.

**ENT 300 Digital Entrepreneurship 3(3-0)**
The use and management of information systems (IS) by entrepreneurs around the world, creating value from information systems and exploring digital entrepreneurship. Identical to BIS 300. Credit may not be earned in more than one of these courses. Prerequisites: 56 semester hours completed; ACC 201, 210, 250, or ENT 210; STA 282; signed major or minor in Entrepreneurship.

**ENT 320 Financial Management of the Entrepreneurial Venture 3(3-0)**
Practical application of financial principles to the creation, growth, and management of an entrepreneurial venture. Identical to FIN 320. Credit may not be earned in more than one of these courses. Prerequisites: ENT 210, 221; 56 semester hours completed; signed major in Entrepreneurship.

**ENT 419 Running and Growing an Entrepreneurial Venture in a Global Economy 3(3-0)**
This course emphasizes the acquisition of skills and knowledge necessary to successfully maintain and grow an established entrepreneurial venture within a global business environment. Identical to MGT 419. Credit may not be earned in more than one of these courses. Prerequisites: 56 semester hours completed; signed major or minor in Entrepreneurship.

**ENT 420 Legal Aspects of New Ventures 3(3-0)**
Introduces entrepreneurs to legal requirements for forming a business. Identical to BLR 420. Credit may not be earned in more than one of these courses. Prerequisites: 86 semester hours completed; signed major or minor in Entrepreneurship.

**ENT 444 Internship in Entrepreneurship 3(3-0)**
Student works full or part time in a business situation for educational experience. Must be arranged through Entrepreneurship Internship Supervisor. Prerequisites: ENT/ACC 210, ENT/ECO 213, and ENT/MKT 221; 56 semester hours completed; signed major or minor in Entrepreneurship, approval of Entrepreneurship Internship Supervisor. Recommended: ENT/FIN 320 and ENT/MGT 419.

**ENT 492 Emerging Venture Consulting 3(3-0)**
Work with local small business clients and entrepreneurs to conduct analysis and provide deliverables that enable the business to operate more effectively and to grow. Prerequisites: 86 semester hours completed; signed major or minor in Entrepreneurship; ENT/MKT 221; ENT/BIS 300; ENT/FIN 320. Recommended: ENT/MGT 419.

**ENT 495 Launching a Venture 3(3-0)**
Analyzing opportunities, writing a comprehensive business plan, “pitching” opportunities, and other advanced entrepreneurship topics. Capstone course for Entrepreneurship major. Prerequisites: 86 semester hours completed; ENT/MGT 221, ENT/BUS 300, ENT/FIN 320, and ENT/MGT 419. Pre/co-requisite: ENT/BLR 420.

**ENT 497 Special Topics in Entrepreneurship 3-12(3-0)**
Selected topics not covered in existing courses with current topic listed in Course Search and Registration. Specific topics will be listed on the student’s transcript. Repeatable up to 12 credits with different topics. Only 3 credits will count toward entrepreneurship major or minor. Prerequisite: See Course Search and Registration.

**ENV - Environmental Studies**

*See the Environmental Studies Major and Minor in the Index for more information.*

**ENV 101 Introduction to Environmental Studies 3(3-0)**
An introduction to the interdisciplinary study of human/environmental relationships. Topics include the biosphere, ecosystems and how human socio-political factors interact with them. This course is approved for offering in a distance learning format.

**ENV 197 Special Topics 1-6(3-0)**

**ENV 210QR Environmental Resource Use 3(3-0)**
This course uses quantitative reasoning and analyses to explore and evaluate critical environmental issues, such as resource utilization and sustainability, from an interdisciplinary perspective. Quantitative Reasoning.

**ENV 310 Environmental Issues Management 3(3-0)**
Review of regulatory requirements and application of scientific studies to risk management environmental risk. Case studies of risk management by the targeted community and regulatory agencies. Prerequisites: BIO 101 or BIO 105; ENV 101; CHM 120 or CHM 161 or both CHM 131 and CHM 132.
ENV 397 Special Topics 1-6(Spec)

ENV 400 Environmental Studies Capstone 3(3-0)
Seminar format; discussion, analysis and presentation of research relevant to contemporary environmental issues. Prerequisites: Completion of at least 31 credits selected from the Core and Required courses of the Environmental Studies major.

ENV 497 Independent Study 1-3(Spec)
Students may explore topics of special interest with faculty members. Prerequisites: open to juniors and seniors with approval of the instructor and program director.

ENV 597 Special Topics 1-6(Spec)

ESC - Earth Science
See the Department of Geography and/or the Interdisciplinary Earth Science Majors and Minors for more information.

ESC 340 Micrometeorology 3(3-0)
Radiation balance, heat and moisture exchange, and wind structure near the ground; influences of topography, soil type, cultivation techniques, and vegetation. Applications of agriculture, forestry, cities, and air pollution. Prerequisites: GEO 105, MET 201 or MET 240. Corequisite: ESC 341.

ESC 341 Micrometeorology Laboratory 1(0-2)
Field measurements of micrometeorological variables; examination of the impact of variations in the environment on the local climate. Corequisite: ESC 340.

ESC 397 Independent Study 1-3(Spec)
Exploration of topics in geography/earth science agreed upon by student and instructor. Prerequisites: 6 hours of ESC; permission of instructor and department chairperson before registration.

ESC 400 Earth Science Education 3(2-2)
Study of earth science in the K-12 science curriculum, including relevant teaching methods and preparation of lesson plans in accordance with the State Science Content Standards. Prerequisites: Junior standing as a declared major or minor in Integrated Science or Earth Science Education; GEL 100 or 130; 9 additional hours distributed among major requirements for Integrated Science or Earth Science. Admission into Teacher Education program.

ESC 575 Special Studies in Earth Science 1-6(Spec)
Various special topics offered at an advanced undergraduate level. Topics announced in Course Search and Registration. Prerequisites: permission of instructor.

ESC 591 Internship 1-12(Spec)
Experiences in applying geographic techniques to environmental analysis, resource management and business applications. Up to 3 hours credit can be applied to geography major. A full-time internship position for one semester may qualify for 12 hours of credit. Identical to GEO 591. Credit may not be earned in more than one of these courses. Prerequisites: permission of program advisor.

ESC 597 Independent Study 1-9(Spec)
Exploration of topics in earth science agreed upon by student and instructor. May be taken only by arrangement prior to registration. Prerequisites: 12 hours of earth science credit; permission of both instructor and department chairperson before registration.

FIN - Finance
See the Department of Finance and Law for more information.

FIN 201 Personal Finance 3(3-0)
A survival course designed to help you cope with the financial aspects of your life such as taxes, budgeting, inflation, insurance of all kinds, savings, and investing. This course is approved for offering in a distance learning format.

FIN 257 Risk Management 3(3-0)
A survey course of insurance and risk management, with emphasis on the corporate handling of risks. Prerequisites: 26 semester hours completed.

FIN 297 Special Topics 1-3(Spec)
Selected topics of interest to students which are not normally included in existing courses. Specific topic will be listed on student's transcript. Prerequisites: permission of department chairperson.

FIN 302 Integrated Financial Analysis 3(3-0)
Selected methods, with relevant theories, for a corporation to make decisions on investments, financing, and to evaluate performance in an integrative framework. Credit may not be earned in both FIN 302 and FIN 332. Prerequisites: Tier 2 Admission to Professional Business Studies; ACC 255, BIS 255, MGT 258. Co-requisites: MGT/MKT 303, MKT 304.

FIN 303 Financial Administration 3(3-0)
Financial administration of both profit and not-for-profit organizations in the areas of asset procurement and raising capital. Credit may not be earned in both FIN 303 and FIN 332. This course is approved for offering in a distance learning format. Prerequisite: ACC 204.

FIN 307 Fundamentals of Personal Financial Planning 3(3-0)
A fundamental course with emphasis on the personal financial planning process and the roles of health, property and liability insurance in financial planning. Prerequisites: ACC 201 or ACC 250.

FIN 315 Principles of Investments 3(3-0)
Provides students with basic knowledge about different investments and sources of information to enable them to make wiser investments and prepare to build portfolios. Prerequisites: 56 hours completed; admission to Professional Business Studies or listed on a signed major or minor.

FIN 317 Insurance Planning 3(3-0)
This course introduces students to risk management and insurance decisions in personal financial planning, including health, disability, property, liability, and long-term care risks and insurance. Prerequisites: ACC 201 or 250, BLR 202 or 235; STA 282 or 382; admission to Professional Business Studies or listed on a signed major or minor.

FIN 320 Financial Management of the Entrepreneurial Venture 3(3-0)
Practical application of financial principles to the creation, growth, and management of an entrepreneurial venture. Identical to ENT 320. Credit may not be earned in more than one of these courses. This course may be offered in an online or hybrid format. Prerequisites: 56 semester hours completed; ACC 201, 210, 250, or ENT 210; STA 282; signed major or minor in Entrepreneurship.

FIN 332 Managerial Finance 3(3-0)
Basic principles and techniques of the acquisition, management, and distribution of financial resources. Credit may not be earned in both FIN 302 and FIN 332. Prerequisites: ACC 201 or ACC 250, ACC 202 or ACC 255; 56 semester hours completed. This course is approved for offering in a distance learning format.

FIN 335 Real Estate Principles 3(3-0)
An introduction to real estate practice, institutions and participants with a focus on investment decision making, valuation, and debt financing. Prerequisite: ECO 202 or 203.

FIN 336 Real Estate Finance & Investments 3(3-0)
Survey of the institutional landscape of real estate finance, including debt and equity, public securities and private financing modes. Prerequisites: FIN 335; admission to Professional Business Studies or listed on signed major or minor.

FIN 337 Real Estate Valuation/Appraisal 3(3-0)
The application of valuation techniques to the appraisal of properties purchased by investors for their income potential. Prerequisites: Admission to Professional Business Studies.

FIN 347 Retirement Planning 3(3-0)
This course covers issues that individuals face in retirement (money needs, life-styles, medical) and develops an understanding of both public and private retirement plans. Prerequisites: ACC 311, FIN 315, FIN 307; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

FIN 397 Special Topics 3-6(Spec)
Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the student's transcript. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

FIN 416 Institutional Operations 3(3-0)
Study of the management strategies and procedures for profitable operation of institutions such as commercial banks, thrift institutions insurance companies, finance companies and pension funds. Prerequisites: FIN 302 or FIN 332, FIN 472; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

FIN 425 Options and Futures 3(3-0)
Survey of markets for futures and options on financial securities and commodities. Valuation of futures/options and application for hedging and risk. Prerequisites: FIN 302 or FIN 332, FIN 315 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

FIN 438 Real Estate Development 3(3-0)
A case studies approach to real estate development integrating urban dynamics, architecture, construction, law, public approvals, finance, marketing and management. Prerequisites: FIN 335, 336, and admission to Professional Business Studies.

FIN 442 Intermediate Financial Management 3(3-0)
In-depth examination of financial management. Current theory and practices are discussed with applications including computer simulations, comprehensive cases, and a term project. Prerequisites: FIN 302 or FIN 332, 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

FIN 445 Personal Estate Planning 3(3-0)
Fundamentals of estate planning for personal use and professional training. Professional topics target applications in trust administration, accounting, and personal financial planning. Identical to BLR 445. Credit may not be earned in more than one of these courses. Prerequisites: FIN 347; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

FIN 446 Problems in Financial Institutions 3(3-0)
A case course to enable students to deal with problems affecting various financial intermediaries, with an emphasis on banking. Prerequisites: FIN 472; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.
FIN 447 Cases in Personal Financial Planning 3(3-0)
Capstone personal financial planning course in client-centered personal financial planning. This course applies principles of personal financial planning in case studies. Prerequisites: FIN 317, FIN 347, completion or current enrollment in FIN 435; 56 semester hours completed; admission to Professional Business Studies.

FIN 448 Fundamental Financial Analysis 3(3-0)
Methods of fundamental financial analysis necessary for evaluating and forecasting firm financial and operating performance. This course may be offered in an online or hybrid format. Prerequisites: FIN 302 or FIN 332; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

FIN 455 Portfolio Management 3(3-0)
Learn advanced methods of analyzing and valuing both debt and equity securities, as well as theories and techniques for combining assets into efficient portfolios. Prerequisites: FIN 302 or FIN 332; FIN 315; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

FIN 472 Money and Capital Markets 3(3-0)
Survey of money and capital markets, strategies for growth, and timing of financial policy. Prerequisites: FIN 302 or FIN 332; ECO 201 or ECO 204, ECO 202 or ECO 203; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

FIN 482 Working Capital Management 3(3-0)
In-depth examination of working capital within the firm, emphasizing the short-term aspects of financial management. Computer simulations, comprehensive cases, and term project are required. Prerequisites: FIN 302 or FIN 332; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

FIN 490 Internship in Finance 1-3(Spec)
Enrollment confined to a limited number of students working in business situations for educational experience. Prerequisites: permission of the department chairperson; admission to Professional Business Studies or listed on signed major or minor.

FIN 491 Independent Studies 1-6(Spec)
Directed reading or research on an approved topic. Open to seniors in good academic standing. Prerequisites: prior permission of instructor and department chairperson; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

FIN 492 Practicum in Small Business 3(Spec)
Provides the student an opportunity to analyze the accounting, finance, marketing, and management of an ongoing small business. Identical to ACC/MGT/MKT/BIS 492. Credit may not be earned in more than one of these courses. Prerequisites: Permission of instructor; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

FIN 497 Special Topics 1-6(Spec)
Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the students transcripts. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

FIN 498 Seminar in Financial Theory 3(3-0)
Financial theories, such as utility and arbitrage pricing will be studied. The efficacy of the theory to the application of finance in the world will be discussed. Prerequisite: FIN 442; permission of instructor; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

FIN 499 Advanced Financial Management 3(3-0)
The capstone course in finance. Broad integrative topics within financial management are examined through cases, exams, and a written project. Required of finance majors. Prerequisites: FIN 302 or 332, 442, 448; 86 semester hours completed; Tier 2 admission to Professional Business Studies or listed on signed major or minor. Recommended: FIN 472.

FIN 573 International Finance 3(3-0)
Role of financial manager in international corporations. Environmental problems of foreign exchange management, techniques for making investment decisions, financing, marketing operations, long-term capital structure and flow of funds. Prerequisites: FIN 302 or FIN 332; 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

FIN 597 Special Topics 1-3(Spec)
Selected problems of interest to students which are not formally included in existing courses. Specific topic will be listed on student's transcript. Prerequisites: 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor, or permission of MBA director.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

FLN 671 Financial Derivatives 3(3-0)

FLN 674 Short Term Financial Management 3(3-0)

FLN 676 Investment Strategy 3(3-0)

FLN 678 Long Term Financial Policies 3(3-0)

FLN 791 Independent Studies 1-6(Spec)

FLN 797 Special Topics 3-6(Spec)

FLN 798 Thesis 1-6(Spec)

Course Descriptions approved for University Program are in italics.
FMD 332 Fashion Buying 3(2-2)
Fundamentals of the fashion buying function; practices, procedures, and techniques including merchandising calculations and buying simulation. Prerequisites: FMD 256, BIS/CPS 106, successful completion of math competency.

FMD 345 Apparel Design Methods 3(2-2)

FMD 346 Advanced CAD for Apparel 3(2-2)
Apparel design and production techniques using computer systems and CAD software. Web site development, portfolio development, and CAD related career exploration. Prerequisites: FMD 246.

FMD 350 Professional Study Tour 2-3(Spec)
Tours to relevant sites within merchandising and design industries which may include producers, trademarks, museums, etc. Credit based on tour content and depth of study. CR/NC only.

FMD 355 Textile Analysis 3(2-2)
Use of standardized testing in quality control of textiles for end-use and serviceability. Pre/Co-requisite: FMD 241.

FMD 356 Visual Merchandising 3(1-3)
Visual Merchandising for fashion product promotion and branding. Techniques of styling and window display. Creation of merchandising directives. Professional practice via team-based project completion. This course may be offered in an online or hybrid format. Prerequisites: FMD 246, 256.

FMD 357 Fashion Show Production & Promotion 3-6(Spec)
Experiential course involving aspects of fashion show production. Event design, planning, staging, and promotion. This course may be offered in an online or hybrid format. Prerequisites: A minimum of 24 completed credits.

FMD 358 Multichannel Fashion Merchandising 3(3-0)
In-depth examination of multichannel fashion merchandising including topics such as store locations, catalog and web merchandising, mobile commerce, TV home shopping, and virtual fashion. Prerequisites: FMD 246, 256.

FMD 397 Special Topics in Apparel Merchandising & Design 1-6(Spec)
Topics of special interest which are not normally included in existing courses. Prerequisites: See Course Search and Registration.

FMD 401 Internship in Apparel Merchandising and Design 4(Spec)
A structured internship experience that fosters transfer of knowledge and skill into competencies required for successful performance in an apparel merchandising or design career. Prerequisites: FMD 330.

FMD 410 Fashion Advertising and Promotion 3(3-0)
A study of key fashion media, cutting-edge strategies, and techniques for branding, advertising and promoting fashion products. Prerequisites: FMD 256, Pre/Co-requisite: FMD 246, 330.

FMD 457 Portfolio Techniques 3(3-0)
A capstone course to develop a professional portfolio and an e-portfolio integrating knowledge across the curriculum, experiential learning, technical presentation and communication skills. Prerequisites: FMD 401, senior standing.

FMD 490 Independent Study in Apparel Merchandising and Design 1-6(Spec)
A student-initiated learning activity focusing on a faculty approved topic in Apparel Merchandising and Design. Prerequisite: Permission of instructor.

FMD 497 Special Topics in Apparel Merchandising & Design 1-5(Spec)
Topics of special interest which are not normally included in existing courses. Prerequisites: See Course Search and Registration.

FMD 545 Introduction to Draping 3(2-2)
Interpretation of garment designs developed through the draping on dress forms. Prerequisites: FMD 241 and FMD 345 or graduate status.

FMD 546 Experimental CAD for Apparel 3-9(Spec)
Creative use of CAD software as applied to standards prevalent in the design, manufacture or presentation of apparel. May be taken for credit more than once if different software is being used; total credit not to exceed nine hours. Prerequisites: Permission of instructor.

FMD 547 Functional Apparel Design 3(2-2)
A systematic approach to apparel design integrating knowledge of the needs and functional wear of the wearer, the structural properties of textiles and apparel design. Prerequisites: FMD 241, FMD 345, FMD 355.

FMD 550 Global Apparel Supply Chain Management 3(3-0)
Global Textile and apparel trading systems from the perspective of their operational issues including global business process applications, apparel supply chain management and global logistics. This course may be offered in an online or hybrid format. Prerequisites: 56 semester hours with at least 12 hours in apparel merchandising and design courses including FMD 401.

FMD 560 Apparel Product Development 3(2-2)
Integration of merchandising and design functions through team-based and case-based study, and/or industry collaboration as a total process for apparel product development. Prerequisites: Signed major in Apparel Merchandising & Design with a concentration in Apparel Design or signed major in Apparel Merchandising & Design with a concentration in Apparel Merchandising. For Apparel Design concentration: FMD 246, 345, 355, 401; Pre/Co-requisite: FMD 550. For Apparel Merchandising Concentrations: FMD 246, 256, 330, 335, 355, 358, 401; Pre/Co-requisite: FMD 550. Or admission to College of Graduate Studies.

FMD 570 The Business and Design of European Fashion 3(Spec)
A short term (three weeks) faculty led study abroad program examining the business and design of European fashion including haute couture. Prerequisites: FMD 141, 256, minimum GPA of 2.5, and permission of instructor. Recommended: FMD 210.

FMD 597 Special Topics in Apparel Merchandising & Design 1-5(Spec)
Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student's transcript. Prerequisite: See Course Search and Registration.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

FMD 604 Scholarship in Textiles and Clothing 3(0-0)
FMD 635 Advanced Internship in Textiles & Apparel 1-6(Spec)
FMD 640 Anthropometrics and Apparel 3(2-2)
FMD 641 Apparel Presentation Technology 3(2-2)
FMD 655 Textile Product Evaluation 3(2-2)
FMD 656 Apparel Retail Technology 3(3-0)
FMD 697 Special Topics in Apparel Merchandising & Design 1-5(Spec)
FMD 790 Independent Study in Apparel Merchandising & Design 2-5(Spec)
FMD 797 Special Topics in Apparel Merchandising & Design 1-5(Spec)
FMD 798 Thesis in Apparel Merchandising & Design 1-6(Spec)

FNS - Foods and Nutrition
See the Department of Human Environmental Studies for more information.

FNS 160 Introduction to Foods 3(2-2)
Basic principles and fundamental processes underlying food preparation. Prerequisites: Listed on a signed major or minor or less than 56 semester hours completed.

FNS 261 Foodservice Catering for Events 3(3-0)
A comprehensive study of managing the foodservice component to an event including food and beverage planning and costs, table and room settings, and menu planning. Prerequisite: Signed Event Management Minor.

FNS 263 Beverages In Foodservice 3(3-0)
A study of the sources, production, storage and service of coffee, tea, carbonated beverages, beer, wine, and spirits.

FNS 271 Food and Culture in the United States 3(3-0)
Characteristics and effects of food choices among culturally diverse groups within the United States.

FNS 361 Experimental Foods 3(2-2)
An experiential approach to the study of food: physical and chemical properties, food product development, sensory evaluation, food analyses, food engineering, and food biotechnology. Prerequisites: FNS 160; CHM 342; STA 282 or HSC 544; senior standing in Dietetics.

FNS 363 Food Safety and Sanitation 1(1-0)
Safe handling of foods as related to purchase, storage, preparation, and service. Certification in sanitation by the National Education Foundation is earned by passing exam. Prerequisites: FNS 160.

FNS 364 Foodservice Operations 3(3-0)
A systems approach to the production and preparation of food in quantity, including food safety and sanitation, recipe analysis, and distribution. Prerequisite: FNS 160.

FNS 365 Quantity Food Production 2(2-0)
The principles of production: standardized recipes; schedules; forecasting; quality and hazard analysis; yields; principles of cookery in quantity; kitchen departmentalization; production, distribution and service systems. Successful completion of the Michigan Occupational Competency Assessment Center's exam in food management results in credit for this course. Prerequisite: FNS 160.

FNS 366 Quantity Food Production Laboratory 2(0-4)
Techniques of food preparation in quantity using a wide variety of equipment. Application of the principles of procurement, food production, safety, sanitation, distribution and service. Successful completion of the Michigan Occupational Competency Assessment Center's exam in food management results in credit for this course.

FNS 367 Institutional Food Production Laboratory 1(0-2)
Techniques of institutional food preparation and service using a wide variety of equipment. Service to the institution's target population will be emphasized. Prerequisites: FNS 363 with ServSafe Certification, FNS 365, FNS 370.

FNS 370 Nutrition 3(3-0)
Principles of normal nutrition as related to the health of all age groups. This course may be offered in an online or hybrid format. (University Program Group II-A: Descriptive Sciences)

FNS 371 Nutrition & Women's Health 3(3-0)
Study of women's health concerns and nutritional needs. This course focuses on basics of healthy living and common major conditions that affect women's health. Prerequisite: FNS 370.
FNS 373 Contemporary Nutritional Issues 3(3-0)
Contemporary nutritional issues, fads and myths reviewed under current research. This course focuses on current issues in nutrition research and proposes healthy behavioral lifestyle strategies. Prerequisite: FNS 370.

FNS 374 Nutrition in the Life Cycle 4(4-0)
Nutritional needs across the life span. Introduction to nutritional assessment methods, the physiological basis for nutritional recommendations, and evaluation of nutrition related research. Prerequisite: FNS 370.

FNS 375 Nutrition and Performance 3(3-0)
Focus is upon sports nutrition for athletes and individuals in recreation. Analysis of the interaction among energy expenditure, fuel needs and utilization, and all nutrients. Prerequisites: FNS 370.

FNS 377 Nutrition in Disabilities and Disease 3(3-0)
Principles of nutrition as related to individuals with developmental disabilities or disease. Prerequisite: FNS 370.

FNS 378 Maternal and Infant Nutrition 3(3-0)
This course covers the latest research related to women's nutritional requirements throughout their reproductive years including pre-conceptual, antenatal and postnatal periods, and infant nutritional requirements. Prerequisite: FNS 370.

FNS 397 Special Topics in Foods and Nutrition 1-6(Spec)
Topics of special interest which are not normally included in existing courses. Prerequisites: See Course Search and Registration.

FNS 463 Menu Planning: Design and Service 3(3-0)
Concepts of menu design: copy, layout, design, nutrition, construction, pricing techniques and consistency of concept. Service styles and front-of-the-house management presented. Prerequisite: FNS 370.

FNS 465 Foodservice Facilities Design 3(3-0)
Creating a foodservice facility design including: concept development, market analysis, menu, equipment, building size and space, and marketing the operation to the target market. Prerequisites: FNS 365, 463.

FNS 467 Quantity Food Purchasing 3(3-0)
Interaction with intermediaries, buying methods, identification and specifications for food and non-food items presented. Prerequisites: FNS 160.

FNS 468 Foodservice Internship 3(Spec)
An internship of 240 hours in food production. FNS 566 may be a substitution for this course on the Foodservice major for students demonstrating one or more years of qualifying experience. Approval of instructor required. Prerequisites: FNS 365, FNS 366, FNS 465, FNS 467.

FNS 469 Foodservice Systems Administration 3(3-0)
Study of institutional foodservice systems including purchasing, storage controls, cost containment, personnel selection and development, organizing, leadership, decision making, and facilities control. Prerequisites: FNS 160, 364, admission into the professional phase of the Dietetics Program.

FNS 470 Applied Nutrition 3(3-0)
A detailed examination of human nutritional needs and how nutritional science can be applied to meet those needs in health and disease. Prerequisites: FNS 370.

FNS 471 Medical Nutrition Therapy 3(3-0)
This course addresses the application of medical nutrition therapy in the treatment and management of injury, illness and other disease conditions. Prerequisites: FNS 370, CHM 421 or 521, BIO 392 or HSC 214 and 215; admission to the Professional Phase of the dietetics program. Pre/Co-requisite: FNS 473.

FNS 472 Medical Nutrition Therapy II 3(3-0)
The application of medical nutrition therapy in the treatment and management of injury, illness, and other disease conditions. Prerequisites: FNS 471, admission to the Professional Phase of the Dietetics Program.

FNS 473 Advanced Nutrition 4(4-0)
Biological needs in human nutrition based on current research and its applications. Prerequisites: FNS 370; BIO 392 or CHM 521.

FNS 475 Nutritional and Herbal Supplements 3(3-0)
The potential impact of non-nutrient components in food, nutritional supplements, and herbs in the prevention and treatment of disease via integrative and alternative medical approaches. Prerequisite: FNS 370.

FNS 477 Assessing Nutritional Status 2(1-2)
Introduces dietary, anthropometric, biochemical, and clinical approaches to assessing nutritional status. Prerequisite: FNS 370.

FNS 479 Professional Issues in Dietetics 1(1-0)
An analysis of the profession of dietetics: Careers, issues and trends. Preparation for acquisition of an American Dietetics Association approved internship. Prerequisites: Senior standing, signed Dietetics major.

FNS 490 Independent Study in Foods and Nutrition 1-6(Spec)
A student-initiated learning activity focusing on a faculty approved topic in Dietetics or Foodservice Administration. Prerequisite: Permission of instructor.

FNS 497 Special Topics in Foods and Nutrition 1-15(Spec)
Topics of special interest which are not normally included in existing courses. Prerequisites: See Course Search and Registration.

FNS 512 Food and Nutrition in Developing Countries and in Emergencies 3(3-0)
Nutritional issues of developing countries and in emergencies explored in depth, including assessment, prevention, and relief. This course may be offered in a hybrid or online format. Prerequisites: FNS 370, junior, senior or graduate status. Recommended: FNS 271.

FNS 560 Field Experience in International Nutrition 3(Spec)
Faculty-led study abroad course to acquire hands-on experience in the assessment, prevention and relief of nutritional and public health problems in developing countries. Prerequisite: FNS 370, minimum GPA of 2.5, age 18 years or older. Recommended: FNS 271, 512.

FNS 570 Nutritional Education 4(4-0)
Teaching strategies, advising techniques, resources, and motivational techniques as specifically applied to patients/clients in nutrition programs and patient/clients receiving nutrition services. Pre/Co-require: FNS 471.

FNS 573 Field Work: Community Nutrition 3(Spec)
Consulting, teaching and supportive research experiences in the field with a nutritionally vulnerable group. Prerequisites: FNS 370 and FNS 570.

FNS 575 Geriatric Nutrition 3(3-0)
A detailed description of nutrition for the elderly, including special nutritional considerations, food selection patterns, nutritional status and strategies for disease prevention. Identical to GRN 575. Credit may not be earned in more than one of these courses. Recommended: FNS 370.

FNS 577 Advanced Topics in Nutrition: Eating Disorders 3(3-0)
Analysis of factors involved in etiology, assessment, medical consequences, treatment and prevention of eating disorders. Recommended: FNS 370. This course is approved for offering in a distance learning format.

FNS 597 Special Topics in Foods and Nutrition 1-15(Spec)
Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student's transcript. This course is approved for offering in a distance learning format. Prerequisites: See Course Search and Registration.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

FNS 661 Macronutrients 3(3-0)
FNS 662 Micronutrients 3(3-0)
FNS 670 Seminar: Nutrition 3(Spec)
FNS 671 Advanced Topics in Nutrition: Geriatrics 3(3-0)
FNS 672 Advanced Clinical Nutrition 3(3-0)
FNS 673 Advanced Nutritional Assessment 3(3-0)
FNS 674 Dietetic Internship: Clinical Experience 5(Spec)
FNS 675 Dietetic Internship: Foodservice Administration Experience 5(Spec)
FNS 676 Dietetic Internship: Summary Experience 2(Spec)
FNS 677 Nutritional Epidemiology 3(3-0)
FNS 678 Research Methods in Nutrition 3(3-0)
FNS 679 Advanced Topics in Nutrition: Obesity 3(3-0)
FNS 697 Special Topics in Dietetics 1-15(Spec)
FNS 790 Independent Study in Dietetics 2-6(Spec)
FNS 797 Special Topics in Nutrition 1-15(Spec)
FNS 798 Thesis in Dietetics 1-6(Spec)

FRN - French

FRN 101 Elementary French I 4(4-0)
Designed for students who have had no French. Basic language skills. Introduction to the culture of the French-speaking countries. Students who have had previous preparation in French are required to take a placement test. Students who have had more than two years of high school French may not enroll without permission of instructor. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

FRN 102 Elementary French II 4(4-0)

FRN 110 Study Abroad 1-8(Spec)
Intended for beginning students studying abroad. Prerequisite: permission of instructor.

FRN 201 Intermediate French I 4(4-0)
Review of grammar and further development of all language skills. Recommended: FRN 102. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

FRN 202 Intermediate French II 4(4-0)
Review of grammar and further development of all language skills. Recommended: FRN 201. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

FRN 210 Study Abroad 1-18(Spec)
Intended for intermediate students studying abroad. Prerequisites: FRN 102.
FRN 310 Study Abroad 1-18(Spec)
- Intended for advanced students studying abroad. Prerequisites: FRN 202; permission of instructor.

FRN 315 Conversation & Composition I 3(3-0)

FRN 316 Conversation & Composition II 3(3-0)

FRN 320 French Civilization 3(3-0)

FRN 321 France Today 3(3-0)
- Various aspects of the political, social, economic, intellectual, artistic, and literary life of contemporary France. May be offered as Writing Intensive. Recommended: FRN 202.

FRN 330 Survey of French Literature (Beginning to 1800) 3(3-0)
- Intended for advanced students interested in selecting texts, cultural materials and teaching aids. Credit may be repeated for different topics. Recommended: FRN 316; 6 additional FRN credit hours in courses 300 or above.

FRN 331 Survey of French Literature (1800 to Present) 3(3-0)
- General acquaintance with the literature of France from 1800 to the present. Selections from representative authors. Recommended: FRN 202.

FRN 333 Francophone Literature and Culture 3(3-0)
- This course examines Francophone prose, poetry and film selections. May be offered as Writing Intensive. Recommended: FRN 202.

FRN 335 French for Business 3(3-0)
- Designed for students interested in acquiring vocabulary related to business and in developing fluency in writing and reading business letters and reports. Recommended: FRN 202.

FRN 350 French and Francophone Film 3(3-0)

FRN 353 Youth Literature in French 3(3-0)
- An examination of selected children’s and young adult literature from France and the Francophone world. May be offered as Writing Intensive. Recommended: FRN 202.

FRN 370 French Pronunciation and Diction 3(3-0)

FRN 391 Topics in French and Francophone Cultures 1-12(Spec)
- Topics of interest in French and francophone literature and civilization. Students may repeat the course as long as the topic differs. Recommended: FRN 410.

FRN 410 Study Abroad 1-12(Spec)
- Intended for advanced students studying abroad. Prerequisites: 6 hours of French at the 300 level; permission of instructor.

FRN 411 Practicum in Teaching French 2(1-0)
- Techniques for planning and testing foreign language skills, planning lessons and units, and selecting materials for secondary-level classrooms. Practical experience through mini-teaching situations. Prerequisites: Two 300-level courses; passing the comprehensive test; departmental permission.

FRN 412 Practicum: Secondary Field Experience 1(Spec)
- Pre-student teaching experience in middle or high school teaching situation. CR/NC only. Co-requisite: FRN 411.

FRN 421 Foreign Language in Elementary Schools 1(1-0)
- Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting texts, cultural materials and teaching aids. Practical experience through mini-teaching situations. Corequisite: FRN 411.

FRN 422 Practicum: Elementary Field Experience 1(Spec)
- Pre-student teaching experience in elementary school teaching situation. CR/NC only. Co-requisite: FRN 421.

FRN 423 France at War in the 20th Century 3(3-0)
- From the late 19th-century roots of World War I through the aftermath of the Algerian War, this course examines representations of France’s major 20th-century conflicts. May be offered as Writing Intensive. Recommended: Two 300-level French courses.

FRN 510 Study Abroad 1-12(Spec)
- Intended for advanced undergraduate and graduate students studying abroad. Prerequisites: 6 hours of French at the 400 level; permission of instructor.

FRN 511 Practicum in French Stylistics 3(3-0)
- Study and analysis of composition and style. Recommended: FRN 315, FRN 316; 6 additional FRN credit hours in courses 300 or above.

FRN 591 Advanced Topics in French and Francophone Cultures 1-6(Spec)
- Advanced study of topics of interest in French and francophone literatures and civilizations. Credit hours vary; may be repeated for different topics. Recommended: FRN 315 or 316.

FRN 597 Independent Study 1-6(Spec)
- The in-depth study of a topic under the direction of a faculty member who together with a student designs the format of the study. Prerequisites: At least 6 FRN credit hours at the 300 level or above; permission of the instructor and department chairperson.

FYE - First Year Experience
See First Year Experience under the Special Studies section for more information.

FYE 101 First Year Experience 1(1-0)
- Provides an understanding of the university environment, value of learning, career guidance and student responsibilities. This course is approved for offering in an online or hybrid format. Prerequisite: only open to students in their first year at CMU.

FYE 301 Mentor First-Year Experience 3(2-2)
- This course provides a theoretical foundation, practical knowledge and skill development for the role of First-Year Experience (FYE 101) Mentor.

GEL - Geology
See the Department of Earth and Atmospheric Sciences for more information.

GEL 100 Introduction to Earth Systems 3(2-2)
- A discovery-based introductory examination of the processes that shape our planet. Topics include the rock cycle, earthquakes, volcanoes, the ice Age, and plate tectonics. Satisfies University Program Group II-B: Descriptive Sciences.

GEL 101 Physical Geology 3(3-0)
- An introduction to the external and internal earth processes that shape our world. Topics include plate tectonics, minerals, rocks, volcanoes, earthquakes, and the ice Age. Credit may not be earned in both GEL 101 and GEL 100, GEL 105, or GEL 130. This course is approved for offering in a distance learning format. (University Program Group II-A: Descriptive Sciences)

GEL 102 Physical Geology Laboratory 1(0-2)
- Laboratory study of minerals, rocks, maps, and geologic processes. Satisfies University Program Group II laboratory requirement. Credit may not be earned in GEL 102 and 100 or 130. This course may be offered in an online or hybrid format. Pre-Co-requisite: GEL 101 or 105. (University Program Group II-A: Descriptive Sciences)

GEL 105 Dangerous Planet 3(3-0)
- A survey of the socially important geological topics that affect people and their environment with a focus on natural and anthropogenic geologic hazards. This course may be offered in an online or hybrid format. Credit may not be earned in both GEL 103 and 100, 101, or 130. (University Program Group II-A: Descriptive Sciences)

GEL 130QR Earth Processes 3(2-2)
- Introduces geologic processes from a quantitative perspective. Students will investigate, graph, and calculate rates and scales of processes including earth quakes, volcanic eruptions, and groundwater flow. Satisfies University Program Group II laboratory requirement. Credit may not be earned in both GEL 130 and 100, 101, 102, or 105. Quantitative Reasoning. (University Program Group II-B: Quantitative and Mathematical Sciences)

GEL 201 Earth History 3(2-2)
- The Earth’s history as revealed in the rock record. Geologic processes and concepts are applied to the evolution of North America and life through geologic time. Prerequisites: One of: GEL 100; or GEL 101, 102; or GEL 105, or GEL 130.

GEL 203 Geology of the National Parks 3(3-0)
- Study of the geologic processes responsible for creating the areas set aside as National Parks and National Monuments. Recommended for the traveler, naturalist, or park administrator.

GEL 205 Oceanography 3(3-0)
- Introduction to the properties and movements of ocean waters; marine life, the ocean floors, and the effects of the oceans on humans. This course may be offered in an online or hybrid format. Identical to GEO 205, credit may not be earned in both courses. (University Program Group II-B: Descriptive Sciences)

GEL 230 Prehistoric Life 3(3-0)
- An introduction to the history of life on Earth. Topics include geologic time, plate tectonics, evolution, origin of life, and the evolutionary history of vertebrates. (University Program Group II-A: Descriptive Sciences)

GEL 250 Geoscience Mapping and Resource Evaluation 3(3-0)
- This course explores applications that aid in the analysis of geoscience data. Integration of various geospatial data sources and analysis pertinent to geoscience. Identical to MET 250; credit may not be earned in both of these courses. Prerequisites: GEO 203; One of: MET 101 or MET 140 or MET 260 or GEL 100 or GEL 101, 102 or GEL 105, 102 or GEL 130.

GEL 275 Special Problems in Geology 1(Spec)
- A study of special topic approved on demand when sufficient students and interested faculty are available.

GEL 280 Geomath 2(0-4)
- Students learn to solve geoscience-specific problems through application of quantitative methods, graphs, and spreadsheets. Prerequisites: MTH 132; One of: GEL 100 or GEL 101, 102 or GEL 105, 102 or GEL 130.
GEL 290 Introduction to Geologic Investigation 3(2-2)

An introduction to methods of geologic research and investigation. Topics include information gathering (library, Internet), field methods (observations, measurements, sampling, map-making), and report writing. Prerequisites: GEL 101 or GEL 105, and GEL 100 or GEL 130.

GEL 301 Geology and Michigan 3(3-0)

An introduction to geological processes as they apply to the past and present geologic history of Michigan. Particularly recommended for students in education. Not recommended for students who have completed GEL 101. Recommended: GEL 102 co-registration.

GEL 303 Oceanography: Marine Geology 3(3-0)

Introduction to methods and equipment used to study the geology of ocean floors and the dynamic processes responsible for the formation of ocean basins. Prerequisites: one of: GEL 100, GEL 101, GEL 105, GEL 130, GEL 203, GEL 301, or GEO/GEL 205.

GEL 304 Earth Resources 3(3-0)

Mineral, energy, water, and soil resources, including geological origin, location, extraction, and environmental consequences of their use. Prerequisites: GEL 101 or 105, and GEL 102; or GEL 100 or 130.

GEL 305 Engineering Geology 3(3-0)

Application of geologic processes and quantitative methods to analyze engineering problems involving soils, rocks, surface water and groundwater. Prerequisites: GEL 201; MTH 130; PHY 130 or 145. Recommended: MTH 132.

GEL 308 Introduction to Hydrologic Systems 3(2-2)

Study of Earth as a hydrologic system, including quantification of surface, subsurface, and atmospheric flows, interactions between compartments of the hydrologic cycle, and hydrologic hazards. Prerequisites: GEL 101 or 105, and 102; or GEL 130, or MET 240; MTH 105. Recommended: GEL 280.

GEL 310 Introductory Mineralogy 4(3-3)

Introduction to crystallography. Physical and chemical properties, and descriptions of basic groups and classifications of minerals. Field trip fee required. Prerequisites: GEL 101 or 105, and 102; or GEL 100 or 130. Pre/co-requisites: CHM 131; GEL 280.

GEL 320 Earth Materials 2(2-3)

Origin, interpretation, and hand-specimen identification of natural materials including minerals, rocks, and various mineral and energy resources; for non-geology majors. Field trip fee required. Prerequisites: GEL 101 or 105, and 102; or GEL 100 or 130.

GEL 321 Petrology 3(2-3)

Genesis and evolution of igneous and metamorphic rocks. Identification, description of hand samples and thin-sections emphasizing petrogenesis. Optical mineralogy of common rock-forming minerals. Field trip fee required. Prerequisites: GEL 290, 310; Pre/co-requisite: CHM 132.

GEL 325 Glacial Morphology and Landforms 3(3-0)

Patterns and processes in the formation and distribution of selected glacial features. Prerequisite: GEL 290.

GEL 331 Field Petrology 2(Spec)

Introduction to techniques of structural analyses and geochemical sampling in crystalline rock. Field descriptions and note-taking skills stressed during 1-3 week field excursion. Field trip fee required. Prerequisites: GEL 310, GEL 321.

GEL 370 Structural Geology 3(2-3)

Theoretical and applied study of structures developed by deformation of the Earth's crust and their tectonic environment. Field trip fee required. Prerequisites: GEL 201, 280, 290.

GEL 372 Introduction to Geophysics 3(2-3)

A survey of the physical properties and structure of the earth, and the basic geophysical techniques by which they are known. Field trip fee required. Prerequisites: GEL 280; PHY 145.

GEL 380 Hydrogeology 3(2-3)

Introduction to the study of groundwater: groundwater occurrence and flow, groundwater in the hydrological cycle, groundwater quality and pollution, groundwater exploration, evaluation, and management. Field Trip Fee Required. May be offered as Writing Intensive. Prerequisites: GEL 101 or 105, and 102; or GEL 100 or 130; MTH 132 with a C- or better. Recommended: GEL 280.

GEL 385 Introductory Petroleum Geology 3(2-2)

Petroleum deposits of the earth: location, origin, and occurrence. Technical aspects of exploration and production, emphasizing petroleum and natural gas formations of Michigan. Prerequisite: GEL 201.

GEL 397 Independent Study 1-3(Spec)

Qualified self-directed students may explore topics of special interest with faculty guidance. Prerequisites: One GEL course at 200 level or above; and permission of instructor.

GEL 403 Geochemistry Laboratory 1[0-3]

Fundamentals of research and problem solving utilizing geochemical analytical methods. Emphasizes project planning, sampling techniques, data collection and interpretation. Pre/co-requisites: GEL 402 or GEL 460.

GEL 406 Senior Thesis 3(Spec)

Senior level research project approved by the geology faculty. Results of the research project must be presented in a written thesis and oral report. Prerequisite: Senior standing; permission of both instructor and department chairperson.

GEL 413 Geomorphology 3(3-0)

Geomorphologic approach to geomorphology with emphasis on quantitative analysis, dynamics of landform evolution, and use of geomorphology in solving geologic problems. Prerequisites: GEL 320 or GEL 321; ESC 210 and STA 282 recommended.

GEL 420 Applied Geostatistics 3(2-2)

Application of geostatistical methods to various scientific and engineering domains. Emphasis on analyzing and interpreting spatial data. Kriging, variography and simulation methods. Prerequisites: GEL 280, 290; GEL/NET 250. Recommended: MTH 223; STA 382.

GEL 430 Invertebrate Paleontology 3(2-3)

A general survey of the taxonomy, phylogeny, identification, stratigraphy, and paleoecology of the major fossil invertebrate groups. Field trip fee required. Prerequisites: GEL 201. Recommended: BIO 110, 218.

GEL 440 Stratigraphy and Sedimentology 3(2-3)

Stratigraphy is concerned with the study of layered rocks and their interrelationships. Sedimentology considers properties of sedimentary rocks that allow interpretations of depositional processes. Field trip fee required. Prerequisites: GEL 201, 290; GEL 310 or GEL 320.

GEL 450 Geology Field Camp 5(Spec)

Actual field experience in mapping and interpreting terrains. Student will construct a map and write a report based on observations. Field trip fee required. Prerequisite: GEL 320 or GEL 321; GEL 370, 440, and permission of department chair.

GEL 460 Geochemistry 3(3-0)

Basic principles of geochemistry, involving distribution and significance of elements in natural systems, as well as processes which affect this distribution. Prerequisites: one semester of college chemistry. Pre/co-requisites: GEL 320 or GEL 321; CHM 131 or CHM 120 and 127.

GEL 502 Aqueous Geochemistry 3(2-3)

Biogeochemical processes governing the chemistry of water, with a focus on the distribution of natural and anthropogenic chemical species. Prerequisites: CHM 132; BIO 236 or CHM 231 or GEL 310; or graduate status in a CST program. Recommended: GEL 380.

GEL 510 Geomicrobiology 3(3-0)

Examinations of the fundamental mechanisms microorganisms use to drive the geochemical cycling of Earth's major elements and contaminants in various environments. Prerequisites: GEL 310 or GEL 320; CHM 132; or graduate status in a CST program.

GEL 515 Environmental Soil Chemistry 3(3-0)

Examines the fundamental mechanisms microorganisms use to drive the geochemical cycling of Earth's major elements and contaminants in various environments. Prerequisites: GEL 310 or GEL 320; CHM 132; or graduate status in a CST program.

GEL 550 Economic Geology 3(2-3)

Metallic and nonmetallic ore deposits, fossil fuels, and their tectonic settings; general principles of exploration for natural resources within the context of responsible environmental stewardship. Prerequisite: GEL 320 or 321 or graduate status in the College of Science and Technology.

GEL 597 Independent Study 1-6(Spec)

Qualified self-directed students may explore topics of special interest with faculty guidance. More than 3 credits permitted only rarely. Prerequisites: department chairperson and instructor approval.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

GEL 650 Geology for Science Teachers 3(2-2)

See the Department of Geography for more information.

GEO 105 Physical Geography 3(2-2)

Introduction to the physical processes of the atmosphere, hydrosphere, lithosphere, and biosphere and the global distribution of climate, soils, and vegetation. This course may be offered in an online or hybrid format. Satisfies University Program laboratory requirement. (University Program Group II-A: Descriptive Sciences)

GEO 120QR Environmental Geography 3(3-0)

An introduction to the human use of earth resources and quantitative examination of select environmental issues resulting from the societal use/misuse of our planet. Quantitative Reasoning. This course may be offered in an online or hybrid format. (University Program Group II-A: Descriptive Sciences)

GEO 121 Cultures of the World 3(3-0)

Population, political, economic, and other cultural phenomena and their world distribution patterns are presented upon a non-technical background of physical geography. This course may be offered in an online or hybrid format. (University Program Group II-B: Studies in Social Structures)

GEO 201 Weather and Climate 4(4-0)

Nature of atmospheric processes, weather, and climate - why and how they vary over the surface of the Earth.
GEO 203QR Introduction to Geographic Information Science 3(2-2)
Fundamentals of geographic information science - including spatial data gathering, measurement, classification, analysis, display and map interpretation. Current computer mapping technologies are used in laboratory. This course may be offered in a distance learning or hybrid format. Quantitative Reasoning. (University Program Group II-B: Quantitative and Mathematical Sciences)

GEO 205 Oceanography 3(3-0)
Introduction to the properties and movements of ocean waters; to marine life, the ocean floors, and the effects of the oceans on humans. This course may be offered in an online or hybrid format. Identical to GEL 205, credit may not be earned in both courses. (University Program Group II-A: Descriptive Sciences)

GEO 210 Landforms 3(2-2)
Study of geomorphic processes affecting the evolution and distribution of landforms; quantitative study of the regional physical landscape; analysis of human-landscape interactions. Prerequisite: GEO 105 or GEO 110 or 105 or 130. Recommended: GEO 203.

GEO 303 Geographic Information Systems I 3(2-2)
Concepts and applications of geographic information systems (GIS). Capturing, storing, querying, and displaying geographically referenced data. Primary emphasis is on vector-based GIS. Prerequisite: GEO 203.

GEO 305 Remote Sensing of the Environment 3(2-2)
Characteristics and principles of remote sensing of the environment. The processes of remote sensing imagery acquisition, analysis, and information extraction. Prerequisites: GEO 203. Recommended: Six hours of geography or other environmental science.

GEO 310 Surface Hydrology 3(2-2)
The course deals with stream waters and their alteration of the landscape. Studies the interaction of water, land, and human activity. Prerequisite: GEO 210.

GEO 312 Geography of Contemporary Global Issues 3(3-0)
Geographical analysis of contemporary global issues, including transboundary migrations, regional impact of climate change, resource disputes, regional economic imbalances, and ethno-territorial conflicts. Prerequisites: GEO 120 or 121.

GEO 315 Food and Agriculture 3(3-0)
Study of world production, exchange, and consumption of agricultural commodities with emphasis upon the problems associated with food shortages and the areas most severely affected. This course is approved for offering in an online or hybrid format. Recommended: One of the following: GEO 120, GEO 121, 105.

GEO 317 Economic Geography 3(3-0)
Principles and theories of economic geography, the global interrelations of regional and local economic activities, and the effects of technology on spatial economic structures. Recommended: GEO 121, junior standing, or at least 3 credits in BUS, FIN, ECO, or MKT. (University Program Group III-B: Studies in Social Structures)

GEO 320 Population Geography 3(3-0)
Spatial patterns of fertility, mortality, and migration, and the processes underlying those patterns; Population growth, distribution, problems and policies. Recommended: One of the following: GEO 120, 121, junior standing.

GEO 325 Geography of Growth and Change 3(3-0)
Interrelated nature of the growth of human activity and the resulting spatial expression. Impact of growth on environment. Prerequisite: GEO 120.

GEO 330 Resource Perception and Utilization 3(3-0)
Quantitative analysis of modern resource utilization; systematic examination of U.S. water and power distribution infrastructure; socioecometric analysis of attitude and perception data regarding natural resources. Prerequisite: GEO 105 or 120 or GEO 100 or 105 or 130 or PHS 151 or ENV 101. Recommended: STA 262 or MTH 107.

GEO 334 Soil Science 3(2-2)
An introduction to the physical, chemical, and biotic properties of soils; soil classification and mapping; and soil resource issues. Identical to BIO 334. Credit may not be earned in more than one of these courses. Prerequisites: CHM 120 or CHM 131. Recommended: 6 hours of environmental science.

GEO 335 Biogeography 3(3-0)
Physical, biological, and anthropogenic influences on the world distribution of plant and animal life. Prerequisites: GEO 105. Recommended: One of: BIO 101, 105, 110, 240.

GEO 340 Urban Geography 3(3-0)
The rise of cities and urbanization. Human use of urban space. The city as environment. This course is approved for offering in a distance learning format. Recommended: GEO 121 or Junior standing.

GEO 342 Historical Geography 3(3-0)
An overview of US and world history from geographic and ecological perspectives, focusing on the expansion/contraction of empires, spatial interactions, and technology/resources. Prerequisites: Junior standing, 12 hours of geography and/or history.

GEO 345 Political Geography 3(3-0)
Study of characteristics and territorial problems of states, including internal relations, border disputes, and colonial areas. Selected world problems. Recommended: GEO 121.

GEO 346 Geography of the Developing World 3(2-0)
A geographic analysis of the developing world focusing on processes of environmental, demographic, and socioeconomic change, particularly since World War II. This course may be offered in an online or hybrid format. Prerequisite: Junior standing. Recommended: 9 hours of social science courses.

GEO 350 United States and Canada 3(3-0)
Physical environment, resources, economic activities, population pattern, and of interregional relationships of United States and Canada. Recommended: One of: GEO 105, 120, 121, junior standing. CR/NC option available.

GEO 355 Environmental Disasters 3(3-0)
Causes and effects of hurricanes, tornadoes, blizzards, earthquakes, volcanic eruptions, dam failures, tidal waves, freak seas, plagues, epidemics, and similar phenomena. Recommended: One or more environmental courses.

GEO 365 Europe 3(3-0)
Geographic characteristics of the continent, its regions, and economic and political systems since WWII. National characteristics of culture, human/land relationships and international involvements. Identical to EUR 301. Credit may not be earned in more than one of these courses.

GEO 373 Latin America 3(3-0)
Geographic characteristics of Latin America from colonization to present. Regions are interpreted by analysis of geographical elements and their interactions. This course may be offered in an online or hybrid format. Recommended: GEO 121 or at least 3 credits in a social science. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

GEO 375 Special Topics in Geography 1-9(Spec)
Varied topics offered at an advanced undergraduate level. Prerequisite: permission of the instructor.

GEO 385 China: Environment and People 3(3-0)
Discussion of China's physical environment and the geographic patterns of social, political, and economic processes. China's dynamic roles in world geopolitics and global economy. Prerequisite: GEO 121 or junior standing.

GEO 395 Michigan 3(3-0)
Geographic analysis of the interrelations between Michigan's geomorphology, biogeography, climate, resource use and protection, agriculture, land division, transportation, demography, economic and urban development. Prerequisite: Junior standing.

GEO 397 Independent Study 1-6(Spec)
Exploration of topics in geography agreed upon by student and instructor. Only 1-3 credits can be earned within one registration period. Prerequisites: Permission of instructor.

GEO 400 Geographic Education 3(2-2)
Study of Geography in the K-12 curriculum including relevant teaching methods, state content standards, and strategies for teaching diverse students. May be offered as Writing Intensive. Prerequisites: junior standing; 12 hours of geography or social sciences.

GEO 404 Global Positioning System 1(1-0)
Introduction to the Global Positioning System, system operation, data capture, mission planning and data input to Geographic Information Systems (GIS). Prerequisites: GEO 203, 303. CR/NC option available.

GEO 405 CAD Mapping for GIS 3(2-2)
Concepts and practice of 2-dimensional Computer-Aided Drafting systems (CAD) from a GIS/Mapping perspective. Approach will include photogrammetric techniques and land surveying data. Prerequisites: GEO 203, GEO 303.

GEO 500 Advanced Cartography 3(3-2)
Advanced methods and theories concerning the field of cartography, including: cartographic communication and visualization, digital map compilation and multivariate data representation. Prerequisites: GEO 303.

GEO 501 Principles and Applications of Geographic Information System 3(2-2)
Fundamentals of GIS and its applications in environmental, social and economic analysis (for non-geography majors only). This course is approved for offering in a distance learning format. Prerequisites: GEO 203 or senior standing or graduate standing.

GEO 503 Advanced Geographic Information Systems 3(2-2)
Use of raster spatial data models and associated methods for the collection, processing, management, analysis and visualization of geographic data. Focus: land use/environmental applications. Prerequisites: GEO 303, 305; or GEO 501.

GEO 508 Digital Remote Sensing 3(2-2)
Computer processing and data analysis of digital remote sensing data. Emphasis on multispectral image processing and analysis using standard image processing software. Prerequisites: GEO 303, 305. Recommended: STA 382.

GEO 511 International Geographic Experience 3-6(Spec)
Experience in field research techniques and knowledge of regions outside the United States. International travel is required. May be repeated one time only. Prerequisites: 6 semester hours of 300 level or higher Geography course.

GEO 512 Quantitative Methods for Spatial Analysis 3(2-2)
Statistical techniques for solving spatial problems. Descriptive and inferential statistical analysis. Spatial pattern analysis. Regression modeling with spatial data. Prerequisites: GEO 303, STA 382.
Course Descriptions approved for University Program are in italics.

GER 110  German Language Study Abroad 1-8(Spec)
Characteristics, processing, and applications based on advanced remote sensing systems including imaging radar, thermal and hyperspectral systems. Prerequisites: GEO 308 and STA 382.

GER 516 Advanced Remote Sensing Systems 3(2-2)
GIS model design and implementation as directed towards environmental issues. Raster data models, concepts, structure, functions, examples, and modeling capabilities are explored. Prerequisites: GEO 203, 303 and 305; or GEO 501. Recommended: GEO 503.

GER 520 Intermediate German II 4(4-0)
Continuation of German language skills in reading, writing, listening and speaking. Review of German grammar, expansion of vocabulary and exploration of German cultural issues. Students who have had previous preparation in German are required to take a placement exam. Recommended: GEO 305. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

GER 710 Intermediate German Language Study Abroad 1-8(Spec)
Intended for beginning students studying abroad. Prerequisite: permission of instructor.

GEO 513 Geographic Information Systems for Social Sciences 3(2-2)
Spatial data visualization and analysis using Geographic Information Systems (GIS) with emphasis on application to social sciences, planning, public policy, and business research. Co-requisites: GEO 303.

GEO 515 Geography of the Great Lakes Region 3(3-0)
Topics include shoreline development, resource use, economic development strategies, social issues, and land use change through contemporary and historical perspectives in the Great Lakes region. Prerequisites: GEO 105 or GEO 120; GEO 350 or GEO 395.

GEO 516 Advanced Remote Sensing Systems 3(2-2)
Characteristics, processing, and applications based on advanced remote sensing systems including imaging radar, thermal and hyperspectral systems. Prerequisites: GEO 308 and STA 382.

GEO 528 Environmental Modeling with GIS 3(2-2)
GIS model design and implementation as directed towards environmental issues. Raster data models, concepts, structure, functions, examples, and modeling capabilities are explored. Prerequisites: GEO 203, 303 and 305; or GEO 501. Recommended: GEO 503.

GEO 530 Land Use Planning 3(3-0)
Study of land use planning history, concepts and techniques. Analysis of federal, state, and local government roles in planning. Examination of specific land use programs. Prerequisites: GEO 303; 6 additional semester hours in either or both GEO or PSC.

GEO 531 Integrated Land Use Planning 3(3-0)
This course provides students comprehensive understanding of land use issues, processes and solutions. The course integrates innovative planning concepts with advanced analytic tools. May be offered as Writing Intensive. Prerequisite: GEO 530.

GEO 550 Geography for Teachers 3(3-0)
For teachers who want to upgrade their knowledge of geography, experiment with new teaching techniques, and learn how to make professional in-service presentations to teachers. Graduate credit only. Prerequisites: Three years teaching experience and/or permission of instructor.

GEO 553 GIS Operations and Practices 3(3-0)
Practices and procedures utilized by professionals in the implementation and maintenance of large-scale GIS operations. Prerequisites: GEO 503 or Graduate Status in the MGISci Program.

GEO 575 Special Studies in Geography 1-6(Spec)
Various special topics offered at an advanced undergraduate and graduate level. Prerequisites: permission of instructor.

GER 591 Internship 1-12(Spec)
Experiences in applying geographic techniques to environmental analysis, resource management, and business applications. Up to 3 hours of internship credit can be applied to the geography/earth science major. Identical to ESC 591. Credit may not be earned in more than one of these courses. A full-time internship position for one semester may qualify for 12 hours of credit. Prerequisite: permission of program advisor.

GER 597 Independent Study 1-9(Spec)
Exploration of topics in geography agreed upon by student and instructor. Course may be taken for credit more than once, not to exceed nine hours. Prerequisites: At least 6 hours of Geography credit at the 400 level or above, permission of instructor.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

GEO 600 Dynamic Mapping and Visualization 3(2-2)
Prerequisites: three years teaching experience and/or permission of instructor.

GEO 603 GIS Design and Programming 3(2-2)
Prerequisites: three years teaching experience and/or permission of instructor.

GEO 608 Advanced Digital Remote Sensing 3(2-2)
Prerequisites: three years teaching experience and/or permission of instructor.

GEO 615 Research Design in Geographic Information Sciences 3(3-0)
Continuing Registration for Final Research Project 1(1-0)
Prerequisite: permission of instructor.

GER 102 Intermediate German II 4(4-0)
Continuation of German language skills in reading, writing, listening and speaking. Review of German grammar, expansion of vocabulary and exploration of German cultural issues. Students who have had previous preparation in German are required to take a placement exam. Recommended: GEO 305. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

GER 210 German Language Study Abroad 1-8(Spec)
Intended for intermediate students studying abroad. Prerequisites: GEO 102.

GER 310 German Language Study Abroad 1-12(Spec)
Intended for advanced students studying abroad. Prerequisites: GEO 202.

GER 311 Advanced German I 3(3-0)

GER 312 Advanced German II 3(3-0)
Continuation of GER 311. Required for majors and minors. Recommended: GEO 311.

GER 325 Modern German Literature in Translation 3(3-0)
Interpretation and discussion of representative works by modern German-speaking writers with a focus on contemporary views of contemporary society. (University Program Group I-A: Human Events and Ideas)

GER 335 The Culture of the German Economy 2(2-0)
Development of proficiency through readings, discussions, and assignments dealing with the culture of the German economic system and Germany in world trade. Taught in German. Prerequisite: GEO 312.

GER 336 The Culture of German Business 2(2-0)
Readings, discussions, and assignments based on materials dealing with key areas of the German business culture such as management and corporate hierarchies. Taught in German. Prerequisite: GEO 312.

GER 341 German Cultural History I 3(3-0)
The civilization of Germany and German-speaking areas with emphasis on the social, artistic, philosophical, and literary aspects. May be offered as Writing Intensive. Recommended: GEO 202.

GER 342 German Cultural History II 3(3-0)
Continuation of GER 341. May be offered as Writing Intensive. Recommended: GEO 202.

GER 343 Survey of German Literature I 3(3-0)
Survey of the chief literary periods from the earliest texts through the Enlightenment, reading representative authors and works within their social contexts. May be offered as Writing Intensive. Recommended: GEO 202.

GER 344 Survey of German Literature II 3(3-0)
Survey of the chief literary periods from the end of the eighteenth century until the early 1930s, reading representative authors and works within their social contexts. May be offered as Writing Intensive. Recommended: GEO 202.

GER 345 Survey of German Literature III 3(3-0)
Survey of the chief literary periods from the 1930s until the present time, reading representative authors and works within their social contexts. Conducted in German. May be offered as Writing Intensive. Recommended: GEO 202.

GER 347 German Cultural History III 3(3-0)
Investigation of the cultural history of Germany from post-war division through reunification and after, as seen through a wide variety of texts and other media. May be offered as Writing Intensive. Recommended: GEO 202.

GER 350 Highlights of German Film 3(3-0)
A survey of German film from the Weimar Republic through the present, with the focus on significant and representative feature films. Taught in German. Recommended: GEO 202.

GER 370 Advanced Studies in German I 1-12(Spec)
Special topics may include language, literature and/or culture. May be repeated when the content is not a duplication of a previous special topics offering. Recommended: GEO 202.

GER 397 Directed Readings 1-3(Spec)
Offers insight into certain aspects of German literature and civilization, not normally included in regular courses. Prerequisites: 6 hours of 300-level courses; permission of instructor.

GER 398 Directed Writing 1-3(Spec)
Students will learn to write different text types (e.g., news articles, short stories, book reviews, etc.), they will improve their grammatical, linguistic and stylistic skills in written German. Prerequisites: GER 311; permission of instructor.

GER 403 German Literature to 1776 3(3-0)
The Middle Ages, Renaissance, Baroque and the Enlightenment. Modern German translations from Old High German and Middle High German periods. Prerequisites: 6 hours of 300-level courses.

GEO-GER
GER 405 German Classicism 3(3-0)
The classical age culminating in the works of Goethe and Schiller. The author's lives, thoughts, and impact on their contemporaries. Prerequisite: 6 hours of 300-level courses.

GER 407 German Literature of the Nineteenth Century 3(3-0)
Romanticism, Poetic Realism, and Naturalism through representative authors. Prerequisite: at least 6 hours of 300-level courses.

GER 409 German Literature of the Twentieth Century 3(3-0)
Imagination, Expressionism, Neo-realism, and other current trends. Prerequisite: At least 6 hours of 300-level courses.

GER 410 Study Abroad 1-24(Spec)
Intended for students on the exchange program with the Federation of German-American Clubs. Prerequisites: 6 hours at the 300 level; permission of the instructor.

GER 411 Practicum in Teaching German 3(2-1)
Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting materials for secondary-level classrooms. Practical experience through mini-teaching situations. Prerequisites: Two 300-level courses; passing the competency test; departmental permission.

GER 412 Practicum: Secondary Field Experience 1(Spec)
Pre-student teaching experience in middle or high school teaching situations. CR/NC only. Co-requisite: GER 411.

GER 421 Foreign Language in Elementary Schools 1(1-0)
Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting texts, cultural materials and teaching aids. Practical experience through mini-teaching situations. Prerequisite: must be taken concurrently with GER 411.

GER 422 Practicum: Elementary Field Experience 1(Spec)
Pre-student teaching experience in elementary school teaching situation. CR/NC only. Co-requisite: GER 421.

GER 470 Advanced Studies in German 1-12(Spec)
To develop advanced proficiency in German. Special topics may include language, literature, and/or culture. May be repeated when the content is not a duplication of previous special topics offering. Recommended: 6 hours at the 300 level.

GER 570 Advanced Grammar and Composition 3(3-0)
Analysis of grammatical structures, vocabulary expansion, and extensive practice in written expression. May be offered as Writing Intensive. Prerequisite: GER 512.

GER 597 Independent Study 1-6(Spec)
The in-depth study of a topic under the direction of a faculty member who together with a student designs the format of the study. Prerequisites: permission of instructor and department chairperson; at least 6 hours on the 400 level.

GRK - Greek
See the Department of Foreign Languages, Literatures, and Cultures for more information.

GRK 101 Classical Greek 4(4-0)
Grammar of written Greek prose of the Attic period, reading Greek text aloud, translation and composition.

GRK 102 Classical Greek 4(4-0)
Continuation of GRK 101. Prerequisite: GRK 101.

GRK 201 Classical Greek 4(4-0)
Reading and translation of Greek prose, including Xenophon and the Greek Bible. Prerequisite: GRK 102.

GRK 202 Classical Greek 4(4-0)
Continued guidance of the student in reading Greek prose and in the analysis of connected texts. Prerequisite: GRK 201.

GRN - Gerontology
See the Department of Human Environmental Studies for more information.

GRN 430 Women and Aging 3(3-0)
Multiple theoretical perspectives examine the status of older women, individual psychological, social and physical development, roles in family and society, and policy implications. Identical to WST 430. Credit may not be earned in more than one of these courses. Prerequisite: GRN 247 or PSY 325 or HSC 390.

GRN 575 Geriatric Nutrition 3(3-0)
A detailed description of nutrition for the elderly, including special nutritional considerations, food selection patterns, nutritional status and strategies for disease prevention. Identical to FNS 575. Credit may not be earned in more than one of these courses. Prerequisites: FNS 370.

GRN 590 Independent Study 1-4(Spec)
Student-initiated study (reading, research, and/or project development) on a topic not normally covered in existing courses. Prerequisite: permission of instructor.

GRN 597 Special Topics 1-4(Spec)
Selected topics/problems of interest that are not normally included in existing courses. May include conferences, workshops, and seminars sponsored by the Interdisciplinary Gerontology Program. Prerequisite: permission of instructor.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

GRN 631 Gerontology: Theory and Practice 3(3-0)

GRN 632 Public Policy and Aging 3(3-0)

HDF - Human Development & Family Studies
See the Department of Human Environmental Studies for more information.

HDF 100 Lifespan Development 3(3-0)
Study of the basic principles of human development and their relation to family interactions throughout the lifespan. Recommended: Students who have taken EDU 280 or PSY 220 should seek departmental advice prior to enrollment. (University Program Group III-A: Behavioral Sciences)

HDF 110 Oppression: Roots and Impact on Human Development in the United States 3(3-0)
A study of the roots and impact of different forms of oppression on the development of individuals within the family context. This course may be offered in an online or hybrid format. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

HDF 200 Constructivism as a Tool for Learning 2(2-0)
Using Constructivist theory, students will establish their view of the child, family, teacher, school and community as a lens to frame future teaching practices.

HDF 211 Marriage and Close Relationships 3(3-0)
This course examines the cultural and historical factors and processes that affect the development of marital, familial, and other close relationships across the life course.

HDF 212 Families in Cultural Perspective 3(3-0)
The varieties of family forms and resulting patterns of interpersonal relations to be found throughout Western history and in selected Western and non-Western cultures. (University Program Group III-B: Studies in Social Structures)

HDF 213 Introduction to Human Sexuality 3(3-0)
Human sexual development throughout the life cycle. Emphasis on understanding and acceptance of self as a sexually functioning person. Identical to WST 213. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format.

HDF 214QR Consumer Economics 3(3-0)
This course introduces financial and resource management skills using quantitative reasoning and mathematical calculations to enhance family financial well-being. This course may be offered in an online or hybrid format. Quantitative Reasoning.

HDF 219 Field Work 3(1-6)
This course examines service learning and potential career paths for professionals in Human Development and Family Studies. Field placements required. Prerequisites: A signed major in Child Development or Family Studies; HDF 100 or HDF 211 or PSY 220.

HDF 247 Introduction to Gerontology 3(3-0)
Introduction to individual aging in the context of families, societies, social policies, services and resources, demography, and historical times. (University Program Group III-A: Behavioral Sciences)

HDF 248 Service Learning in Gerontology 3(Spec)
A structured and supervised service learning experience in professional service settings specifically addressing the needs of older adults. Prerequisites: concurrent registration in or completion of GRN 247 or PSY 325.

HDF 291 Human Environmental Studies: Family Ecology 3(3-0)
Holistic approach to studying families: emphasis on the dynamic interaction of families with surrounding environments and career options associated with interaction of families and environments.

HDF 301 Infant Toddler Practicum Experience 1-3(Spec)
A structured observation experience that provides students with the opportunity to apply knowledge of typical infant/toddler development to observed behaviors. This course may be taught in an online or hybrid format. Prerequisites: HDF 100 or PSY 220 or EDU 280; HDF 302; permission of instructor. Students completing HDF 302 for four credits at CMU are not eligible for this course.

HDF 302 Infant and Toddler Development 4(3-2)
Pregnancy, prenatal development, childbirth, and the development of infants and toddlers (to 3 years) within the family and the larger social system. Supervised observation experience. Prerequisites: HDF 100 or EDU 280 or PSY 220.

HDF 303 Early Childhood Development 4(3-2)
Principles and methods of growth and development of preschool and early elementary children (ages 3-8) from diverse backgrounds and observation of children in early education settings. Prerequisite: HDF 100 or EDU 280 or PSY 220.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Additional Information</th>
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</thead>
<tbody>
<tr>
<td>HDF 306</td>
<td>Adolescent Development 3(3-0)</td>
<td>Study of adolescence and issues relating to the family of a teenager. Prerequisite: HDF 100 or EDU 280 or PSY 220.</td>
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<tr>
<td>HDF 307</td>
<td>Parent-Child Relations 3(3-0)</td>
<td>The study of the parent-child relationship, and the impact of that relationship on the development of both children and parents. Prerequisite: one of: HDF 100, EDU 280, or PSY 220.</td>
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<td>HDF 308</td>
<td>Theories of Child and Adolescent Development 3(3-0)</td>
<td>Survey of child and adolescent theories of development. Prerequisites: HDF 100 or EDU 280 or PSY 220; Significant minor or minor in Child Development or Family Studies.</td>
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<tr>
<td>HDF 309</td>
<td>Families, Schools, and Communities 3(3-0)</td>
<td>Study of the child, family, community, and contextual perspectives. Coping challenges and strategies to assist coping with hospitalization are examined. This course may be offered in an online or hybrid format. Prerequisites: HDF 100 or EDU 280 or PSY 220; Pre/Co-requisites: HDF 290.</td>
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<td>HDF 315</td>
<td>Family Management Theory 3(3-0)</td>
<td>Integrated nature of family management; values, goals as reflected in decision-making regarding family resources.</td>
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<tr>
<td>HDF 317</td>
<td>Child Development Skills and Methods 3(3-0)</td>
<td>An introduction to skills and methods for professional practice with children and adolescents. Prerequisites: HDF 219 with a grade of C+ or better; a signed major in Child Development; Recommended: HDF 307.</td>
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<td>HDF 319</td>
<td>Family Studies Skills and Methods 3(3-0)</td>
<td>An introduction to skills and methods essential for work with individuals and families in service fields. Prerequisites: HDF 219 with a grade of C+ or better; a signed major in Child Development or Family Studies.</td>
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<tr>
<td>HDF 320</td>
<td>HDF International Service Learning 3(6-Spec)</td>
<td>An international cultural immersion experience working on a service learning project under the supervision of a faculty member. Prerequisite: Permission of instructor; minimum of 2.5 GPA; minimum of 24 CHU credit hours; depending on the service project approved, prerequisites may include language credit or ability, completion of specialized courses, or demonstration of appropriate skills for the project. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition, Option 2).</td>
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<tr>
<td>HDF 328</td>
<td>Programs, Policies and Services for Older Adults 3(3-0)</td>
<td>An examination of U.S. legislation and policies that undergird the aging services network. Prerequisite: HDF 247.</td>
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<td>HDF 340</td>
<td>Men and Masculinities in Adulthood 3(3-0)</td>
<td>The course takes a social construction approach examining how a gendered society influences the way adult men perceive themselves, other men, women and social situations. Prerequisites: HDF 100 or GRN 247; one additional 3 credit HDF course.</td>
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<td>HDF 381</td>
<td>Education for Family Life and Human Sexuality 3(3-0)</td>
<td>Course designed to familiarize human development and family studies students with the methods and materials necessary to teach and work as a family-helping professional. Prerequisites: HDF 100 or EDU 280 or PSY 220; HDF/SOC 213 or HSC 222; HDF 211; 3 other credits in the Family Studies major or Family Life and Human Sexuality minor.</td>
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<td>HDF 397</td>
<td>Special Topics in Human Development &amp; Family Studies 1-6(Spec)</td>
<td>Topics of special interest which are not normally included in existing courses. Prerequisites: See Course Search and Registration.</td>
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<td>HDF 400</td>
<td>Developmental Assessment of Children 3(3-0)</td>
<td>Focus on the process of assessment, with an emphasis on methods and skills used in assessing young children's development. Collaboration with parents and professionals is emphasized. This course may be offered in an online or hybrid format. Prerequisites: Two of: HDF 302, 303, 306, 510.</td>
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<tr>
<td>HDF 403</td>
<td>Best Practices in Early Childhood Settings 3(3-0)</td>
<td>Knowledge and application of evidence-based practices in early childhood settings. Opportunities to plan experiences in all curricular areas. Prerequisites: HDF 200; HDF 302, 303 with a grade of C+ or better. Recommended: HDF 402.</td>
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<td>HDF 404</td>
<td>Children and Hospitalization 3(3-0)</td>
<td>This course focuses on children and hospitalization from developmental and contextual perspectives. Coping challenges and strategies to assist coping with hospitalization are examined. This course may be offered in online or hybrid format. Prerequisite: HDF 100 or PSY 220 or EDU 280.</td>
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<td>HDF 409</td>
<td>Lead Teaching in Early Childhood 8(Spec)</td>
<td>Development of professional skills for working with young children and families. Supervised lead teaching experience in the Child Development and Learning Laboratory. Prerequisites: SPE 585, HDF 309, C+ or better in HDF 402 and 403. Pre/Co-requisites: HDF 400.</td>
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<td>HDF 411</td>
<td>Families in Social, Legal, &amp; Political Contexts 3(3-0)</td>
<td>This course examines how factors from social, legal, and political contexts influence family development and functioning over the life course. Prerequisites: HDF 211; Senior standing.</td>
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<td>HDF 413</td>
<td>Facilitating Discussion in Human Sexuality Groups 3(3-0)</td>
<td>The purpose, rationale, professional issues, planning, techniques and methods, learning objectives, evaluation, and guided experience in facilitating discussion in human sexuality groups. Prerequisites: permission of instructor; HDF 213 or SOC 201 or WST 213.</td>
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<td>HDF 414</td>
<td>Human Development and Family Studies Research Methods 3(3-0)</td>
<td>This course is an introduction to research methods within human development and family studies. Prerequisites: 9 HDF or GNM credits.</td>
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<td>HDF 418</td>
<td>Family Development in Late Life 3(3-0)</td>
<td>This course examines individual development and aging within the context of the family: marriage, singlehood and widowhood; intergenerational relations and grandparenthood; sibling relations and friendships.</td>
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<tr>
<td>HDF 419</td>
<td>HDF Internship 1-12(Spec)</td>
<td>A structured internship that provides students with an opportunity to work in a professional setting serving the needs of individuals and families. No more than 6 credits may be taken each semester. Prerequisites: HDF 317 or 319 or 506 with a grade of C+ or better; a signed major in Child Development or Family Studies.</td>
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<td>HDF 481</td>
<td>FCS/LME Teaching Methods 3(3-0)</td>
<td>Covers material designed to prepare students for an endorsement in Family and Consumer Sciences/Life Management Education. Prerequisites: completion of all courses in Family Studies/Life Management Education Major.</td>
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<td>HDF 490</td>
<td>Independent Study in Human Development &amp; Family Studies 1-6(Spec)</td>
<td>A student-initiated learning activity focusing on a faculty approved topic in Human Development and Family Studies. Prerequisite: Permission of Instructor.</td>
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<td>HDF 497</td>
<td>Special Topics in Human Development &amp; Family Studies 1-15(Spec)</td>
<td>Topics of special interest which are not normally included in existing courses. Prerequisites: See Course Search and Registration.</td>
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<tr>
<td>HDF 506</td>
<td>Practicum in Parent Involvement 3(2-2)</td>
<td>Analysis of goals, trends, methods and models of parent involvement with opportunities to plan programs for parents, and to work with parents in professional settings. Prerequisites: HDF 302, HDF 303, HDF 306; or Human Development and Family Studies graduate standing.</td>
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<td>HDF 508</td>
<td>Early Childhood Program Administration and Learning Environments 3(3-0)</td>
<td>The functional role of the early childhood program director: legal and administrative controls and creative learning environments will be explored. Prerequisites: HDF 302, 303 and 309; or graduate admission.</td>
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<tr>
<td>HDF 510</td>
<td>Child Development Seminar: Promoting Resilience 3(3-0)</td>
<td>Through integration of theory, research, and practice, this course focuses on encouraging positive developmental outcomes and resilience in children and adolescents facing stressful life circumstances. Prerequisites: Two of: HDF 302, 303, 306, 309; or Human Development and Family Studies graduate standing.</td>
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<td>HDF 511</td>
<td>Seminar in Human Sexuality 3(3-0)</td>
<td>Survey of professional literature pertaining to human sexuality. Prerequisites: HDF 213 or HSC 222.</td>
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<tr>
<td>HDF 513</td>
<td>Readings in the Family 3(3-0)</td>
<td>Survey of professional literature related to the family. Prerequisites: HDF 211 or HDF 411 or SOC 411.</td>
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<tr>
<td>HDF 516</td>
<td>Family Development: Early Adulthood/Middle Age 3(3-0)</td>
<td>A study of the tasks and transitions of the periods of the family life cycle from early adulthood through middle age. Prerequisites: HDF 100 or PSY 220; HDF 211 or HDF 411 or SOC 411.</td>
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<td>HDF 517</td>
<td>Readings in Marital Counseling and Divorce 3(3-0)</td>
<td>Analysis of changing philosophical conceptualizations of marriage and family, as reflected by emerging issues in marriage counseling and divorce. Prerequisites: HDF 211.</td>
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<td>HDF 535</td>
<td>Dementia Care: Diagnosis, Treatment and Prevention 3(3-0)</td>
<td>This course provides a foundation in normal aging and then addresses the individual, family and institutional challenges of diagnosis, treatment and prevention of dementia illnesses. Prerequisites: HDF 247 or PSY 325 or HSC 390.</td>
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<tr>
<td>HDF 597</td>
<td>Special Topics in Human Development &amp; Family Studies 1-15(Spec)</td>
<td>Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student’s transcript. Prerequisite: See Course Search and Registration.</td>
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For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.
HON 300 Introduction to Honors 3(3-0)
Introduction to the mission, core values, and goals of the University Honors Program for first semester, Track II, Honors students. Credit cannot be earned in both HON 100 and HON 300. Prerequisite: Admission to the University Honors Program. Co-requisite: Enrollment in one Honors First Year Seminar: HON 201, 202, 203, 204, 205, 206, 207, 208.

HON 102 Honors Colloquium 1-3(Spec)
Colloquia are experimental or novel courses which are open to all Honors students. Colloquia intend to introduce new subjects or questions or to probe deeply into more narrowly defined areas. Repeatable up to 3 credits when content previously studied is not duplicated. Prerequisite: Honor students only.

HON 201 Honors Studies in Human Events and Ideas: First Year Seminar 3(3-0)
Explores a complex issue through the lens of the Humanities and seeks solutions to the great challenges facing our world. May be offered as Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group I-A: Human Events and Ideas)

HON 202 Honors Studies in the Arts: First Year Seminar 3(3-0)
Explores a complex issue through the lens of the Humanities and seeks solutions to the great challenges facing our world. May be offered as Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group I-B: The Arts)

HON 203 Honors Descriptive Science: First Year Seminar 3(3-0)
Explores a complex issue through the lens of the descriptive sciences and seeks solutions to the great challenges facing our world. May be offered as Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group II-A: Descriptive Sciences)

HON 204 Honors Quantitative and Mathematical Science: First Year Seminar 3(3-0)
Explores a complex issue using approaches from the quantitative and mathematical sciences and seeks solutions to the great challenges facing our world. May be offered as Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group II-B: Quantitative and Mathematical Science)

HON 205 Honors Behavioral Sciences: First Year Seminar 3(3-0)
Explores a complex issue through the lens of the behavioral sciences and seeks solutions to the great challenges facing our world. May be offered as Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group III-A: Behavioral Sciences)

HON 206 Honors Studies in Social Structures: First Year Seminar 3(3-0)
Explores a complex issue through an analysis of social structures and seeks solutions to the great challenges facing our world. May be offered as Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group III-B: Studies in Social Structures)

HON 207 Honors Studies in Global Cultures: First Year Seminar 3(3-0)
Explores the complexity of global cultures and seeks solutions to the great challenges facing our world. May be offered as Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

HON 208 Honors Studies in Racism and Diversity in the U.S.: First Year Seminar 3(3-0)
Explores the complexity of racism as a great challenge facing our world and seeks solutions that promote diversity. May be offered as Writing Intensive. Prerequisite: Admission to the Honors Program. Pre/Co-requisite: HON 100. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

HON 300 Introduction to Honors II 1(Spec)
Introduction to the mission, core values, and goals of the University Honors Program for first semester, Track II, Honors students. Credit cannot be earned in both HON 100 and HON 300. Prerequisite: Track II Admission to the University Honors Program.

HON 309 Honors Global Citizenship 1-6(Spec)
This course is designed to engage Honors students in global citizenship through study abroad experience. This course may be repeated when offered with a different focus of study. Prerequisites: Completion of HON 100, good standing in Honors. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

HON 310 Honors Academic Service Learning 1-4(Spec)
This course offers an opportunity for honors students to perform targeted academic-based service work under the supervision of a CMU faculty member. This course may be repeated when offered with a different focus of study. This course may be offered in an online or hybrid format. Prerequisites: HON 100; good standing in Honors.

HON 321 Seminar 3-12(Spec)
Honors seminars are more cognitively advanced courses addressing various topics, themes, and problems, and assuming experience and skill in analysis, synthesis, critical evaluation, and research. They are open primarily to sophomores, juniors, and transfer students.

HON 399 Independent Study 1-6(Spec)
Provides an opportunity for the student to investigate an approved topic which relates to her/his special needs and interests.

HON 401 Confrontation Colloquium 3-3(Spec)
These team-taught courses provide an opportunity for advanced multidisciplinary scholarship in which an integrating activity, project, or exhibit will be required.
HON 499 Senior Project 3(6-Spec)
An opportunity for senior honors students individually to design and execute multidisciplinary scholarship. Upper division honors students are expected to complete either HON 401 or 499.

HPS - Health Professions
See the Herbert H. and Grace A. Dow College of Health Professions for more information.

HPS 101 Introduction to the Health Professions 3(3-0)
Provides an understanding of the university environment, value of learning, and student responsibilities while emphasizing health professions and exploring self-identification skills necessary for choosing careers.

HPS 582 Special Topics 1-3(Spec)
Exploration of special topics in the field of Athletic Training/Sports Medicine and other health related areas. May be repeated to a maximum of 3 hours. Identical to ATR 582. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: ATR 430 and permission of instructor.

HSA - Hospitality Services Administration
See the Department of Marketing and Hospitality Services Administration for more information.

HSA 120 Introduction to the Gaming Industry 3(3-0)
Overview of gaming industry, including scope, staffing, security, control, taxation, government regulations, and social, economic, and cultural impacts of gaming on host community.

HSA 210 Effective Supervision: Principles and Practices 3(3-0)
Prepares students to be effective first-line supervisors in a variety of organizational settings by using sound principles and practices applied to basic managerial processes. Identical to MGT 210. Credit may not be earned in more than one of these courses.

HSA 240 Introduction to Hospitality Services Administration 3(3-0)
Lectures and travel giving a broad introduction to the services industry in the United States and the world. Additional fee required.

HSA 245 Wines of the World 1(1-0)
This is an introduction to the subject of wine, its history, variety, production, commercial and social role. Course participants gain experience in identifying wines, appraising value, serving, and discussing wines intelligently and constructively in today’s era of social responsibility.

HSA 297 Special Topics 1-6(Spec)
Selected problems of interest to students which are not normally included in existing courses. Specific topics will be listed on students’ transcripts.

HSA 331 Hospitality Industry Information Systems 3(3-0)
Concepts and design of information systems and the role of the computer in hotels, restaurants and travel-related industries. Prerequisites: ACC 202; BIS 221; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 341 Services Marketing 3(3-0)
Planning and implementation of marketing strategy and application of the marketing mix to services including hospitality, banking and health services. Identical to MKT 341. Credit may not be earned in more than one of these courses. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 343 Tourism 3(3-0)
An examination of where and why the hospitality services industry client travels at home and abroad and the economic impact of tourism expenditures. Identical to RPL 343. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 344 Legal Aspects of Hospitality Services 3(3-0)
An analysis of the legal and labor environments of the hospitality services industry. Prerequisites: BLR 202; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 348 Franchising 3(3-0)
This course explores the major functional areas of franchising, franchising agreements, characteristics of the franchisor and franchisee, franchising opportunities, legal concerns, and franchising strategies. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 350 Lodging Operations 3(3-0)
A detailed look at the multi-dimensional lodging operations from a manager’s perspective. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 390 Field Studies in Hospitality Services Administration 3(3-0)
Activities which may include industrial visitations and work study in conference with supervision of cooperating organization, professor and student. Prerequisites: permission of instructor; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 397 Special Topics 1-6(Spec)
Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the students’ transcript. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 445 Advanced Food and Beverage Systems Management 3(3-0)
Studies in advanced management requirements in food and beverage systems. Prerequisites: Completion of FNS 365/366 encouraged; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 490 Hospitality Internship 3(Spec)
Full-time summer designed work experience in hospitality operations agreed to by student and faculty coordinator. Detailed written report required. Prerequisites: 56 semester hours completed; HSA major or concentration; admission to Professional Business Studies or listed on signed major or minor.

HSA 491 Independent Studies 1-6(Spec)
Directed reading or research on an approved topic. Open to seniors in good academic standing. Prerequisites: prior permission of instructor and department chairperson; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 492 Practicum in Small Business 3(Spec)
Provides the student an opportunity to analyze the accounting, finance, marketing, management, and production system of an ongoing small business. Identical with ACC/FIN/MGT/MKT/BIS 492. Prerequisites: 56 semester hours completed; permission of instructor; admission to Professional Business Studies or listed on signed major or minor.

HSA 542 International Tourism 3(3-0)
This course focuses on the strategic management of international tourism in hospitality organizations, associations, and government agencies. Prerequisites: 86 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

HSA 546 Management in the Hospitality Service Sector 3(3-0)
Management and personnel functions as they relate to the hospitality industry; skills necessary to manage hotels, clubs, resorts; role of food service in these operations. Prerequisites: HSA 350, 447; 86 semester hours completed; admission to Professional Business Studies, listed on signed major or minor.

HSA 597 Special Topics 1-6(Spec)
Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the student’s transcript. Prerequisites: admission to Professional Business Studies and senior standing; 86 hours completed.

HSC - Health Science
See the School of Health Sciences for more information.

HSC 106QR Healthy Lifestyles 3(2-1)
Focus on individual health and wellness concepts using quantitative reasoning. Designed to assist the individual in striving for lifelong learning about healthier lifestyles. Quantitative Reasoning.

HSC 107 Drugs and the Athlete 1(1-0)
An orientation in basic chemical substances and nutrition as an ergogenic aid as they affect athletic performance. This course may be offered in an online hybrid format.

HSC 190 Introduction to Exercise Science 1(1-0)
Introduction to the profession of exercise science, including elements from the basic and clinical sciences, and other allied health professions that integrate with exercise science.

HSC 201 Medical Terminology 2(2-0)
A self-study module course for learning the meaning and use of prefixes, suffixes, root words and terms commonly used in health care fields. CR/NC only.

HSC 203 Leadership for the Health Professions 3(3-0)
This course provides students entering health professions with concepts, principles and techniques to equip them to assume more responsibility, to serve in leadership roles, and to maintain professional/personal balance.

HSC 205 Responding to Emergencies 2(1-2)
Includes CPR and first aid care. American Red Cross certification for first aid and CPR can be earned.

HSC 211 Human Anatomy and Physiology 3(3-0)
Introductory course in structure and function of the human body.
HSC 212 Applied Physiology and Kinesiology 3(2-2)
Emphasizes functional aspects of human performance and their application. Identical to PES 212. Credit may not be earned in more than one of these courses. Prerequisite: HSC 211.

HSC 213 Anatomy and Physiology Laboratory 1(0-2)
A learning experience using laboratory techniques and procedures to develop an understanding of the human body structure and function. Prerequisite: HSC 211 or concurrent enrollment.

HSC 214 Human Anatomy 4(3-3)
A comprehensive course in the structure of the human body organized by systems. Laboratory work includes identification of fundamental anatomical structures on models and cadavers. Prerequisites: HSC 211 or college level natural science course.

HSC 215 Human Physiology 4(3-2)
A comprehensive course that studies the function of the organ systems of the human body. Laboratory work in fundamental physiological principles is included. Pre/Co-Requisite: HSC 214.

HSC 216 Biomechanics and Kinesiology 3(2-2)
The study of functional aspects of human movement, including basic biomechanics and structural kinesiology. Prerequisites: HSC 214, HSC 215.

HSC 219 Exercise Conditioning for Health Fitness Professionals 2(0-3)
Students will learn to perform and teach various exercises utilized in fitness centers and achieve a moderate standard of fitness themselves. Prerequisites: HSC 214, HSC 215.

HSC 220 Basics In Health Fitness 3(2-2)
Theory and practices related to exercise testing and administration. Practical experience in body composition techniques, electrocardiography, and fitness evaluation. Prerequisites: HSC 214, HSC 215.

HSC 222 Sexuality In Health Education 3(3-0)
Emphasis on understanding and human values as related to programming sex education in health education classes. Not open to students with credit in HSC 527.

HSC 223 Basic Health Concepts I 3(3-0)
one of two introductory content courses covering: tobacco, alcohol and drug use and prevention; growth and development; disease prevention; nutrition; and physical activity. Pre/Co-Requisite: HSC 106.

HSC 224 Basic Health Concepts II 3(3-0)
one of two introductory health content courses covering: violence prevention/safety; emotional/mental health; character education; intentional/unintentional injuries; community, environmental and consumer health. Pre/Co-Requisites: HSC 106.

HSC 235 Psychoactive Drugs 3(3-0)
The study of psychoactive drugs: what they are; how they work; and why people use and/or abuse them. Not open to students with credit in HSC 528, 529, or 530. This course may be offered in an online or hybrid format.

HSC 236 Substance Abuse Intervention Programming 3(3-0)
The impact of drug abuse on society and efforts to prevent substance abuse, including prevention, interdiction, treatment and follow-up. Prerequisite: HSC 235.

HSC 297 Special Topics 1-12(Spec)
Contains subject matter not included in courses currently listed in the Bulletin. Prerequisite: Permission of Instructor.

HSC 308 Physiological Basis of Sport and Exercise 3(3-0)
Lectures on basic principles of physiology of exercise. The basics of exercise, performance conditioning, and the human organism response to these conditions. Identical to PES 308. Credit may not be earned in more than one of these courses. Prerequisites: HSC 211; or HSC 214, 215.

HSC 310 ECG Assessment 2(2-1)
Emphasis is placed on the recognition and interpretation of normal and abnormal resting and exercise ECGs. Includes lab experience in resting and exercise ECG monitoring. Prerequisites: A grade of C or higher in HSC 214, 215; a signed Exercise Science Major: Clinical Exercise Science Option or a signed Health Fitness in Preventive and Rehabilitative Major.

HSC 313 Field Experience in School Health Education 1(Spec)
A 30-hour field experience of on-site observation and participation under the supervision of the department and a secondary school health education teacher. CR/NC only. Prerequisites: EDU 107; HSC 205, HSC 211, HSC 222, HSC 235; HSC 503 or FNS 370.

HSC 317 Community Health 3(3-0)
Introduction to public health, and services provided to citizens and educators by official and voluntary health agencies. This course may be offered in an online or hybrid format.

HSC 319 Methods and Materials in Community Health Education 3(3-0)
Skills and techniques in writing, developing health education materials, public speaking, and group dynamics as they relate to community programs. Prerequisite: A grade of C or higher in Community Health Major or minor.

HSC 323 Community Organization Methods 3(3-0)
The course examines the principles of community organization practice for health education. Community organization models, concepts, skills, strategies, and theories will be addressed.

HSC 333 Managing the Health of Populations 3(2-0)
This course provides the foundation for exploring health of populations and communities within the context of applied epidemiology and sound healthcare delivery administration.

HSC 340 Curriculum in Health Education 3(3-0)
Study of modern curriculum philosophy, structure, placement, and content within elementary, junior, and senior high schools.

HSC 343 Health Education in the Elementary School 2(2-0)
A study of health education programs and practices for teachers at the elementary school level. Prerequisites: admission to teacher education or teacher certificate.

HSC 346 Methods and Resources in Teaching Health 3(3-1)
Methods and resources in teaching health education. A lab will be devoted to micro-teaching. Pre/Co-require: HSC 340.

HSC 350 Community Service in the Health Educators 2(2-0)
A service-learning experience where the student is engaged in a hands-on service project. Academic coverage includes the philosophy, objectives, and methods of community service. Prerequisite: HSC 317.

HSC 352 Environmental Health 3(3-0)
Emphasis on today's environmental problems related to health, air, water, radiation, housing, urban and rural, cultural, and man's responsibilities and remedial actions to these problems. This course may be offered in an online or hybrid format.

HSC 390 Health and Aging 3(3-0)
A study of age-related changes of the body, health concerns, healthy lifestyles and health care for older adults.

HSC 404 Epidemiology 3(3-0)
Introduction to basic principles and methods of epidemiology including: determinants of disease distribution, measures of disease frequency and association, study design, and data sources. Prerequisites: Math competency; 56 credits.

HSC 411 Pathopharmacology 3(3-0)
Study of body's physiological responses to disease states. Emphasis is placed on the interactions among body systems and the alterations in homeostatic mechanisms. Prerequisite: HSC 211 or HSC 215 or BIO 392.

HSC 414 Decision Technologies in Health Care 3(3-0)
This course surveys two computer-based tools, simulation and geographical information systems, commonly used to market and manage the delivery of health services. Prerequisite: an introductory probability or statistics course.

HSC 417 Epidemiology for Community Health 3(3-0)
This course introduces students to the basic principles and methods of epidemiology, including determinants of disease distribution and other elements of investigating disease outbreaks. Prerequisite: HSC 317.

HSC 418 Professional Aspects of Health Education 2(2-0)
This course will address professional issues relating to the history, philosophy, ethics, practice, settings, and competencies of health education. Prerequisites: HSC 317 or concurrent enrollment.

HSC 419 Community Health Education, Assessment, Planning and Program Evaluation 3(3-0)
Models, theories, methodologies, interventions, and evaluation of community health assessments and programs will be discussed, along with other health education responsibilities and initiatives. Prerequisites: HSC 418 or concurrent enrollment; HSC 544 or concurrent enrollment.

HSC 420 Health Fitness Assessment 3(2-3)
Practical course in exercise testing as used in health fitness settings including tests of cardiovascular function, muscular strength and endurance, flexibility, body composition and lung function. Prerequisites: HSC 211 or HSC 214 and HSC 215; HSC 308.

HSC 421 Personal Training 3(2-3)
Practical course to instruct students in leading safe and effective exercise programs one-on-one with their clients in a variety of environments. Prerequisites: HSC 308; HSC 420 (or concurrent enrollment).

HSC 422 Internship - Community Health 6(Spec)
Application of health education and health promotion principles in a community health agency. Experience supervised by a qualified health educator. CR/NC only. Prerequisites: Students must complete all required courses in their major prior to the internship. Applications must be approved in advance by the internship coordinator.

HSC 423 Practicum in Personal Training 2(1-3)
This course is designed for students to obtain experience leading safe and effective exercise programs with clients one-on-one. CR/NC Only. Prerequisites: HSC 205, 308, 420, 421.

HSC 424 Practicum in Health Fitness 2(0-6)
Practical experience with fitness appraisals/exercise prescriptions for adults; and staff functions in various campus facilities. CR/NC only. Prerequisites: HSC 205, 308 and permission of instructor.

HSC 425 Health Fitness Program Administration/Management 3(3-0)
This course will prepare students to work in health fitness settings organizing, administering and supervising programs for apparently healthy individuals or those with controlled risks. Prerequisites: HSC 420, HSC 421.
HSC 527 Sex Education Workshop 1(Spec)
Concentrated study of sex education and roles of home, school, and community. Not open to students with credit in HSC 222.

HSC 528 Smoking and Health Education Workshop 1(Spec)
Concentrated study of physiology, psychological, sociological, and educational aspects of smoking. Not open to students with credit in HSC 235.

HSC 529 Alcohol Education Workshop 1(1-0)
Concentrated study of physiological, psychological, and sociological aspects of alcohol education. Not open to students with credit in HSC 235.

HSC 530 Drug Abuse Workshop 1(Spec)
Concentrated study of the effects of drugs and narcotics. Roles of home, school, and community in drug policy. Not open to students with credit in HSC 235. This course is approved for offering in a distance learning format.

HSC 532 Diversity Issues in the Health Professions 3(3-0)
Developing an understanding of diversity issues in order to become a more effective, multicultural health practitioner. Prerequisites: HSC 106 or HSC 317 or graduate standing.

HSC 534 Workshop in Principles of Cardiovascular Health and Disease 1(Spec)
Concentrated study of the physiological aspects of the cardiovascular system and its adaptation to stress.

HSC 536 Health Education Assessment 3(3-0)

HSC 537 Stress Reduction Workshop 1(Spec)
Systematic evaluation of stress and methods used to effectively reduce stress to promote and maintain health and wellness. Prerequisite: 50 credit hours completed or graduate standing.

HSC 538 Development of Proposals and Reports in Health Administration 3(3-0)
Emphasize format, content, and writing skills necessary for administration of health programs to prepare proposals, reports, and publications.

HSC 544 Biostatistics 2(2-1)
This class presents statistical concepts, principles and methods in the health services industry. Statistical procedures are applied to health, administrative, and medical data. Prerequisites: STA 282 or PSY 211 or graduate standing.

HSC 545 Health Planning 3(3-0)
Capstone course that brings together major aspects of managing healthcare organizations and programs into the strategic planning process and methodologies. This course may be offered in an online or hybrid format. Prerequisites: HSC 500, 507, 520, 544. Pre/Co-requisites: HSC 570. Recommended: MKT 300; HSC 333, 338.

HSC 546 Microcomputer Applications to the Health Sciences 3(3-0)
Microcomputer applications in school and community health, health services administration, health promotion and exercise science, application of current software utilized by the health fields. Prerequisites: CPS 100 or BIS 104.

HSC 547 Health Risk Identification and Management 3(3-0)
Health risk factors associated with cardiovascular and other chronic diseases will be identified and studied. Management, and risk to morbidity and mortality will be emphasized. This course is approved for offering in a distance learning format. Prerequisite: A signed major in one of the following: Health Fitness in Preventive and Rehabilitative Programs Major; Community Health Education Major; or Exercise Science Major (Clinical Exercise Science, Health Fitness, or Kinesiology Option).

HSC 550 Stress Test Administration 3(2-2)
Course in theory and methods of administering exercise stress tests using different modes of exercise and consideration of different populations. Includes classroom and practical experience. Prerequisites: A grade of C or higher in HSC 220 or 420, 308, 310; a signed Exercise Science Major: Clinical Exercise Science Option or a signed Health Fitness in Preventive and Rehabilitative Programs Major; or Exercise Science Graduate Status.

HSC 551 Stress Testing Interpretation 3(3-1)
Course in analysis of information gained from exercise testing, studying deviations from normal, and applications of exercise test information in adult fitness and cardiac rehabilitation programs. Prerequisites: HSC 550 with a grade of C or higher.

HSC 552 International Health Systems, Organizations and Policy 3(3-0)
This course presents an overview of health systems structure, service delivery, administrative processes and policy dimensions from an international perspective. Health systems, programs and initiatives from various countries and cultural settings are studied as are global health agencies involved in the coordination of health improvement efforts. This course is approved for offering in a distance learning format. Prerequisites: HSC 317.

HSC 553 Cardiac Medications 2(2-0)
An examination of classifications, mechanisms of action, indications and names of medications used in treatment of cardiovascular diseases and associated disorders (pulmonary and metabolic diseases). Prerequisites: Admission to the Exercise Science Major: Clinical Exercise Science option or graduate standing.
HSC 555 Health Education in the Elementary School 3(3-0)
Various components of the elementary school program: instruction, curriculum, services, and administration.

HSC 570 Financial Aspects of Health Services Organizations 3(3-0)
This course addresses the main issues surrounding financial administration of health services organizations, particularly hospitals. Prerequisite: ACC 201.

HSC 571 Legal Aspects of Health Services Organizations 3(3-0)
The issues studied are hospital liability, informed consent, medical staff appointments, tort and health services, ethical issues related to health care. 

HSC 572 Quality Improvement in Health Services 3(3-0)
Basics, implementation and application of quality management and improvements specific to health care. Statistical principles and illustrative cases are presented. Recommended: HSC 570.

HSC 575 Exercise Science Clinical Internship 8(Spec)
Application of knowledge and skills in an approved, supervised clinical exercise program internship: minimum of 480 hours required. CR/NC only. Prerequisites: Undergraduate students must have completed all courses in the Exercise Science Major: Clinical Option. Graduate students must have completed HSC 310, 411, 547, 550, 551, 553 with grades of C or higher.

HSC 576 Exercise Science Fitness Internship 8(Spec)
Application of knowledge and skills in an approved, supervised fitness internship: minimum of 480 hours required. CR/NC only. Prerequisites: Undergraduate students must have completed all courses in the Exercise Science Major: Clinical Option. Graduate students must have completed HSC 310, 411, 547, 550, 551, 553 with grades of C or higher.

HSC 580 Teaching Sexuality and Reproductive Health in Schools 2(2-0)
A workshop designed to meet PA 226 guidelines for teacher qualifications in sex education and reproductive health by providing insight into the content of quality K-12 sex education programs. Prerequisites: A teaching certificate or approval of the instructor.

HSC 581 Managed Care: Origins, Organizations, and Operations 3(3-0)
Covers managed care programs, structures, practice models, role of physicians and other clinicians, capitation cost-accounting, and forms of reimbursement. Prerequisites: HSC 507, HSC 520.

HSC 586 Cardiovascular Disease Risk Factors in Children 3(1-4)
Course reviews cardiovascular disease risk factors of children (CVDRF). Students will be involved in 45 hours of service learning, screening CVDRF of area children. Prerequisites: HSC 214, 215, and 220.

HSC 591 Legal & Regulatory Aspects of Long-Term Care 3(3-0)
This course covers the legal and regulatory issues inherent to the long-term care industry in the United States. In addition, this course serves as preparation for individuals wishing to sit for the National Association of Board of Examiners Exam ("National Exam"). Prerequisites: undergraduate students must have completed 56 credit hours, or Graduate students must have completed HSC 571 recommended.

HSC 592 Administration Issues in Long-Term Care 3(3-0)
This course covers the facility management issues of long-term care administration, including aspects of business, regulation and human resources. Prerequisites: undergraduate students must have completed 56 credit hours; HSC 570 recommended.

HSC 593 Resident Care Issues in Long-Term Care Administration 3(3-0)
This course covers the residential and clinical aspects of long-term care administration. Prerequisites: undergraduate students must have completed 56 credit hours.

HSC 595 Health Administration Internship 6(6-0)
This course is the capstone professional experience conducted at a health care facility in the United States. In addition, this course serves as preparation for individuals wishing to sit for the National Association of Board of Examiners Exam ("National Exam"). Prerequisites: HSC 507, 520, 545, 570, 571, and 572 and permission of internship coordinator; Recommended: HSC 333, 500, 538, 544, or Graduate Status and permission of internship coordinator.

HSC 598 Nature and Dynamics of Destructive Health Habits 3(3-0)
Etiologies and recovery strategies of substance abuse, eating and sexual disorders and other destructive health habits which undermine healthy life-styles. Prerequisites: HSC 235.

HST 100 Dynamics of the Past: An Introduction to the Study of History 3(3-0)
Investigates how the past lives in the present and influences the future. Library is used as laboratory to answer historical questions; memorizing answers is deemphasized.

HST 101 The Development of Western Civilization: From Ancient Times to 1700 A.D. 3(3-0)
The people, empires, and ideas that forged the history of Europe and the Western world, from the first cities to the Scientific Revolution. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

HST 102 The Development of Western Civilization: From 1700 to the Present 3(3-0)
The modern world was made in Europe between 1700 and 1950. Find out how and why in this survey of events, personalities, and ideas. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

HST 106 Twentieth Century: Western World Issues 3(3-0)
Analyzes issues of contemporary importance in the Western world, such as world wars, women’s rights, the rise of dictatorships, and the threat of nuclear war. May be offered as Writing Intensive. (University Program Group II-B: Studies in Social Structures)

HST 110 The American Experience 3(3-0)
The modern world was made in Europe between 1700 and 1950. Find out how and why in this survey of events, personalities, and ideas. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

HST 112 The Struggle for Equality: The United States, 1865-Present 3(3-0)
A broad and interpretative study of the United States since the Civil War. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

HST 120 Unlikely Princesses: Women of World History 3(3-0)
An examination of "dangerous" women in world history who would not make good cartoon princesses. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

HST 163 The Latin American Experience 3(3-0)
Latin American history and cultures from the Inca and Aztec empires to the Colonial and Mexican Drug Wars. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

HST 168 Modern East Asia 3(3-0)
Explores the history of China, Japan, and Korea from the age of the samurai to the Beijing Olympics (1600-present). May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

HST 176 The African Experience 3(3-0)
A survey of the history of the continent from prehistoric hominids to the Arab Spring of North Africa. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

HST 200 Medieval Civilization 3(3-0)
Learn the truth about the Middle Ages (c. 500-1500), the period in European history sanitized so brilliantly in "Monty Python and the Holy Grail." May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

HST 201 World History to 1500 3(3-0)
A survey of selected political, economic, social, religious, intellectual, and cultural elements in the history of the world from ancient times to 1500 CE.

HST 202 World History Since 1400 3(3-0)
A survey of selected political, economic, social, religious, intellectual, and cultural elements in the history of the world since 1400 CE.
HST 210 United States History through Michigan Eyes 3(3-0)
Explores how people living in Michigan shared with others in North America the changes introduced by the colonization, expansion, and development of the United States. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

HST 221 Growing Up in America 3(3-0)
Learn how childrearing, family life, education, and the transition to adulthood have changed from colonial times to the present. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

HST 228 American Business: A History 3(3-0)
A history of American business with primary emphasis on the role of individuals and the evolution of institutions-partnerships, corporations, and conglomerates.

HST 236 Babylon and Beyond: Ancient Civilizations of the Near/Middle East 3(3-0)
The origins and florescence of the earliest civilizations of the Near/Middle East from the Neolithic to the death of Alexander the Great (323 BCE). May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

HST 237 Baghdad and Beyond: The Middle East from 600 C.E. 3(3-0)
A study of the history and cultures of the Middle East from the origins and expansion of Islam until modern times. May be offered as Writing Intensive. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

HST 238 Ancient Greece and Rome 3(3-0)
Political, social, intellectual, and cultural developments in the history of ancient Greece and Rome to AD 365. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

HST 261 Indigenous Peoples of Latin America: Precontact to 1821 3(3-0)
This course explores continuity and change in the culture and society of the indigenous peoples of Latin America from the precontact period to 1821. Recommended: Any Latin American and/or Native American history course.

HST 280 Nazi Germany and the Holocaust 3(3-0)
An examination of the events and ideas in Germany and elsewhere that produced the Nazi state and the Holocaust.

HST 292 Global Perspectives on Non-Western History 3(3-0)
Variable content, examining one non-Western area in the context of world historical patterns and current Michigan social studies requirements.

HST 297 Special Studies 1-6(Spec)
Each offering studies a selected historical topic using readings, discussion, lecture, and research as appropriate. May be repeated when the content is not a duplication of a previous special topics offering.

HST 300 A Mid-tier Experience for History Majors: Teaching History in Secondary Schools 2(1-2)
The Mid-Tier Experience provides observations and small-group instructional opportunities for students seeking secondary certification in history. Course includes both campus instruction and field work. CR/NC only. Prerequisites: completion of a minimum of 15 hours of history on a signed major, admission to teacher education, junior standing.

HST 301 The Craft of History 4(4-0)
Study of history as a scholarly discipline with emphasis given to historical theory, concepts, methodology, fields, and the history of historical thinking and writing. Specific topics and materials will vary from semester to semester. Prerequisites: Nine hours of history and a signed major or minor in history.

HST 302 Comparative Environmental History 3(3-0)
Investigate complex relationships between humans and nature, considering such questions as why weeds, pigs, and germs were more important in colonial expansion than military campaigns. Prerequisites: 9 hours of history. Recommended: At least 2 of HST 111, 112, 201, 202.

HST 303 The American Revolution 3(3-0)
Explores the Revolutionary War's causes and course; political, social, and cultural changes of the period; and the formation of the Constitution. May be offered as Writing Intensive.

HST 312 American Military Experience 3(3-0)
The role of American armed forces in peace and war. As social institutions the armed forces reflect political, social, and economic developments of the time. This course is approved for offering in a distance learning format.

HST 315 The Vietnam War 3(3-0)
Examines the modern conflicts in Vietnam, the American experience in Indochina from 1945 to 1975, and the war's implications for the United States.

HST 319 The United States since World War II 3(3-0)
An analysis of post-World War II political, economic, and social developments in America.

HST 320 United States Social History to 1865 3(3-0)
Examines social structures in early America-including family life, religion, and slavery - and analyzes the nineteenth-century origins of modern socioeconomic institutions. This course may be offered in an online or hybrid format. May be offered as Writing Intensive.

HST 321 United States Social History since 1865 3(3-0)
Examines the experiences of different class, age, gender and ethnic groups in America; stresses the historical roots of current social problems. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

HST 322 Westward Movement in America 3(3-0)
The impact of territorial expansion in the United States upon economics, culture, and politics.

HST 323 History of Native Americans 3(3-0)
This course analyzes the study of Native peoples of North America before Columbus and the inter-relationships between the Native peoples and European immigrants after Columbus. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

HST 324 African American History to 1877 3(3-0)
Explores African American social, cultural, and political life from the origins of the transatlantic slave trade to the late nineteenth century. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

HST 325 African American History, 1877-Present 3(3-0)
Explores African American social, cultural, and political life from the late nineteenth century to the present, including the modern civil rights movement. May be offered as Writing Intensive. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

HST 326 Women in America 3(3-0)
Study of the traditional position of women in American society as documented in historical, literary, and biographical sources. Identical to WST 328. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

HST 328 Technology in American History 3(3-0)
Examines the role of technology in the economic, social and cultural history of the United States from the colonial era to the early 21st century. Recommended: At least 12 hours of humanities or social science courses.

HST 329 Film and the Politics of Gender, 1960-Present 3(3-0)
This course uses top-grossing films and written texts as primary sources to trace the popular debate over feminism from the early 1960's until the present. Prerequisite: HST 112 or 326 or WST 328.

HST 330 U.S. Constitutional History 3(3-0)
Historical overview of the critical events and ideologies that shaped the U.S. Constitution and how the courts have interpreted the U.S. Constitution since 1787.

HST 333 History of Michigan 3(3-0)
A study of the development of Michigan from earliest settlement by Native Americans to the present, focusing on economic, social, and political history.

HST 335 History of the Rock and Roll Era 3(3-0)
The historical origins and evolution of rock music, from "Rock Around the Clock" to "Smells Like Teen Spirit." History like you've never heard it before. Prerequisite: at least sophomore standing. (University Program Group I-B: The Arts)

HST 336 Iran and Iraq in History 3(3-0)
An examination of the interrelated histories of Iran and Iraq from the emergence of the first cities and states around 4000 BCE to the present.

HST 338 The Decline and Fall of the Roman Empire 3(3-0)
War, politics, society, religion, and culture in the Mediterranean world of the later Roman empire (c. 250-650 AD).

HST 340 The High Middle Ages 3(3-0)
Investigates intellectual, cultural, political, and social developments of the High Middle Ages (ca. 1000-ca.1300), focusing on interactions among Classical, Germanic, Jewish, Christian, and Islamic cultures. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

HST 341 Renaissance and Reformation 3(3-0)
Social, cultural, intellectual, and political history of the Renaissance and Reformation movements in Europe from ca. 1350 to ca. 1650. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

HST 342 The Culture of Renaissance Italy (Study Abroad) 3(Spec)
Renaissance Italy (4 weeks on site) as it survives in texts, churches and museums of the five major Renaissance cultural centers: Milan, Venice, Florence, Rome and Naples.

HST 343 History of Paris 3(3-0)
This course addresses key moments in the history of France's capital from an interdisciplinary perspective. Recommended: Any European history and/or French literature/culture courses.

HST 344 Modern Europe, 1815-1918 3(3-0)
The economic, political, social, cultural, and diplomatic developments in Europe from the close of the Napoleonic era to the end of World War I.

HST 346 The World of Versailles: Power and the Politics of Splendor in 17th-Century France 3(3-0)
Examines how Louis XIV of France employed "the politics of splendor," that is using the arts as a means to acquire and legitimize political power. Recommended: 9-12 hours of course work in the humanities. (University Program Group I-B: The Arts)
HST 347 The French Revolution and Napoleonic Period 3(3-0)
Origin and development of the French Revolution and the role of Napoleon in European history, 1787-1815.

HST 348 Russia through the Reign of Catherine the Great 3(3-0)
A social, cultural, and political study of Russia from the ninth to the eighteenth century.

HST 349 Russia in the Nineteenth and Twentieth Centuries 3(3-0)
A social, cultural, and political study of Russia in the nineteenth and twentieth centuries.

HST 350 England to 1688 3(3-0)
From Anglo-Saxon times through the reign of the Stuarts.

HST 351 Britain since 1689 3(3-0)
Political, economic, social, and religious history of early modern and modern Britain (England, Scotland, Ireland, and Wales) from the later Stuarts to the present.

HST 352 British Imperialism 3(3-0)
A study of the key themes, events, and personalities of British imperialism from the 16th century through the 20th century.

HST 353 Germany since 1870 3(3-0)
The German experience since the formation of the Empire, including the processes, problems, and aftereffects of wars, revolutions, constitutions, totalitarianism, and peace.

HST 354 Women in European History 3(3-0)
Surveys and analyzes the traditional and nontraditional roles of women in European history, using new historical research. Identical to WST 354. Credit may not be earned in more than one of these courses.

HST 356 Europe Since 1945 3(3-0)
A study of political, social, economic and cultural change in Europe from the end of the Second World War to the present. Identical to EUR 302. Credit may not be earned in more than one of these courses.

HST 361 Religion in Colonial Latin America 3(3-0)
This course examines the interaction of European, African, and Native American religions during the colonial period in Latin America. Identical to REL 361. Credit may not be earned in more than one of these courses. Recommended: Any Latin American history and/or Religion course.

HST 362 Latin American Revolutions: Mexico, Cuba and Central America 3(3-0)
The Circum-Caribbean in the Twentieth Century with primary emphasis on the origin and development of the Mexican, Cuban, and Central American Revolutions.

HST 369 Traditional China 3(3-0)
The political and social history of China from earliest times to the nineteenth century.

HST 370 Modern China 3(3-0)
The political and cultural history of China from the Opium War to the present.

HST 376 East/Central Africa: Issues 3(3-0)
Explores a varying selection of issues concerning historic and contemporary patterns of political and economic organizations, international relations in Ethiopia, Somalia, Rwanda, Zaire, Uganda, Kenya.

HST 377 West Africa 3(3-0)
An overview of West African history emphasizing the post-1800 period and especially developments since independence.

HST 378 South Africa 3(3-0)
The conflict between European immigrants and indigenous Africans; the effects of white minority rule, including apartheid; successful African efforts to achieve majority rule.

HST 379 Race, Class and Power: South Africa in the 20th Century 3(3-0)
The course explores the challenges to Afrikaner nationalism and its apartheid policies by traditional liberalism, Black African nationalism, revolutionary Marxism and ethnic mobilization. Identical to HUM 340. Credit may not be earned in more than one of these courses. Recommended: HST 176 or PSC 340.

HST 382 History of Israel 3(3-0)
Israel and Palestine from ancient times to the present, including background to contemporary Zionism and the conflict with Arab nationalism. Identical to REL 382. Credit may not be earned in more than one of these courses.

HST 397 Special Studies 1-6(Spec)
Each offering studies a selected historical topic using readings, discussion, lecture, and research as appropriate.

HST 400 History for Secondary Schools 3(3-0)
Translates the study and methodology of history into teaching practices appropriate for secondary schools, and evaluates recent proposals for improving history instruction. Prerequisites: Admission to teacher education program; 18 hours of history or current enrollment in 18th hour; 2.70 GPA in history major or minor.

HST 491 Independent Research 3(Spec)
Research and writing on a topic selected in consultation with an instructor. HST 491 may not be used as a substitute for HST 496. Prerequisites: junior or senior standing with B average in 12 hours of history; permission of instructor and the department chairperson.

HST 496 Research Seminar 3(3-0)
Historical research and writing. This course or an arranged substitute is required on all majors. May be offered as Writing Intensive. Prerequisite: HST 301.

HST 497 Special Studies 1-6(Spec)
Each offering studies a selected historical topic using readings, discussion, lecture, and research as appropriate. Prerequisite: permission of instructor.

HST 498 Honors Thesis 3(Spec)
The student, with guidance from a thesis advisor, researches and writes an undergraduate thesis. Prior written approval by thesis advisor and chairperson required. Prerequisites: completion of 90 credit hours, including 24 credit hours in History.

HST 505 Tudor England 3(3-0)
The political, religious, socio-economic and cultural life of England under the Tudors, focusing on the reigns of Henry VIII and Elizabeth I. May be offered as Writing Intensive. Prerequisites: One of HST 101, 102, 350, 351; or graduate status.

HST 511 Colonial British America 3(3-0)
Explores the social, cultural and political development of British America in the seventeenth and eighteenth centuries. May be offered as Writing Intensive. Prerequisite: One of the following: HST 111, 323, 324, 326, 351; or graduate status.

HST 513 Era of the Early Republic, 1789-1825 3(3-0)
An investigation of nation-building, the formation of new institutions, ideology, decision-making, and personalities during the precocious decades following the American Revolution. May be offered as Writing Intensive. Prerequisites: One of HST 110, 111, 301; or graduate status.

HST 514 Democracy, Expansion, and Reform in America, 1824-1848 3(3-0)
America changed dramatically between 1824 and 1848. This course explores relations with Native Americans, political democracy, industrialization, women’s roles, reform, and expansion into the slavery. May be offered as Writing Intensive. Prerequisite: One of HST 111, 320; or graduate status. Recommended: While this course does not require or expect detailed knowledge of the Jacksonian Era, students should be broadly familiar with basic periods and developments in nineteenth century America.

HST 515 Civil War and Reconstruction 3(3-0)
Causes and process of secession, the conduct of war, and the reconstruction of the South to 1877. May be offered as Writing Intensive. Prerequisite: One of HST 111, 320; or graduate status. Recommended: While this course does not require or expect detailed knowledge of the Civil War, students should be broadly familiar with basic periods and developments in nineteenth century America.

HST 516 Emergence of Modern America, 1877-1920 3(3-0)
Social, political, cultural, and economic developments from the end of Reconstruction through the Progressive era. May be offered as Writing Intensive. Prerequisite: One of HST 111, 320; or graduate status. Recommended: While this course does not require or expect detailed knowledge of the Progressive Era, students should be broadly familiar with basic periods and developments in nineteenth century America.

HST 517 U.S. Rise in World Leadership, 1917-1945 3(3-0)
The United States as a world power after World War I, the decade of the 1920s, the depression era, the impact of modern global war.

HST 518 African Americans and the Law: From Slavery to Civil Rights 3(3-0)
Course explores the unique relationship between African Americans and the American legal system from Colonial times to the present. May be offered as Writing Intensive. Recommended: one of HST 111, 320; one of 112, 321, 325, or graduate standing.

HST 522 Indians of the Great Lakes Region 3(3-0)
This course focuses on the American Indian people in the Great Lakes Region, from early European contact through the nineteenth century. May be offered as Writing Intensive. Prerequisites: One of the following: HST 111, 323, or graduate standing.

HST 523 American Diplomatic History, 1775-1898 3(3-0)
The major issues in American diplomacy, beginning with the birth of the Republic and continuing to the Spanish-American War. Prerequisites: HST 110, HST 111.

HST 524 American Diplomatic History Since 1898 3(3-0)
The major issues of United States diplomacy, beginning with the Spanish-American War and continuing to the present.

HST 525 The Industrialization of America 3(3-0)
This course analyzes how industrialization transformed America and how it altered living standards, culture, labor, business, and politics. This course may be offered in an online format. May be offered as Writing Intensive. Recommended: At least 12 hours of humanities and social science.

HST 526 Modern American Political Culture, 1865-Present 3(3-0)
Uses cultural texts such as films, novels, monographs and lectures; this course examines American politics and political culture from 1865 to the present. Recommended: HST 112 or PSC 105 and 9 additional hours of history or political science; or graduate standing.

HST 532 Michigan History Studies 1-3(Spec)
Individual and group studies in regional and local Michigan history.

HST 535 The Middle East in the Modern Era 3(3-0)
An examination of the history of the Middle East and its relations with Europe and the United States from the 17th century to the present. May be offered as Writing Intensive. Prerequisites: HST 237 or graduate standing.
HST 537 The Age of Cicero 3(3-0)
Political, economic, social, and cultural history of the late Roman republic (c. 133–27 BC), emphasizing modern historiography and ancient sources in English translation. May be offered as Writing Intensive. Prerequisite: One of HST 101, 238, 338 or graduate status. Recommended: While this course does not require or expect detailed knowledge of Roman history, students should be broadly familiar with basic periods and developments in the ancient Mediterranean world.

HST 538 Athens: Classical Period 3(3-0)
Athensian political and social and economic change in the sixth and fifth centuries B.C. relying primarily on contemporary or near contemporary documents in translation. Recommended: HST 238.

HST 542 The Enlightenment in Europe 3(3-0)
The social, cultural, political and intellectual history of Europe in the late seventeenth and eighteenth centuries. Recommended: 6 hours of European history before 1815.

HST 543 Napoleon 3(3-0)
This course will examine the period dominated by Napoleon Bonaparte (1795–1815) and its political, social, and cultural impact on European and transnational history. May be offered as Writing Intensive. Recommended: 9 hours of history coursework or graduate standing.

HST 548 Russian Thought 3(3-0)
Currents of Russian thought. Emphasis on the nineteenth century.

HST 558 Europe, 1914–1945 3(3-0)
Politics, social, and economic change in Europe from the First World War through the Second; emphasis on fascism and the failure of democracy. May be offered as Writing Intensive. Prerequisite: HST 102 or 106 or graduate status.

HST 560 Mind Games 3(3-0)
Students propose, design, and develop role-playing and other face-to-face games for use in the history classroom. Prerequisite: Advanced undergraduate or graduate standing.

HST 562 The Atlantic World in the Age of Empire 3(3-0)
Study of the political, social, cultural and economic interactions of Europe, Africa, and the Americas from the fifteenth to the nineteenth century. Recommended: One of: HST 111, HST 163, HST 276, HST 341, HST 377, HST 511.

HST 576 Colonialism in Africa, 1880s–1960s 3(3-0)
Africa on the eve of European colonization, the colonization of Africa, the struggle for independence, the post-independence period, neo-colonialism, the Cold War and globalization. May be offered as Writing Intensive. Prerequisites: HST 176, 201 or 202, or graduate standing.

HST 580 Public History 3(3-0)
Discover why public historians are on the cutting edge, preserving and interpreting our heritage as writers, researchers, curators, media personalities, policy analysts, archivists, and more. May be offered as Writing Intensive. Prerequisites: HST 301 and MST 310, or graduate status.

HST 583 Archival Administration 3(3-0)
A practical introduction to archives theory, management, and issues; hands-on learning experience with primary source materials. Prerequisites: HST 301 and MST 310, or graduate standing.

HST 585 Oral History 3(3-0)
An introduction to the methodology and use of Oral History in historical research, interpretation, and documentation. May be offered as Writing Intensive. Prerequisites: HST 301 and MST 310, or graduate status.

HST 590 Readings in History 1-6(Spec)
Selected topics studied in special arrangement with an instructor. Prerequisites: junior or senior standing with a B average in 12 hours of history, or graduate status; and permission of the instructor and the department chairperson.

HST 595 Internship in Public History 1-6(Spec)
Enter the growing field of applied history through a supervised hands-on experience chosen to match your interests. Prerequisites: Permission of academic advisor and work supervisor.

HST 597 Special Studies 1-6(Spec)
Study of a selected historical topic at a level suitable for advanced undergraduate or graduate students. Recommended: 12 hours of HST.

HST 600 Historiography 3(3-0)

HST 601 Colloquium in Transnational and Comparative History 3(3-0)

HST 602 Colloquium in U.S. History to 1865 3-6(3-0)

HST 603 Colloquium in U.S. History Since 1865 3-6(3-0)

HST 619 Continuing Registration for Final Research Project 1(1-0)

HST 636 Colloquium in Ancient History 3-6(3-0)

HST 637 Colloquium in the Modern Middle East 3-6(3-0)

HST 650 Colloquium in European History to 1540 3-6(3-0)

HST 651 Colloquium in Early Modern European History 3-6(3-0)

HST 652 Colloquium in Modern European History 3-6(3-0)

HST 663 Colloquium in Colonial Latin American History 3-6(3-0)

HST 676 Comparative History of Slavery 3-6(3-0)

HST 681 Historic Preservation 3(3-0)

HST 690 Advanced Readings 1-9(Spec)

HST 695 Special Studies Abroad 3-15(Spec)

HST 697 Special Studies Colloquium 3-6(3-0)

HST 700 Practicum in College Teaching 1-6(Spec)

HST 710 Seminar in Intellectual and Cultural History 3-6(3-0)

HST 711 Seminar in Colonial and Revolutionary America 3-6(3-0)

HST 713 Seminar in the History of Nineteenth Century America 3-6(3-0)

HST 715 Seminar in the Civil War and Reconstruction 3(3-0)

HST 717 Seminar in the History of Twentieth Century America 3-6(3-0)

HST 723 Seminar in American Diplomatic History 3(3-0)

HST 738 Seminar in Ancient History 3-6(3-0)

HST 740 Seminar in Medieval West 3(3-0)

HST 741 Seminar in Early Modern Europe 3(3-0)

HST 742 Seminar in Eighteenth-Century European History 3(3-0)

HST 744 Seminar in Nineteenth-Century European History 3-6(3-0)

HST 758 Seminar in Twentieth-Century European History 3-6(3-0)

HST 763 Seminar in Latin American History 3(3-0)

HST 766 Seminar in Asian History 3(3-0)

HST 776 Seminar on African Diaspora History 3-6(3-0)

HST 791 Graduate Research 3-6(Spec)

HST 795 Seminar Abroad 3-15(Spec)

HST 797 Thesis 1-6(Spec)

HST 890 Doctoral Readings 1-9(Spec)

HST 898 Dissertation 1-36(Spec)

HUM - Humanities

See the College of Humanities and Social & Behavioral Sciences for more information.

HUM 101 Introduction to the Humanities 3(3-0)
Introduction to the study of selected topics in the humanities from various perspectives (historical, literary, religious, philosophical) in small group discussion (seminar) format.

HUM 197 Special Studies in Humanities 1-12(Spec)
HUM 197 is primarily for freshmen and sophomores; 397 is primarily for juniors and seniors; 597 is primarily for graduate students. Prerequisite: Permission of instructor.

HUM 202 Age of Charlemagne 3(3-0)
Introduction to the study of selected topics in the Carolingian period of the Middle Ages. Special emphasis placed on the reign of Charlemagne and the Carolingian Renaissance. Prerequisites: ART 185; HST 200.

HUM 301 Medieval Synthesis: Love in the Middle Ages 3(3-0)
An integrative, interdisciplinary seminar (employing history and literary criticism) examining love in its many medieval guises, e.g., love of God, of family, erotic love, and illicit love. Pre/Co-Requisites: ENG 362; HST 200 or HST 340.

HUM 302 Law and Society: Great Trials 3(3-0)
Interdisciplinary study of law, from the classical world to modern times, focusing on ethical, jurisprudential, political and legal components of trials of major historical figures. May be offered as Writing Intensive. (University Program Group I: Human Events and Ideas).

HUM 340 Race, Class and Power: South Africa in the Twentieth Century 3(3-0)
The course explores the challenges of Africaner nationalism and its apartheid policies by traditional liberalism, Black African nationalism, revolutionarv Marxism and ethnic mobilization. Identical to HST 379. Credit may not be earned in more than one of these courses. Prerequisites: HST 176; PSC 340.

HUM 370 The Age of Augustus 3(3-0)
Literature, history, art, and culture of the Roman world under its first emperor.

HUM 397 Special Studies in Humanities 1-12(Spec)
HUM 197 is primarily for freshmen and sophomores; 397 is primarily for juniors and seniors; 597 is primarily for graduate students. Prerequisite: Permission of instructor.

HUM 430 Self and Identity in American Life 3(3-0)
This interdisciplinary honors seminar explores identity formation in American life. Students explore major theories of identity formation and apply them to different dimensions of identity. Prerequisite: Junior or senior status.

HUM 510 Words and Music: A Theatrical Partnership 4(4-0)
The course considers musical theater as a unique art form, combining music, literature, and stagecraft into a whole greater than the sum of its parts. Prerequisites: Junior standing or above; any 300-level course in music, English, foreign language, or theater and interpretation.
IET - Industrial and Engineering Technology

See the School of Engineering and Technology for more information.

IET 116 General Drafting 3(2-2)
An introduction to the language of industry; includes lettering, sketching, pictorials, multiview projection, dimensioning, auxiliaries, sections, developments, and computer-assisted drafting. Requires no previous experience.

IET 120 Introduction to Engineering Technology 3(3-0)
A survey of the engineering world with a technologist’s perspective to provide the skills and knowledge required to pursue an engineering technology career. Recommended: MTH 105.

IET 130 Industrial Materials and Testing 3(2-2)
An overview of industrial materials including metals, plastics, composites and ceramics. Topics include material properties, material selection, and material testing.

IET 143 Introduction to Graphic Arts 3(2-2)
Letterpress, gravure, screen printing, bookbinding, and basic principles and processes of graphic reproduction.

IET 154 Engineering Design Graphics 3(2-2)
Focus on engineering design fundamentals, design processes, and the utilization of graphics within design. Computer-Aided design and product data management techniques are covered.

IET 160 Wood Technology 3(1-4)
Design, development, and construction of wood prototypes, utilizing appropriate wood materials and supplies, involving efficient and safe use of tools, machines, and industrial processes.

IET 170 Manufacturing Processes 3(1-4)
Introduction to the processing of metal materials through casting, fabricating, machining, and basic welding.

IET 180 Power and Energy Technology 3(2-2)
An introductory study of operational and scientific principles related to energy sources used as prime movers. To include gasolene, diesel, rotary, turbine, and jet engines.

IET 181QR Alternative Energy Analysis 3(2-2)
A quantitative comparison and analysis of current alternative energy technologies and systems. Quantitative Reasoning.

IET 182 Automobile Ownership and Maintenance 2(1-2)
A consumer product line of vehicles designed to provide fundamental mechanical understanding of the automobile. Lab activities include light repair and essential maintenance procedures.

IET 223QR Lean Six Sigma for Process Improvement 3(3-0)
The utilization of mathematical and statistical tools to improve product and process quality. This course may be offered in an online or hybrid format. Prerequisite: MTH 105. Recommended: STA 282. Quantitative Reasoning.

IET 225 Manufacturing Process Planning 3(3-0)
Study of the responsibilities and activities normally associated with process planning and its relationship to other manufacturing functions. Prerequisites: IET 170.

IET 226 Parametric Design and Modeling 3(2-2)
Development and production of engineering and technical models with a mechanical computer-aided design system. An introduction to parametric design and modeling. Prerequisite: IET 154.

IET 227 Principles of Accident Prevention 3(3-0)
A survey of accident prevention including the home, consumer, fire, water, motor vehicle, work, school, and sports.

IET 232 Technology for Children 2(1-2)
Apply creative thinking and problem solving skills to develop learning activities co-related with core curriculum concepts, utilizing materials, tools, and processes in cooperative learning environments.

IET 261 Construction Surveying 3(2-2)
A study of basic surveying applications in the planning, design, layout, and construction of our physical environment and infrastructure. Prerequisite: MTH 106 or 130.

IET 279 Applied Statics 3(3-0)
This course will cover force systems, resultants and equilibrium, trusses, frames, beams, and shear and moments in beams. Prerequisites: IET 154; MTH 130; PHY 130 or 145; PHY 170 or 175.

IET 281 Dynamics 3(3-0)
Study and engineering application of relationship between the forces acting on a body, the mass of the body, and the motion of the body. Prerequisites: IET 279 or EGR 251; MTH 132.

IET 284 Fluid Power Technology 3(2-2)
A study of hydraulic and pneumatic technologies related to the generation, transmission, and control of fluid power in fluid power systems. Prerequisites: MTH 130 or IET 180. Recommended: IET 120 or MTH 105.

IET 291 Applied Circuits 3(2-2)
A study of the fundamentals of applied circuits including Direct Current (DC) circuits, Alternating Current (AC) circuits, and basic electronics. Prerequisites: MTH 130. Pre/Co-Requisites: PHY 131, 171.

IET 292 DC Circuit Analysis 3(2-2)
Introductory dc circuit analysis including Ohm's law, Kirchhoff's current and voltage laws, mesh and nodal analysis, Thévenin, Norton and maximum power transfer theorems. Prerequisites: MTH 105.

IET 293 AC Circuit Analysis 3(2-2)
Introductory ac circuit analysis including sinusoidal signals, phasors, series and parallel ac networks, mesh and nodal analysis, network theorems, power triangle, power factor, and resonance. Prerequisites: IET 292; MTH 130.

IET 294 Residential Electrical Wiring 3(2-2)
Development of knowledge and skills related to the installation of electric wiring systems in residential and light commercial applications.

IET 324 Product Design and Development 3(2-2)
Ideeation, conceptualization, and development of product designs. Utilization of Non-Uniform Rational B-Spline (NURBS) based surface modeling tools to solve product design problems. Prerequisite: IET 226.

IET 326 Manufacturing Methods Analysis 3(3-0)
Study of methods, materials, tools, and equipment for productivity measurement and improvements. Prerequisites: IET 170; STA 282.

IET 327 Industrial Safety 3(3-0)
A study of the principles and practices of safety management with emphasis on occupational safety standards and loss control. Prerequisite: CHM 120 or CHM 131.

IET 338 Practicum in Industrial Education: Affiliation 2(0-4)
Expand technical competency and instructional methodology in industrial education by observing and participating with a university faculty member in classroom and laboratory teaching activities.

IET 350 Mechanism Design 3(3-0)
Study of mechanisms with graphical and analytical analysis of displacement, velocity, acceleration, motion, gearing, gear trains, linkages, and cams.

IET 352 Applied Fluid Mechanics 3(3-0)
Study of the basic principles and their application to practical applied problems in the fluid statics, fluid dynamics, flow in pipes, and open channel flow. Prerequisites: IET 281 or EGR 253.

IET 356 Thermodynamics 3(3-0)
Study of thermodynamics and basic tools necessary to obtain quantitative solutions to common engineering applications involving energy and its conversion, conservation and transfer. Prerequisites: PHY 145, PHY 175; or PHY 130, PHY 170.

IET 357 Residential Architectural Graphics 3(1-4)
Modern house planning resulting in a complete set of plans and specifications. This course is approved for offering in a distance learning format.

IET 358 Light Commercial Architectural Graphics 3(2-2)
Development of the architectural drawing techniques, basic construction methods and materials, details, and planning for light commercial building. Recommended: IET 357.

IET 360 Advanced Wood Technology 3(2-2)
Design, development and construction of wood prototypes in an advanced area of specialization including: bending, veneering, furniture construction, and use of jigs and fixtures. Prerequisites: IET 116, 160.

IET 361 Construction Technology 3(1-4)
Laboratory and classroom experience designed to develop skills and knowledge relating to noncommercial construction. Field experiences are used when applicable.

IET 363 Building Code Enforcement 3(3-0)
A comprehensive study of construction building code enforcement. Topics include the permit process, inspection process, and the legal aspects of building code enforcement. Recommended: IET 361. This course is approved for offering in a distance learning format.

IET 365 Manufacturing Processes II 3(2-2)
Introduces basic polymer formulation, properties of plastics materials, methods of molding plastics, and the fabrication and decoration of plastic articles. Prerequisites: CHM 120 or 131; IET 130, 170.

IET 367 International Building Codes 3(3-0)
Comprehensive study of the International Building Codes. Topics include International Building, Electrical, Plumbing, Mechanical, and Fire Codes. Recommended: IET 361. This course is approved for offering in a distance learning format.
IET 368 International Residential Code 3(3-0)
Comprehensive study of International Residential Code for One and Two-Family Dwellings. Topics include all residence code requirements for building a home according to IRC 2000. Recommended: IET 361. This course is approved for offering in a distance learning format.

IET 375 Robotics 3(2-2)
Introduction to industrial robotics including robot classifications, components and functions, programming, and applications. Prerequisites: CPS 180, IET 291 or EGR 290, MTH 132 or MTH 217.

IET 377 Computer Numerical Control Programming 3(2-2)
Programming and operation of CNC machines, including CNC vertical milling center and turning center. Emphasis on manual programming, CAM design, and machine setup and operation. Prerequisites: IET 154, 170.

IET 379 Mechanics of Materials 3(3-0)
Introduction to methods of determining the internal stresses and deflections of basic load-carrying members of construction and machine applications. Prerequisites: EGR 251 or IET 279, MTH 132.

IET 385 Automotive Engines 3(1-4)
Design, construction, operation, and service procedures involved in both reciprocating and rotary engines.

IET 390 Discrete Device Theory 3(2-2)
A comprehensive study of discrete devices and circuits, including diodes, transistors, single and multistage amplifiers, frequency response, and integrated operational amplifiers. Prerequisite: IET 292.

IET 397 Special Studies 1-6(Spec)
Individual investigation and research to increase ones technical Competency.

IET 400 Senior Seminar 11(1-0)
This seminar format will be used to prepare students to take the Certified Industrial Technologist (CIT) Exam and for graduation. Open to graduating seniors only. CR/NC Only. Prerequisites: Final Semester of Program of Study of ITM Majors.

IET 420 International Engineering Technology 1-6(Spec)
Engineering and technology applications, issues, and perspectives in international settings. Travel abroad required. May be repeated once. Any interested students should contact the IET Department. Prerequisites: 12 hours of IET credit.

IET 424 Human Factors and Ergonomics 3(3-0)
The study of methods and tools used in the fields of human factors and ergonomics to design and improve jobs, tasks, and products. Prerequisite: IET 324. Recommended: IET 327.

IET 425 Industrial Internship 2-8(Spec)
Supervised work experiences in industry. CR/NC Only. Prerequisites: departmental permission.

IET 426 Plant Layout and Materials Handling 3(3-0)
Study of plant layout through the development of overall layout including location, planning, detailing, diagrams, and design of manufacturing and service facilities for efficient flow. Prerequisite: IET 326.

IET 427 Product Reliability and Safety 3(3-0)
A study of product reliability and safety factors affecting the design, production, distribution, sales, and use. Prerequisite: 12 hours of IET coursework.

IET 428 Manufacturing Quality 3(3-0)
Study of specific quality techniques used by production departments to monitor processes, products, and reliability so quality can be improved. Prerequisites: STA 282 or 382; Junior standing.

IET 429 Occupational Competency 1-30(Spec)
Credit for examination for work experience in background in a given technical area for which the student has earned 25+ credit hours. Recommended: certified record of work experience; approval of the department chairperson.

IET 433 Problems and Methods of Teaching Industrial Education 3(3-0)
Preparation for teaching students of various ages, abilities, and interests in industrial education programs, encompassing relevant local, state, and national trends and philosophies.

IET 435 Curriculum Development and Facility Planning 3(3-0)
Principles of curriculum development and facility planning. Prerequisite: Open only to seniors.

IET 437 Independent Study 2-5(Spec)
Individual investigation and research to increase ones technical Competency. Prerequisite: departmental pre-registration.

IET 450 Mechanical Computer-Aided Engineering 3(2-2)
Mechanical components design, structural analysis, and mechanism analysis by using computer aided design system and simulation tools. Prerequisites: IET 226, 350, 379.

IET 451 Geometric Dimensioning and Tolerancing 3(2-2)
Fundamentals of Geometric Dimensioning and Tolerancing concepts as interpreted in ASME standard Y14.5. This course may be offered in an online or hybrid format. Prerequisite: IET 226.

IET 452 Mechanical Laboratory 3(1-4)
Experiments utilizing a variety of mechanical devices and systems to demonstrate fundamental concepts in mechanics, fluid mechanics, thermodynamics, and heat transfer. Prerequisites: IET 351, IET 352, IET 356, IET 379.

IET 453 Heat Transfer 3(3-0)
Fundamental laws of heat transfer by mechanism of conduction, convection and radiation, and boundary layer concepts. Prerequisites: IET 352, 356.

IET 454 Machine Design 3(2-2)
Application and analysis of machine element fundamentals in design and analysis of mechanical systems for safe operation. Prerequisites: IET 350; IET 365; IET 379 or EGR 255.

IET 455 Tool Design 3(2-2)
Covers the process of planning and developing tools, fixtures, and devices, for efficient and economical manufacture of a product. Prerequisites: IET 170, IET 226.

IET 457 Computer-Aided Design 3(2-2)
Development and production of computer-generated graphical images for solid-based models and basic system assemblies utilizing mass properties and boolean operations. Recommended: IET 226.

IET 458 Surface Modeling 3(2-2)
Development and production of industrial and engineering designs with conceptual and parametric surface modeling tools. Utilization of generative shape design functions to model engineering designs. Prerequisites: IET 226.

IET 459 Computer-Aided Design Engineering Analysis 3(2-2)
Development and production of computer-generated graphical images for advanced finite element models, setting of load and thermal constraints; introduction to mechanism analysis. Recommended: IET 458.

IET 461 Construction Estimating and Scheduling 3(3-0)
The techniques of quantity survey for material, labor, and equipment to enable the students to organize data essential for estimating cost and time duration of projects. Prerequisite: IET 361.

IET 462 Mechanical Systems in Buildings 3(3-0)
Study of installation and performance of mechanical systems (heating, air conditioning, and plumbing) in buildings. Prerequisites: PHY 170, MTH 130, IET 361.

IET 472 Instrumentation and Controls 3(2-2)
A study of instrumentation and control technology including process control fundamentals, signal conditioning, sensor measurements, control components and feedback control characteristics. Prerequisites: IET 352, 356, 375.

IET 477 Advanced Computer Numerical Control Programming 3(2-2)
Advanced CNC programming techniques including advanced GM codes, 3D surface machining, and multi-axis programming in CNC vertical milling center and turning center. Prerequisite: IET 226, 377.

IET 487 Vehicle Design and Manufacture 3(2-2)
This course provides an opportunity for students to apply skills of engineering and design to development and design in a nationally competitive setting. Prerequisites: IET 170, 180, 226.

IET 488 Computer Aided Product Design Capstone 3(1-4)
Integration of design processes, techniques, systems, and technologies toward the solving of a product design problem. Prerequisite: IET 324; Pre/Co-requisites: IET 458 and Senior Standing.

IET 497 Special Studies 1-6(Spec)
Individual investigation and research to increase ones technical Competency.

IET 499 Industrial Projects Capstone 3(1-4)
Preparation for the solving of a product design problem. Prerequisite: IET 324. Pre/Co-requisites: IET 458 and Senior Standing.

IET 500 Production Concepts 3(3-0)
Comprehensive review of current factors which influence productivity. Emphasis is placed on the integration of people, methods, machines, materials, and management. This course may be offered in an online or hybrid format. Prerequisites: IET 327; STA 282; or graduate standing and statistics competency.

IET 501 Application of Industrial Management Principles 3(3-0)
A study of industrial management as a process of coordination that exhibits different patterns depending on the manager’s level in the organization and functional responsibilities. This course may be offered in an online or hybrid format. Prerequisites: STA 282 or graduate standing and statistics competency.

IET 502 Computer Applications in Industry 3(3-0)
General/special purpose, digital/analog computer applications in industry and automation with emphasis on input/output devices and process control. Prerequisite: 12 IET credit hours.

IET 524 Technology and Environment 3(3-0)
A study of the relationship between technology and environment. A systematic approach is utilized to examine the optimization of technology within environmental constraints. This course may be offered in an online or hybrid format. Prerequisite: 12 IET credit hours or graduate standing.

IET 525 Hazardous Materials Technology 3(3-0)
The course covers hazardous materials and related health, safety, and regulatory issues for persons conducting, supervising, and managing field activities. Prerequisites: IET 327; CHM 120 or CHM 131; Junior or senior standing.
IND 526 Industrial Ergonomics 3(2-2)

The study of human characteristics, capacities and limitations for the design of productive, safe, and comfortable work spaces, tools, equipment, tasks, and facilities. Prerequisites: IET 327; or senior/graduate standing and permission of instructor.

IET 527 Industrial Safety Management 3(3-0)

A comprehensive study of safety management systems and their implication related to accident cost analysis and to programs which comply with state and federal standards. Prerequisite: IET 327.

IET 532 Careers and Technology for Children 3(2-2)

Developing interdisciplinary instructional units, manipulatives, and pedagogy to provide K-12 students with meaningful career awareness, exploration, and preparation experiences using industrial materials, tools, and processes. Prerequisite: junior, senior or graduate status in teacher education.

IET 534 Design and Construction of Teaching Aids 2(1-2)

Workshop for planning and constructing three-dimensional teaching aids and devices in various curriculum areas of the elementary and secondary grades. Prerequisite: senior status.

IET 550 Product Design and Development 3(3-0)

Product design principles, structural, aesthetic, and intellectual property considerations, and product function are discussed. Focus on concept development, evaluation, and prototyping. Prerequisites: IET 226 or Graduate Standing.

IET 551 Coordination in Vocational Education 3(3-0)

Duties, problems, and techniques used in organizing and supervising cooperative education programs, primarily designed to meet state certification requirements identical to BIS 451. Credit may not be earned in more than one of these courses. Prerequisite: a signed authorization.

IET 561 Light Frame Construction Workshop 3(0-6)


IET 567 Construction Safety 3(3-0)

A comprehensive study of construction safety standards, practices, and procedures. Recommended: IET 361.

IET 576 Industrial Automation 3(2-2)

A study of electro mechanical devices, industrial robotics, programmable logic controllers (PLCs), and automated work cell designs. Prerequisites: IET 375; MTH 132; CPS 150 or CPS 180.

IET 590 Green Building and Sustainability 3(3-0)

Comprehensive study of the principles of Green Building and Sustainability. Topics include sustainability, xeriscaping, high performance building, energy efficiency, indoor air quality and environmental stewardship. This course is approved for offering in a distance learning format. Prerequisites: IET 361, 368 or graduate standing.

IET 591 Construction Management 3(3-0)

A comprehensive study of construction management standards, practices, and procedures with emphasis on the legal aspects of the private, federal, and state construction industries. Prerequisites: IET 361, IET 561.

IET 597 Special Studies 1-6(Spec)

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

IET 602 Current Concepts of Industrial Education 2(2-0)

IET 610 Advanced Quality Management 3(3-0)

IET 619 Continuing Registration for Final Research Project 1(1-0)

IET 620 Advanced Materials 3(2-2)

IET 625 Industrial Internship 2-6(Spec)

IET 633 Seminar: Industrial Education 3(3-0)

IET 634 Advanced Safety Management 3(3-0)

IET 635 Curriculum Development: Industrial Education 3(3-0)

IET 636 Leadership Internship 2-6(Spec)

IET 650 Project Management 3(3-0)

IET 670 Lean Manufacturing & Six Sigma Quality 3(3-0)

IET 680 Sustainability and Green Technology 3(3-0)

IET 694 Problems in Management and Technology 1-6(Spec)

IET 695 Independent Study 2-6(Spec)

IET 697 Special Studies 1-6(Spec)

IET 733 Practicum: Industrial Education/Special Education 3(Spec)

IET 791 Independent Research 2-6(Spec)

IET 798 Thesis 1-6(Spec)

IND - Interior Design

See the Department of Human Environmental Studies for more information.

IND 131 Interior Design Studio I: Introduction 3(1-4)

Application of basic design elements and principles and the use of design concepts, materials, and model building techniques applicable to commercial and residential interiors. Prerequisites: IND 139, Formal admittance to the Interior Design Program. Pre/Co-requisite: IND 138.

IND 138 Visual Communication for Interior Design 3(2-2)

Visual communication of design concepts through rendering and presentation techniques; used to express development and the final states of design process. Pre/Co-requisite: IND 139.

IND 139 Interior Design Drafting 3(2-2)

Provides drafting and print reading experience designed to meet the professional needs of students concentrating in interior design by covering presentation, architectural and pictorial drawings.

IND 155 Introduction to Textiles 3(2-2)

Study of fiber, yarn and fabric properties intended for commercial and interior usage; impact of various processes on use and serviceability; includes textile laboratory analysis. Credit may not be earned in both IND 155 and FMD 155.

IND 238 Design History and Precedent 3(2-2)

Cross cultural survey of environmental design (Egyptian through Neoclassical Europe) including furniture, interiors and architecture with correlating historical context.

IND 328 Design History and Criticism 3(3-0)

Study of Western design forms (17th century through present) with correlating historical, cultural, and theoretical developments. Criticism of current design using diverse criteria. Prerequisite: IND 238. Pre/Co-requisite: IND 131.

IND 331 The Art of Event Planning 3(3-0)

Through the principles and elements of design, this course provides the application of design skills to the overall design of an event while recognizing budget and client constraints.

IND 332 Human Shelter and Environment 3(3-0)

Course explores the interrelationship between the built, cultural and natural environments and human behavior, perception and social interaction. This course may be offered in an online or hybrid format. (University Program Group III-A: Behavioral Sciences)

IND 333 Interior Design Service Learning 1-6(Spec)

This course offers an opportunity for Interior Design students to perform targeted academic-based service work under the supervision of a CMU faculty member. Prerequisite: IND 131, IND 138, IND 139.

IND 334 Computer-Aided Design for Interiors 3(2-2)

Fundamental concepts and applications of graphic software programs. Current trends and potential applications of digital computers and CAD software in design. Prerequisites: IND 131, IND 138, IND 139; Pre/Co-Requisite: IND 337.

IND 335 Contract Documents 3(2-2)

This course provides an introduction to construction working drawings, methods and materials of diverse construction types, and building codes. Prerequisite: IND 139.

IND 336 Materials and Components of Interior Design 3(3-0)

Consideration of the materials, equipment and systems utilized in the design and construction of interior environments.

IND 337 Interior Design Studio II: Residential 3(1-4)

Application of basic design process to residential interiors: space planning, furnishings, finishes, color, and lighting; according to the socioeconomic, physical, and psychological needs of users. Prerequisites: IND 139, 132. Pre/Co-Requisites: IND 328, 336.

IND 338 Internship Preparation for Interior Design 1(Spec)

Development of skills to prepare students for obtaining an internship in an interior design firm or related field. Should be taken semester prior to IND 438. Prerequisite: IND 337.

IND 339 Interior Design Studio III: Special User Groups 3(1-4)

Assessment of the special environmental needs of the disabled, elderly and children; application to studio design problems. May be offered as Writing Intensive. Prerequisites: IND 131, IND 138, IND 139, IND 238, IND 328, IND 332, IND 336, IND 337. Pre/Co-Requisites: IND 334, 436.

IND 397 Special Topics in Interior Design 1-6(Spec)

Topics of special interest which are not normally included in existing courses. Prerequisites: See Course Search and Registration.

IND 432 Seminar in Interior Design 3(3-0)

Capstone course providing focus on current issues in interior design, methods, materials, and portfolio evaluations. Must be taken during the final Spring semester before graduation. May be offered as Writing Intensive. Prerequisites: IND 339, 436.

IND 433 Professional Practices in Interior Design 3(3-0)

Application of internships and business procedures to the establishment and general management of a design practice. To be taken immediately following IND 438. Prerequisite: IND 438.

IND 434 Advanced CAD for Interiors 3(2-2)

Advanced application of CAD software. Emphasis on application of the computer as a design tool, topical applications and computer graphic methods. Prerequisites: IND 334, IND 337; Pre/Co-Requisites: IND 339, 436.

IND 436 Lighting and Other Mechanical Systems 3(2-2)

Concentrates the role of mechanical systems in the design of interior spaces with emphasis on lighting, and including heating, ventilation, air conditioning, and acoustical systems. Prerequisites: IND 131, 138, 139, 337; successful completion of math competency.
IND 437 Interior Design Studio IV: Contract 3(1-4)
Application of visual, conceptual and functional design processes in the design and space planning of commercial and public spaces. Prerequisites: IND 334, 339, 436; Pre-Co-Requisite: IND 434.

IND 438 Interior Design Internship 2(Spec)
Supervised internship of 250 hours in an interior design firm or related field designed to complement classroom learning. Taken semester prior to IND 433. Prerequisite: IND 338.

IND 439 Interior Design Studio V: Senior Thesis 3(1-4)
A capstone studio course that focuses on projects with increasing scope and complexity and topics that vary depending on current trends in interior design. Prerequisite: IND 437.

IND 490 Independent Study in Interior Design 1-6(Spec)
A student-initiated learning activity focusing on a faculty approved topic in Interior Design. Prerequisite: Permission of instructor.

IND 497 Special Topics in Interior Design 1-15(Spec)
Topics of special interest which are not normally included in existing courses. Prerequisites: See Course Search and Registration.

IIPR - Integrative Public Relations
See the Interdisciplinary Integrative Public Relations Major for more information.

IIPR 101 Foundations of Integrative Public Relations 1(1-0)
Introduction to the concepts, activities, responsibilities and career directions of public relations from an interdisciplinary perspective.

IIPR 490 Independent Study in Integrative Public Relations 1-6(Spec)
Student-initiated study guided by faculty member or faculty committee. Prerequisite: Students enrolling in IIPR 490 must be a signed IIPR major.

IIPR 555 Public Relations Internship 3-6(Spec)
Directed full-time work experience in a professional public relations environment. Prerequisites: IIPR 101; BCA 210, BCA 311; COM 264, COM 357; JRN 202, JRN 302, JRN 350, JRN 450; completion of 56 credit hours; prior written approval of the designated internship director; open only to signed Integrative Public Relations majors.

IPS - International Program Studies
Contact the Office of International Affairs for more information.

IPS 197 International Program Studies 1-36(Spec)
Courses taken abroad under auspices of Central Michigan University. Primarily for freshmen and sophomores. Prerequisite: permission of the Director of Study Abroad.

IPS 297 International Program Studies 1-36(Spec)
Courses taken abroad under auspices of Central Michigan University. Primarily for freshmen and sophomores. Prerequisite: permission of the Director of Study Abroad.

IPS 397 International Program Studies 1-36(Spec)
Courses taken abroad under auspices of Central Michigan University. Primarily for juniors and seniors. Prerequisite: permission of the Director of Study Abroad.

IPS 497 International Program Studies 1-36(Spec)
Courses taken abroad under auspices of Central Michigan University. Primarily for juniors and seniors. Prerequisite: Permission of the Director of Study Abroad.

IPS 597 International Program Studies 1-36(Spec)
Courses taken abroad under auspices of Central Michigan University. Primarily for seniors and graduate students. Prerequisite: permission of the Director of Study Abroad.

ITC - Information Technology
See the Department of Computer Science for more information.

ITC 101QR Reasoning Through Computer Visualization 3(2-2)
Computer visualization techniques for making informed decisions with data. Strategies for presenting and understanding graphical data representations. Interpretation and evaluation of info-graphics. Quantitative Reasoning.

ITC 111 Information Technology Programming II 3(3-0)
Programming for Information Technology. User interfaces, databases, component software. Language used is Visual Basic. Prerequisite: CPS 110.

ITC 190 Computer Hardware Concepts, Installation, Configuration, and Support 3(3-0)
Basic computer organization, overview of computer components, properties of peripheral devices, processes management, physical and virtual memory management techniques, resource allocation and protection.

ITC 191 Computer Software Concepts, Installation, Configuration, and Support 3(3-0)
User view of system resources, file systems and operations, start-up, configuration files, software installation, dependencies, deinstallation, simple scripts, batch files, and account management basics.

ITC 265 Basics of Data Communications and Computer Networks 3(3-0)
Concepts of data communications and networks with Internet focus. Introduction and examination of principles and protocol mechanisms with application to practical contexts. Prerequisites: ITC 190, 191; CPS 110 or 180.

ITC 292 Linux/Unix Server Administration 3(3-0)
Concepts and skills related to Linux/Unix system administration: system and application maintenance; user management; system security; system and data assurance. Prerequisites: ITC 191; CPS 110 or 180.

ITC 320 Web Application Development - Client-Side Scripting 3(3-0)
Creating web-based applications with a focus on graphical user interfaces, event driven, object-oriented programming and dynamic, animated web pages. Prerequisite: ITC 111 or CPS 181 or BIS 324. Recommended: CPS 165.

ITC 330 Information Storage and Management 3(3-0)
Information storage and management techniques for storing, managing, and protecting digital information in classic, virtualized, and cloud environments. Prerequisites: ITC 190, 191. Recommended: ITC 265.

ITC 341 Introduction to Databases and Applications 3(3-0)
Database concepts, data models, relational databases, query language SQL, simple database programming. Design and develop databases for various applications using database management systems. Prerequisites: CPS 181 or ITC 111.

ITC 365 Introduction to Data Communications and Computer Networks 3(3-0)
Introduction to data communications and computer networks concepts with hands-on projects and implementations. PC and workstation-based computer networks are designed and implemented. Recommended: ITC 290.

ITC 383 Computer Game Design 3(3-0)
Introduction to design and development of computer video games. Hands-on creation and testing of games. Prerequisites: CPS 110 or 180; CPS 282.

ITC 441 Database and Virtual Data Server Administration 3(3-0)
Database management systems: security, users, recovery, audit, software installation and configuration. Database server management: virtual machines and hosting, file management, permissions, network configuration and scripting. Prerequisites: ITC 265, 341. Recommended: STA 282 or 382.

ITC 465 Network Administration and Security 3(3-0)
Local area network and internet; Unix networks; Windows NT networks; administration and security issues of computer networks; integration of Unix and Windows NT networks. Prerequisites: ITC 365. Recommended: STA 282 or STA 382.

ITC 466 System Administration and Automation 3(3-0)
Study the concept, theory, tools and procedures around major functional areas (configuration, performance, accounting, fault and security) of network management and system administration. Prerequisite: ITC 465.

ITC 495 Senior Internship 1-3(Spec)
Supervised work experience in information technology. Up to 3 hours taken may count toward the IT major requirement. CR/NC only. Prerequisites: senior standing in information technology; written permission of department chairperson.

ITC 496 Special Topics in Information Technology 1-6(Spec)
Selected topics in information technology not otherwise available in a course regularly offered. Topic(s) are listed in Course Search and Registration. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Pre/Co-requisites: See Course Search and Registration. Determined by the specific topics presented.

ITC 510 Software and Data Modeling 3(3-0)
Fundamentals of systems analysis, including the essential concepts and major paradigms of software and data modeling, and cutting-edge software and data modeling methods, and techniques. Prerequisites: CPS 410, ITC 341, or graduate standing.

ITC 520 Foundations of Computer Security 3(3-0)
Computer and network security, cryptography, encryption, threat models, protocols and algorithms, confidentiality, integrity, authentication, authority, access control, operating system and software security, malware, intrusion detection. Prerequisites: ITC 465 or graduate standing.

ITC 530 Mobile Computing 3(3-0)
Wireless networks, mobile devices, programming environments. Current contemporary topics on mobile computing. Student projects and literature review. Prerequisite: ITC 510.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

ITC 620 Information Security and Privacy 3(3-0)

ITC 630 Cloud Computing 3(3-0)

ITC 666 Big Data Analytics 3(3-0)

ITC 691 Information Technology Project 3(3-0)

ITC 798 Thesis 1-6(Spec)

Course Descriptions approved for University Program are in italics.
JPN - Japanese
See the Department of Foreign Languages, Literatures, and Cultures for more information.

JPN 101 Elementary Japanese I 4(4-0)
- Designed for students who have had no Japanese. Basic language skills. Introduction to the culture of Japan. Students who have completed more than one year of Japanese in secondary school will not receive credit. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

JPN 102 Elementary Japanese II 4(4-0)

JPN 110 Study Abroad 1-8(Spec)
- Intended for beginning students studying abroad. Prerequisite: permission of department chairperson.

JPN 201 Intermediate Japanese I 4(4-0)
- Further development of all language and reading skills; a review of grammar, and exploration of Japanese culture. Recommended: JPN 102. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

JPN 202 Intermediate Japanese II 4(4-0)
- Designed to develop further fluency in Japanese language and culture. Recommended: JPN 201. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

JPN 210 Study Abroad 1-12(Spec)
- Intended for intermediate students studying abroad. Prerequisites: JPN 102; permission of department chairperson.

JPN 310 Study Abroad 1-12(Spec)
- Intended for advanced students studying abroad. Prerequisites: JPN 202; permission of department chairperson.

JPN 410 Study Abroad 1-12(Spec)
- Intended for advanced students studying abroad. Prerequisites: 12 or more hours on 300 level; permission of department chairperson.

JRN - Journalism
See the Department of Journalism for more information.

JRN 101 Media and Society 3(3-0)
- Understanding the influence of media and society. (University Program Group III-B: Studies in Social Structures)

JRN 102 Introduction to Journalism 3(3-0)
- An introduction to journalism as a social, cultural, political, technological, and economic force; a professional field; an academic discipline, unit and program.

JRN 105 Social Media in Society 3(3-0)
- The development and impact of social media on society, message control, and the goals and objectives in communication with audiences. This course is offered in an online format only.

JRN 197 Special Studies 1-3(Spec)
- Appropriate title to be listed when offered.

JRN 202 Writing for the Mass Media 3(3-0)
- Gathering, processing and writing information and opinion on current matters using professional standards and formats in news, public relations and advertising. May be offered as Writing Intensive. Prerequisites: ENG 101 (C or better).

JRN 203QR Information Gathering for the Mass Media 3(3-0)
- Acquiring, comprehending, analyzing, synthesizing, and evaluating information by solving journalistic problems in a variety of cases and from multiple perspectives. Pre/Co-Requisite: JRN 202. Quantitative Reasoning.

JRN 205 Shaping the Media 3(3-0)
- An in-depth exploration of the news environment and the forces that shape news within the context of civic and global citizenship. May be offered as Writing Intensive. (University Program Group III-B: Studies in Social Structures)

JRN 220 Basic Media Photography 3(3-0)
- Camera operation, producing and processing of photographs for media use.

JRN 250 Social Media: Managing the Message 3(3-0)
- Select, use and analyze social media to build relationships, network, distribute messages and develop strategies for organizations. This course is offered in an online format only. Prerequisite: JRN 105 with a C or better.

JRN 297 Special Studies 1-6(Spec)
- Appropriate title to be listed when offered.

JRN 302 Introduction to Graphics and Visual Communication 3(3-0)
- Principles and techniques of publication/advertising graphics and visual communication, including typography and the printing process.

JRN 312 Reporting 3(3-0)
- Skills in gathering, evaluating and writing news. May be offered as Writing Intensive. Prerequisites: JRN 202, 203; ENG 201.

JRN 315 Editing 3(3-0)
- Copy editing, headline writing and design and layout. Prerequisite: JRN 202.

JRN 320 Photo Editing 3(3-0)
- Use and preparation of photographs for the print media. Prerequisite: JRN 220.

JRN 339 Social Media: Reputation, Image and Interaction 3(3-0)
- Advanced skills in using social media to engage audiences, establish professional brands, drive traffic and evaluate results. Prerequisite: JRN 202.

JRN 340 Introduction to Digital Journalism 3(3-0)
- Survey of current theories, issues and trends of the digital journalism environment, and introduction of digital journalism production using current media tools and software. Prerequisites: JRN 202 with a C or better or JRN 361 with a C or better.

JRN 348 Business Journalism 3(3-0)
- Coverage of business, economic, consumer and personal finance issues. May be offered as Writing Intensive.

JRN 350 Public Relations Principles and Practices 3(3-0)
- Concepts and principles of public relations practiced by corporations, agencies, non-profits and other organizations. Role of the practitioner stressed. This course may be taken in an online or hybrid format.

JRN 353 Foundations of Strategic Public Relations 3(3-0)
- Overview of strategic campaign process and application public relations theory to real-world projects including formative research, strategic and tactical planning, and plan evaluation phases.

JRN 360 Advertising Principles 3(3-0)
- Organization of today's advertising industry; role of advertising in promotion; examination of types of advertising and media vehicles. This course is approved for offering in an online or hybrid format.

JRN 361 Writing for Advertising 3(3-0)
- An introduction to the principles and techniques used in writing for print, broadcast, internet, mobile, direct mail, and point-of-sale advertising. Prerequisites: JRN 101 or 102; JRN 360.

JRN 365 Advertising Media 3(3-0)
- Evaluation of media in relationship to marketing objectives. Selection of media space/time and decision-making in development of media schedules. Prerequisite: JRN 360.

JRN 366 Advertising Account Management 3(3-0)
- An exploration of the history, functions, and skills of advertising account management. Prerequisite: JRN 360.

JRN 369 Advertising and Public Relations Research 3(3-0)
- Reviews and applies secondary, social scientific, professional, and interpretative research methods in persuasive mass communication contexts. Prerequisite: JRN 350 or 360.

JRN 370 Social Media Legal and Ethical Issues 3(3-0)
- Students investigate and analyze legal and ethical issues in social media to develop appropriate standards and policies for an organization. This course is offered in an online format only. Prerequisite: JRN 250 with a C or better.

JRN 372 The Asian Media and Cross-cultural Mass Communication 3(3-0)
- Analysis of Asian media systems and historical, economic, political and cultural factors shaping those systems. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

JRN 380 Racial and Cultural Diversity: Mass Media's Role 3(3-0)
- Critical, historical and contemporary examination of African, Hispanic, Asian, Native Americans and gender stereotypes in mass media. Self-portrayals by these groups using mass media. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

JRN 397 Special Studies 1-6(Spec)
- Appropriate title to be listed when offered.

JRN 402 Advanced Media Graphics and Visual Communication 3(3-0)
- Advanced techniques of multimedia graphics, digital publishing, and visual design for media industries including advertising, journalism and public relations. Prerequisite: JRN 302.

JRN 404 Law of Mass Communication 3(3-0)
- Principles and case studies. Prerequisites: JRN 101 or 102; junior standing.

JRN 409 Independent Study 1-3(Spec)
- Individual study under faculty direction. Prerequisite: senior standing.

JRN 417 Sports Reporting 3(3-0)
- Critical examination and reporting of sports events. Prerequisites: JRN 315.

JRN 420 Photography Studio Techniques 3(3-0)
- Use of camera in a controlled environment, studio lighting and basic studio operation. Prerequisite: JRN 220.

JRN 421 Color News Photography 3(3-0)
- Use and production of color transparency prints; basic considerations of media use. Prerequisites: JRN 220, JRN 320.

JRN 422 The Photographic Process 3(3-0)
- Advanced camera operation: light, lighting, optics, and the chemistry of the silver halide process. Prerequisites: JRN 220.

JRN 423 Online Visual Storytelling 3(3-0)
- Online storytelling for the photojournalist. Multimedia production combining still photography, audio, and video with the intended purpose of publishing on the Web. Prerequisites: JRN 220; 56 credits completed.
JRN 430 Magazine and Feature Writing 3(3-0)
Experience in writing and marketing newspaper features and magazine articles. Submission of manuscripts for publication is required of each student in the course. May be offered as Writing Intensive. Prerequisites: JRN 202, 203.

JRN 440 Advanced Digital Journalism 3(3-0)
Advanced techniques of digital journalism production using current media tools and software. Prerequisites: JRN 202, 340 with a C or better in each course. Recommended: JRN 203, 220.

JRN 441 Data Journalism 3(3-0)
An introduction to data journalism that involves the investigating and reporting of news by prospecting for, analyzing, graphing, and mapping data from online databases. Prerequisites: JRN 202, 203.

JRN 445 Multimedia Reporting Capstone 3(3-0)
Advanced principles and techniques of online multimedia news and feature packages including writing and reporting, text, photos, interactive graphics, audio, and video. Prerequisites: JRN 340, 440 for journalism majors, JRN 340, 423 for photojournalism majors.

JRN 448 Journalism Practicum 1-3(Spec)
Applying various online journalism theory and skills, such as web design, audio and video production, and photography to publish a web magazine as a group. Prerequisite: JRN 202.

JRN 449 Journalism Internship 3(Spec)
Experience in online journalism under professional and faculty supervision. May be applied toward journalism major and minor only with permission of faculty advisor. Prerequisites: Junior standing; prior approval of internship director.

JRN 450 Public Relations Writing 3(3-0)
Creating and editing written materials for a variety of public relations purposes and a variety of media. Prerequisites: JRN 202, JRN 350.

JRN 460 Social Media Practicum, Portfolio and Plan 3(3-0)
A supervised, eight-week practicum for integrating social media into an organization’s communications. This course is offered in an online format only. Prerequisites: JRN 370 with a C or better. Written authorization (CMU approved forms) is required from the faculty advisor and on-site practicum supervisor prior to the start of the course.

JRN 465 Advertising Copy and Design 3(3-0)
Techniques used to interpret advertising strategies and create advertising concepts, copy, layout, and presentations in print, broadcast and digital media. Prerequisites: JRN 302, 360, 361.

JRN 466 Advertising Campaigns 3(3-0)

JRN 467 Advertising Account Planning 3(3-0)
This course will explain, explore, demonstrate, and examine the research techniques and interpretive skills used in the field of marketing-communications. Prerequisite: JRN 360.

JRN 497 Special Studies 1-6(Spec)
Appropriate title to be listed when offered.

JRN 500 Current Issues in Mass Communication 3(3-0)
Examination of the role of mass communication in society through the exploration of issues, ethics, trends and decision-making processes. Prerequisite: senior standing.

JRN 516 Public Affairs Reporting 3(3-0)
Coverage of government and other public issues. May be offered as Writing Intensive. Prerequisite: JRN 203, 312.

JRN 519 Journalism Internship 1-4(Spec)
Experience at news organizations under professional and faculty supervision. May be applied toward journalism major and minor only with permission of faculty advisor. Prerequisites: Junior standing; permission of instructor.

JRN 520 Independent Study in Photography 3(3-0)
Advanced experience and individual instruction in photography. Prerequisites: JRN 220, JRN 320.

JRN 521 Seminar in News Photography 3(3-0)
Field experience of the photograph as a means of communicating information, ideas, and opinions. Prerequisites: junior standing; permission of instructor.

JRN 529 Photojournalism Internship 1-4(Spec)
Photojournalism experience under professional and faculty supervision. May be applied to journalism major or minor only with permission of faculty advisor. Prerequisites: junior standing; permission of instructor.

JRN 551 Case Studies in Public Relations 3(3-0)
Examination of historic and contemporary public relations problems and programs with emphasis on research, planning and problem-solving skills in public relations practices. Prerequisites: JRN 350.

JRN 556 Public Relations Seminar 3(3-0)
Practical applications of public relations principles in a diverse society. Prerequisites: JRN 350, 450.

JRN 559 Public Relations Internship 1-4(Spec)
Experience in public relations under professional and faculty supervision. May be applied toward journalism major and minor only with permission of faculty advisor. Prerequisites: Junior standing; permission of instructor.

JRN 569 Advertising Internship 1-4(Spec)
Experience in advertising under professional and faculty supervision. May be applied toward journalism major or minor only with permission of faculty advisor. Prerequisites: Junior standing and permission of instructor.

JRN 597 Special Studies 1-6(Spec)
Appropriate title to be listed when offered.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

LDR 670 Public Relations Management 3(3-0)

LAR - Liberal Arts
See the College of Humanities and Social & Behavioral Science for more information.

LAR 145 Racism and Discrimination in America through Dialogue 3(3-0)
Interdisciplinary course examines (through lecture and dialogue) the historical and economic causes of racism and ways of achieving a just society. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

LAR 197 Special Studies in Liberal Arts 1-12(Spec)
Primarily for freshmen or sophomores. Prerequisite: permission of instructor.

LAR 397 Special Studies in Liberal Arts 1-12(Spec)
Prerequisite: Permission of instructor. Primarily for juniors and seniors.

LAR 597 Special Studies in Liberal Arts 1-12(Spec)
Primarily for graduate students. Prerequisite: permission of instructor.

LAT - Latin
See the Department of Foreign Languages, Literatures, and Cultures for more information.

LAT 101 Elementary Latin I 4(4-0)
Introduction to Latin through the study of grammar, vocabulary, and readings in Roman history, literature, and culture. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

LAT 102 Elementary Latin II 4(4-0)
Continuation of LAT 101. Prerequisite: LAT 101.

LAT 201 Intermediate Latin I 4(4-0)
Continuation of LAT 201. Prerequisite: LAT 201.

LAT 202 Intermediate Latin II 4(4-0)
Continuation of LAT 201. Prerequisite: LAT 201.

LDR - Leadership Studies
See the Interdisciplinary Leadership Minor or the Leadership Institute (see index for page number) for more information.

LDR 100 Introduction to Leadership Education and Development 1(1-0)
Designed to provide students with the foundation to develop and enhance their leadership potential and expose them to opportunities in the university environment in order for them to fulfill their scholarship protocol. CR/NC only. Prerequisites: Only open to Leader Advancement Scholarship (LAS) recipients.

LDR 110 Personal Leadership & Service 1(1-1)
An exploratory course guiding students in discovering their personal & leadership potential and exposure to the university and local community with emphasis on public service.

LDR 120 Introduction to Service Leadership 1(1-1)
The use of service leadership as a means of impacting issue-based social problems.

LDR 200 Introduction to Leadership 3(2-2)
Introduction to theoretical, philosophical, and conceptual foundations of leadership. Emphasis on styles and approaches of leadership related to the humanities, natural sciences, and social sciences. This course is approved for offering in a distance learning format.

LDR 320 Leadership and Service in Nonprofits 3(3-0)
Students will experience and apply leadership models specific to nonprofits. This course will emphasize social change leadership and service-based projects. This course may be offered in an online or hybrid delivery format. Prerequisite: LDR 200.

LDR 402 Applications of Leadership 3-6(Spec)
Designed to apply a variety of leadership theories and practices within a supervised organizational setting through an internship involving work, volunteer/community service, or project management. Prerequisites: LDR 200, COM 461; PHL 118 OR PHL 218 OR PHL 318; Junior or Senior standing; a signed Leadership minor; prior written approval by the Leadership Minor advisor.
LIB - Library
Contact Park Library for more information.

LIB 197 Introduction to Library Information Research 1(1-0)
Practical skills needed to conduct library and information research. Includes locating information in electronic and print sources, defining researchable topics, as well as evaluating, citing, and using information. Not open to students with LMT 530.

LIB 397 Special Topics in Library Information Research 1-3(Spec)
Topics vary by semester. Prerequisites: at least Junior standing.

MAR - Marine Science
See the Department of Biology for more information. Summer courses taken with affiliation agreement with the University of Southern Mississippi's Gulf Coast Research Laboratory in Ocean Springs, MS.

MAR 301 Marine Science II: Marine Biology 5(Spec)
An introduction to marine biology with emphasis on local fauna and flora. Prerequisites: general zoology; general botany.

MAR 590 Special Problems in Marine Science 1-6(Spec)
Prerequisites: permission of instructor.

MBA - Master of Business Administration
See the College of Business Administration for more information.

MBA 500 Spreadsheet Applications in Business 1(1-0)
Application of spreadsheet software tools to the solution of common business problems including budgeting, forecasting, and optimization for preparing information to support management decision-making. Course may not be included on any graduate degree program. Prerequisites: computer literacy as demonstrated by BIS 104, CPS 100 and prior knowledge of spreadsheet software; admission to the MBA program OR both graduate status and permission of the MBA director.

MBA 501 Presentation Graphics Applications in Business 1(1-0)
Application of presentation graphics software tools in preparing and delivering professional management briefings that provide information which supports the solution of common business problems. Course may not be included on any graduate degree program. Prerequisites: computer literacy as demonstrated by BIS 104, CPS 100 and prior knowledge of presentation graphics software; admission to the MBA program OR both graduate status; permission of the MBA director.

MBA 502 Database Applications in Business 1(1-0)
Application of a database management program to the solution of common business problems including sales and inventory management for preparing information to support decision making. Course may not be included on any graduate degree program. Prerequisites: computer literacy as demonstrated by BIS 104, CPS 100 and prior knowledge of database management software; admission to the MBA program OR both graduate status and permission of the MBA director.

MBA 503 Professional Business Communications 2(2-0)
Developing professional business communications skills within a team environment. Emphasis on both written and oral communications utilizing current technologies. Prerequisites: admission to the MBA program, or permission the MBA director.

MBA 504 Using Financial Accounting Information 2(2-0)
Introduces use of financial accounting income statements, balance sheets, and statements of cash flow in managerial planning, control, and evaluation. Prerequisites: admission to the MBA program, or permission of the MBA director.

MBA 505 The Economic Environment of Business 2(2-0)
Provides the economic tools necessary for graduate study in business: demand and supply, elasticity, costs and production, competitive and monopolistic markets, macroeconomics, and international trade. Not open to economics graduate students. Prerequisites: admission to the MBA program, or permission of the MBA director.

MBA 506 Legal Environment of Business 2(2-0)
Basic concepts concerning the interrelationships of business and its external environments. Managerial participation in and response to public policy issues and their resolutions. Prerequisites: admission to the MBA program, or permission of the MBA director.

MBA 507 Introduction to Marketing Management 2(2-0)
An introduction to the marketing management process including the marketing environment, buyer behavior, marketing analysis, segmentation, marketing strategy, the marketing mix, and social/ethical issues. Prerequisites: admission to the MBA program, or permission of the MBA director.

MBA 508 Management and Organization 2(2-0)
Introduction to the internal structure, processes, and control of organizations. Prerequisites: admission to the MBA program, or permission of the MBA director.

MBA - Master of Business Administration
See the College of Business Administration for more information.

MBA 509 Production/Operations Management 2(2-0)
Concepts and applications of production and operations management in business and industry. Prerequisites: admission to the MBA program, or permission of the MBA director.

MBA 510 Financial Management and Analysis 2(2-0)
An introduction to basic finance principles and tools including the time value of money, risk and return, capital budgeting and the interpretation of financial statements. Prerequisites: admission to the MBA program, or permission of the MBA director.

MBA 511 Statistics for Managerial Decisions 2(2-0)
An introduction to descriptive and inferential statistics in a business decision context. Applications of various t-tests, ANOVA, multiple regression, and cross-tabulation are emphasized. Prerequisites: admission to the MBA program, or permission of the MBA director.

For graduate level courses descriptions above 600, consult the current College of Graduate Studies Bulletin.

MBA 609 Information Systems Management 2(2-0)
MBA 610 Managing Information Systems in a Global Economy 3(3-0)
MBA 618 Continuing Registration for Final Research Project 1(1-0)
MBA 619 Accounting Information for Managers 2(2-0)
MBA 620 Managerial Accounting: A Management Perspective 3(3-0)
MBA 629 Managing Behavioral Change 2(2-0)
MBA 630 Managing and Leading Individuals and Groups in Organizations 3(3-0)
MBA 639 Quantitative Applications for Managers 2(2-0)
MBA 640 Data Analysis for Managers 3(3-0)
MBA 649 Marketing Management 2(2-0)
MBA 650 Marketing-Based Management 3(3-0)
MBA 659 Managing in a Global Economy 2(2-0)
MBA 660 Global Business and Sustainability 3(3-0)
MBA 669 Financial Decision-Making 2(2-0)
MBA 670 Financial Analysis and Risk Management 3(3-0)
MBA 679 Economic Analysis for Managers 2(2-0)
MBA 680 Global Economic Environment 3(3-0)
MBA 684 Directed Work/Observation/Internship 1(1-0)
MBA 689 Strategic Management 2(2-0)
MBA 690 Strategic Management: Integrative Experience 3(3-0)
MBA 697 Special Topics 1-6(Spec)
MBA 699 The MBA Project 4(4-0)

MDP - Media Design and Production
See the index to locate the interdisciplinary MDP minor (College of Communication and Fine Arts).

MDP 495 MDP Capstone Experience 1(1-0)
A Media Design, Production and Technology capstone experience focused on the documentation and presentation of skills developed during the Minor experience. Must be taken in the last two semesters prior to graduation. Prerequisites: ART 231; BCA 223; CPS 282; JRN 220; All with a C or better; Senior status.

MED - Medicine
Contact the College of Medicine for more information.

MED 600 Society & Community Medicine 9(Spec)
MED 610 Essentials of Clinical Skills 17(Spec)
MED 620 The Art of Medicine 9(Spec)
MED 630 Foundational Sciences of Medicine: Wellness and Disease 18(Spec)
MED 640 Reproductive/Human Development: Wellness and Disease 8(Spec)
MED 650 Cardiopulmonary: Wellness and Disease 10(Spec)
MED 660 Renal/Endocrine: Wellness and Disease 10(Spec)
MED 740 Neurosciences and Behavior: Wellness and Disease 10(Spec)
MED 750 Musculoskeletal/Dermal: Wellness and Disease 8(Spec)
MED 760 Gastrointestinal: Wellness and Disease 8(Spec)
MED 770 Hematology/Oncology: Wellness and Disease 8(Spec)
MED 780 SYNAPSE 4(Spec)
MED 797 Special Topics: Medical Clerkship Elective 1-30(Spec)
MED 800 Comprehensive Community Clerkship 36(Spec)
MED 810 Clerkship: Surgery 6(Spec)
MED 820 Clerkship: Obstetrics and Gynecology 6(Spec)
MED 830 Clerkship: Psychiatry 6(Spec)
MED 840 Clerkship: Hospitalist - Internal Medicine 6(Spec)
MED 850 Clerkship: Pediatrics 6(Spec)
MET - Meteorology

See the Department of Earth and Atmospheric Sciences for more information.

MET 101QR Our Changing Climate 3(3-0)
Scientific causes of climate change and its potential impact. Past, current, and future climates with emphasis on how scientists measure and interpret climate variation. Quantitative Reasoning. (University Program Group II-A: Descriptive Sciences)

MET 140 Severe and Unusual Weather 3(3-0)
Description and causes of tornados, hurricanes, explosive cyclones, floods and drought. The potential impact of global climate change on these phenomena. This course may be offered in an online or hybrid format. (University Program Group II-B: Quantitative and Mathematical Sciences)

MET 250 Geoscience Mapping and Resource Evaluation 3(3-0)
This course explores applications that aid in the analysis of geoscience data. Integration of various geospatial data sources and analysis pertinent to geoscientists. Identical to GEL 250; credit may not be earned in both of these courses. Prerequisites: GEO 201; One of MET 101 or MET 140 or MET 260 or GEL 100 or GEL 101, 102 or GEL 105, 102 or GEL 130.

MET 260 Introduction to Atmospheric Science 3(2-2)
Description and analysis of the fundamental atmospheric phenomena that define our weather and climate: radiation, wind, moisture, stability, clouds, precipitation, convection, and cyclones.

MET 265 Professional Development in the Atmospheric Sciences 1(1-0)
Development of a plan for success in meteorology based on understanding the requirements to enter the field and the resources CMU provides to meet them. Pre/Co-requisite: MET 260.

MET 301 Climatology & Climate Change 3(3-0)
A study of major climate types, their controls, distribution patterns and significance. Examination of the causes and implications of climatic change. Prerequisites: GEO 201 or MET 101 or MET 140 or MET 260.

MET 310 Atmospheric Thermodynamics and the Boundary Layer 3(2-2)

MET 312 Meteorological Instruments and Observations 3(3-0)
Design and use of meteorological instrumentation, including meteorological radar and satellites. Prerequisites: MET 310 with a grade of C- or better.

MET 315 Computer Applications in Meteorology 2(1-2)
Analysis of different types of meteorological data using meteorological software within the Linux operating system, including proper ways to visualize and present data. Prerequisites: MET 310 with a grade of C- or better.

MET 320 Physical Meteorology 3(3-0)
Microphysical processes in warm and cold clouds. Properties of radiation and radiative transfer in the atmosphere. Prerequisites: MET 310 with a grade of C- or better; PHY 145; MTH 133.

MET 330 Dynamic Meteorology 13(3-0)
Application of Newton's laws of motion to various scales of atmospheric phenomena. Vorticity, divergence and vertical motion. Prerequisites: MET 310 with a grade of C- or better; MTH 233; PHY 145. Pre/Co-requisite: MET 340.

MET 335 Dynamic Meteorology II 3(3-3)
Quasi-geostrophic theory and its application in weather prediction and diagnosis. Atmospheric waves, baroclinic instability theory. Prerequisite: MET 330 with a grade of C- or better.

MET 340 Synoptic Meteorology I 3(2-2)
Analysis of large-scale weather patterns through the application of concepts from physical and dynamical meteorology. Focus on cyclogenesis and frontogenesis. Prerequisites: MET 310 with a grade of C- or better; MET 312; MTH 233; PHY 145. Pre/Co-requisite: MET 345.

MET 345 Synoptic Meteorology II 2(2-2)
Advanced analysis of large-scale weather patterns through the application of concepts from physical and dynamical meteorology. Focus on quasi-geostrophic, isentropic, and potential vorticity frameworks. Prerequisite: MET 340 with a grade of C- or better. Pre/Co-requisite: MET 335.

MET 350 Tropical Meteorology 3(3-0)
Climatology and weather analysis in the tropics: streamlines, time sections. Air-sea interaction, convection, tropical disturbances, hurricanes, the Madden-Julian Oscillation, and tropical mid-latitude interaction. Pre/Co-requisites: MET 335, 345.

MET 355 Weather Forecasting Practicum 1-4(Spec)
Presentation of past current, and forecast weather data to an audience of meteorology majors and faculty. This course may be repeated for up to four credits. Prerequisite: MET 260.

MET 375 Special Studies in Meteorology 1-6(Spec)
Various special topics in atmospheric science. Repeatable up to 6 credits when content previously studied is not duplicated. Prerequisite: See Course Search and Registration.

MET 450 Mesoscale Meteorology 3(3-0)
Structure, dynamics, and morphology of atmospheric phenomena on the mesoscale including thunderstorms and mesoscale convective systems. Prerequisites: MET 335, 345.

MET 460 Global Climate Dynamics 3(3-0)
Examines physical laws that govern the climate system; intraseasonal and longer climatic variations (General Circulation, Climate Change, teleconnections) and fundamental data analysis. May be offered as Writing Intensive. Prerequisites: MET 335; MTH 233. Pre/Corequisites: CPS 150 or 180; STA 382.

MET 480 Atmospheric Modeling 3(2-2)
Numerical differencing techniques, stability analysis, structure and operation of commonly utilized weather and climate models, physical parameterizations and their implications. May be offered as Writing Intensive. Prerequisites: MET 450; CPS 150 or 180.

MET 491 Internship 1-6(Spec)
Internship in the field of atmospheric science. Prerequisites: Three or more courses in MET program (2 of which must be 300 level or greater), permission of instructor.

MET 497 Independent Study 1-6(Spec)
Research in meteorology with topics agreed upon by student and instructor. May be taken only by arrangement prior to registration. Prerequisites: Three or more courses in MET program (2 of which must be 300 level or greater), permission of instructor.

MGT - Management

See the Department of Management for more information.

MGT 201 Entrepreneurship Launch Pad 3(3-0)
Recognize, develop, and act on individual potential for creativity and innovation. Shape and evaluate business opportunities, perform market research, and "pitch" an idea. Identical to ENT 201. Credit may not be earned in more than one of these courses. This course may be offered in an online or hybrid format. Prerequisites: ENT 101 or BUS 100 or BUS 100.

MGT 210 Effective Supervision: Principles and Practices 3(3-0)
Prepares students to be effective first-line supervisors in a variety of organizational settings by using sound principles and practices applied to basic managerial processes. Identical to HSA 210. Credit may not be earned in more than one of these courses.

MGT 258 Effective Management of Human Resources in Organizations 3(3-0)
Applying the underlying principles of employee behavior to the effective design, use, and management of human resource systems in organizations. This course may be offered in an online or hybrid format. Prerequisites: ACC 250; BUS 100; BUS 101; BLR 235; ECO 203; 204; MTH 217 or MTH 132 or STA 282 or STA 382; overall GPA of 2.50 or higher.

MGT 303 Integrated Supply Chain Management 3(3-0)
Application of concepts and tools in purchasing, production and distribution of goods and services among an integrated supply chain in organizations. Identical to MKT 303. Credit cannot be earned in more than one of these courses. Prerequisites: Tier 2 Admission to Professional Business Studies; ACC 255, BUS 235, MGT 258. Co-requisites: FIN 302, MKT 304.

MGT 310 Small Business Management 3(3-0)
The course covers concepts, processes, and techniques for starting and managing a small business. It focuses on management processes that are unique to small businesses. Prerequisites: 36 semester hours completed.

MGT 312 Introduction to Management 3(3-3)
Introduction to the concepts, techniques, and processes of management as they pertain to business and other organizations. This course is approved for offering in a distance learning format. Prerequisite: 36 semester hours completed.

MGT 320 Human Resource Management 3(3-0)
Examines process for providing and maintaining productive human resources in an organization. Includes recruitment, selection, training, performance appraisal, compensation, labor relations, and health and safety. This course is approved for offering in a distance learning format. Prerequisites: MGT 258 or MGT 312, 36 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 333 Purchasing Management 3(3-0)
Introduction to concepts, models, and techniques in Purchasing Management, with special emphases on vendor management, materials management, and purchasing strategies. This course is approved for offering in a distance learning format. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 335 Introduction to Management Science 3(3-0)
Basic concepts and applications of quantitative methods in management decisions. This course may be offered in an online or hybrid format. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on a signed major.
MGT 340 Production/Operations Management 3(3-0)
An introduction to production and operations management concepts, tools and techniques as applied in service and manufacturing organizations. Prerequisites: 56 semester hours completed. This course is approved for offering in a distance learning format.

MGT 348 Dynamics of Organizational Behavior 3(3-0)
Integrative theory of organizational behavior. Human motivation influenced by leadership, the organization itself, and its social environment. This course is approved for offering in a distance learning format. Prerequisites: MGT 258 or MGT 312, 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 355 Communications: Managerial Applications 3(3-0)
An applications-oriented class exposing students to many of the common communication-related situations, which they will soon face as managers in business and industry. Prerequisites: MGT 258 or MGT 312; 348 is recommended; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 357 Women in Management 3(3-0)
Explores women in management focusing on social phenomena shaping historical contributions and inequalities facing women in the workplace today, specifically opportunities/challenges pursuing a management career. This course may be offered in an online or hybrid format. (University Program Group III-B: Studies in Social Structures)

MGT 365 International Business 3(3-0)
Environment and operations of multinational business. Public policy issues and their influence on internal management. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor. This course is approved for offering in a distance learning format.

MGT 390 Field Studies 3(3-0)
Activities which may include industrial visitations and work study in conjunction with supervision of cooperating organization, professor, and student. Prerequisites: permission of instructor; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 397 Special Topics 3-6(Spec)
Selected problems for students which are not normally included in existing courses. Specific topic will be announced on the student’s transcript. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 400 Global Concepts for Sustainable Development 3(Spec)
Students will learn the basic concepts used in sustainable development and apply them through the use of cases and simulations. Prerequisites: ECO 301, ENV 101, MGT 365.

MGT 416 Entrepreneurship in the Global Economy 3(3-0)
Primary focus is on how individuals and small companies recognize and seek out business opportunities in a global economy leveraging the power of technology; hands-on assignment-based course with a major global team project component. Does not count on the Department of Management majors or minors. Identical to ENT 416. Credit may not be earned in more than one of these courses. Prerequisites: ENT 213, ENT 221; 56 semester hours completed; signed major in Entrepreneurship.

MGT 419 Running and Growing an Entrepreneurial Venture in a Global Economy 3(3-0)
This course emphasizes the acquisition of skills and knowledge necessary to successfully maintain and grow an established entrepreneurial venture within a global business environment. Identical to ENT 419. Credit may not be earned in more than one of these courses. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 442 Computer Applications for Production Operations Management 3(3-0)
Simulation modeling and application of existing computer software for production and operations decisions. Prerequisites: MGT 303/MKT 303 or MGT 340; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 445 Compensation Administration 3(3-0)
Principles of developing and administering compensation systems. Covers job evaluation methods, wage and salary structure development, incentive pay systems, and benefits administration. Prerequisites: MGT 258 or MGT 312, MGT 320; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 446 Industrial Relations 3(3-0)
Relationships between organized labor and management analyzed in the light of contemporary conditions. Recommend MGT 258 or MGT 312 prior to enrollment. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 447 Personnel Selection and Evaluation 3(3-0)
Study of personnel selection policies and practices and employee evaluation approaches and techniques, including legal issues and concerns, as they are applied in current organizations. Prerequisites: MGT 320; STA 282; 56 semester hours completed; either admission to Professional Business Studies or listed on signed major or minor.

MGT 457 Seminar in International Business 3(3-0)
A case study course for analysis and integration of international business functions in order to develop a cross-cultural perspective in dealing with global challenges. Prerequisites: completion of MGT 365; 86 semester hours completed and admission to Professional Business Studies or listed on signed major or minor. Recommended: ECO 372, FIN 573, and MKT 560.

MGT 484 Human Resource Training and Development 3(3-0)
This course examines theories, concepts, and process of human resource training and development in modern organizations to meet current and future needs. Prerequisites: MGT 258 or MGT 312; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor. Recommended: MGT 312.

MGT 487 Project Course for Sustainable Development 3(Spec)
The students will apply the basic tools of sustainable development within a real-world setting through completion of an applied project. Prerequisite: MGT 400.

MGT 490 Internship in Management 1-6(Spec)
Full or part time on the job learning experience for one or more semesters in industry, government or business organizations. Prerequisites: permission of instructor and department chairperson; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 492 Practicum in Small Business 3(Spec)
Provides the student an opportunity to analyze the accounting, finance, marketing, management, and production systems of an ongoing small business. Identical to ACC/FIN/MKT/BIS 492. Credit may not be earned in more than one of these courses. Prerequisites: permission of instructor; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 495 Global Management Strategy 3(3-0)
An integrative, cross-functional capstone course focusing on the process of strategic planning and management from the general management perspective, and on the domestic, multinational, and global dimensions. Primarily a case course. Prerequisites: 86 semester hours completed; completion of 300-level common body knowledge requirements in business; admission to Professional Business Studies. Graduating seniors only. This course is approved for offering in a distance learning format.

MGT 499 Integrated Capstone-Strategic Management 3(3-0)
An integrative capstone course applying and analyzing financial, marketing, supply chain and other business functions within a global strategic management perspective, and on the domestic, multinational, and global dimensions. Primarily a case course. Prerequisites: 86 semester hours completed; completion of 300-level common body knowledge requirements in business; admission to Professional Business Studies. Preference given to graduating seniors.

MGT 500 Comparative Labor Relations Systems 3(3-0)
Comparative analysis of the history, structure, institutional arrangements, and philosophy of the labor relations systems of several countries in advanced stages of industrialization. Prerequisites: MGT 320; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 516 Management and Women 3(3-0)
Enables both male and female students to understand the opportunities, challenges, and problems confronting women in their pursuit of careers in management, and to manage more effectively. Prerequisites: MGT 312, 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 520 Management in Health Care Facilities 3(3-0)
Management problems and practices in health care facilities. Prerequisites: MGT 312; MSA 650; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 533 Purchasing Strategy 3(3-0)
Strategic analysis and development of purchasing and supplier-base development for both domestic and global competitive environments. Prerequisites: MGT 333 and admission to Professional Business Studies or listed on signed major or minor. Recommended: MGT 400.

MGT 542 Inventory and Materials Management 3(3-0)
The study of the concepts, models and systems for material management and production planning. Prerequisites: MGT 303/MKT 303 or MGT 340; STA 282; 86 semester hours completed; admission to Professional Business Studies or listed on signed major or minor or graduate standing.

MGT 543 Management and Control of Quality 3(3-0)
In-depth study of management and statistical techniques employed in the design, analysis, and improvement of quality assurance and control systems in manufacturing and service organizations. Prerequisites: MGT 303/MKT 303 or MGT 340; STA 282 or STA 382; 86 semester hours completed; admission to Professional Business Studies or listed on signed major or minor or graduate standing.
MGT 545 Operations Strategy 3(3-0)
The treatment of strategic planning and competitive issues in opera-
tions management in a domestic and global environment. Prerequi-
sites: MGT 303/MKT 303 or MGT 340; 86 semester hours completed; admission to Professional Business Studies or listed on signed major or minor in graduate standing.

MGT 597 Special Topics 1-6(Spec)
Selected problems of interest to students which are not normally included in existing courses. Specific topics will be listed on the student’s transcripts. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

MGT 600 Principles of Management Science/Management Information Systems 3(3-0)

MGT 643 Human Resource Management 3(3-0)

MGT 645 Personnel Compensation Practice and Process 3(3-0)

MGT 646 Labor Relations Issues 3(3-0)

MGT 647 Employee Selection and Evaluation 3(3-0)

MGT 649 Seminar in Organizational Development 3(3-0)

MGT 657 International Management 2(2-0)

MGT 667 International Business 3(3-0)

MGT 791 Independent Studies 1-6(Spec)

MGT 797 Special Topics 3-6(Spec)

MGT 798 Thesis 1-6(Spec)

MKT - Marketing

See the Department of Marketing and Hospitality Services Administration for more information.

MKT 151 Marketing and Society 3(3-0)
An overview of the economic, political, social, technological, and legal environment of marketing. Prerequisites: Tier 2 Admission to Professional Business Studies or listed on signed major or minor.

MKT 220 Introduction to Retail Merchandising 3(3-0)
A study of merchandising as an organized system of procedures as they relate to organizational structure, product planning, and inventory control. Prerequisites: MKT 151.

MKT 221 Marketing Strategies for Entrepreneurs 3(3-0)
Basic marketing principles applied to the entrepreneurial venture including daily activities, long-term branding/position strategy, inexpensive ways to conduct research, and utilizing networks to identify/reach customers. Prerequisites: MKT 151 or MKT 201. Recommended: ENT 101, ENT/MGT 201.

MKT 297 Special Topics 1-6(Spec)
Selected problems of interest to students which are not normally included in existing courses. Specific topics will be listed on students’ transcripts.

MKT 300 Introduction to Marketing 3(3-0)
A basic introduction to the marketing environment, the marketing mix, marketing strategy, and the place of marketing in world society. This course may be offered in an online or hybrid format. Recommended: ENT 101, ENT/MGT 201.

MKT 303 Integrated Supply Chain Management 3(3-0)
Application of concepts and tools in purchasing, production and distribution of goods and services along an integrated supply chain in organizations. Prerequisites: MKT 300; 56 semester hours completed.

MKT 304 Integrated Marketing Management 3(3-0)
An introduction to marketing and how it provides customer and market information to the organization so strategic and tactical decisions are customer-focused and market-driven. Prerequisites: Tier 2 Admission to Professional Business Studies; ACC 255, BUS 255, MGT 258. Co-requisites: MKT 304, FIN 302.

MKT 305 Buyer Behavior 3(3-0)
Characteristics of consumers affecting the decision process in buying and the marketing implications. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed, and admission to Professional Business Studies or listed on signed major or minor.

MKT 310 Marketing Communications 3(3-0)
An overview of advertising, personal selling and sales promotion, and other techniques that an organization would use to communicate with its target markets. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor. This course is approved for offering in a distance learning format.

MKT 315 Advertising Media 3(3-0)
Evaluation of media in relationship to marketing objectives. Selection of media space/time and decision-making in development of media schedules. Prerequisites: 56 semester hours completed; MKT 310 or JRN 360 or approval of instructor; admission to Professional Business Studies or listed on signed major or minor.

MKT 320 Retail Management 3(3-0)
Functions of a retail establishment are examined. Significant developments taking place in the major environments of retailers—social, economic, technological, and legal. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor; or with approval from the Office of Undergraduate Business Studies.

MKT 325 Merchandising Management 3(3-0)
Current problems in merchandising which include technological aspects, inventory valuation and reporting procedures, and product mix considerations. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor; Recommended: Pre/Co-Requisite: MKT 320.

MKT 340 Personal Selling 3(3-0)
Planning and implementation of marketing strategy and application of the marketing mix to services including hospitality, banking and health services. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor; or with approval from the Office of Undergraduate Business Studies.

MKT 341 Services Marketing 3(3-0)
Planning and implementation of marketing strategy and application of the marketing mix to services including hospitality, banking and health services. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MKT 350 Marketing Analysis 3(3-0)
An analysis of marketing data: marketing research, statistics, marketing cost/revenue analysis and sales and market forecasting. Prerequisites: MKT 300 or MKT 304; STA 282; ACC 202 or ACC 255; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MKT 360 Electronic Commerce and Marketing Strategy 3(3-0)
Basic concepts and tools for understanding and exploring market opportunities and marketing strategies associated with global electronic commerce. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MKT 390 Field Studies 3(3-0)
Activities which may include industrial visitations and work study in con-

MKT 397 Special Topics 1-6(Spec)
Selected problems of interest to students which are not normally included in existing courses. Specific topic will be listed on the student’s transcript. Prerequisites: permission of instructor; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MKT 410 Advertising Management 3(3-0)
An overview of the economic, political, social, technological, and legal force of marketing information to the organization so strategic and tactical decisions are customer-focused and market-driven. Prerequisites: Tier 2 Admission to Professional Business Studies; ACC 255, BUS 255, MGT 258. Co-requisites: MKT 304, FIN 302.

MKT 420 Advanced Selling and Negotiation 3(3-0)
Methods for building the persuasive selling skills necessary to form rela-
tionships with customers, negotiate successfully and develop and deliver effective sales presentations. Prerequisites: MKT 300 or MKT 304; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MKT 422 Cooperative/Internship in Retailing 3-6(Spec)
Full time work experience under the supervision of the department and participating employer. Prerequisites: permission of instructor; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor. Recommended: MKT 320.

MKT 425 Retail Strategy 3(3-0)
Development of strategic methods for addressing retail problems. Problem solving orientation within the retail organizational setting. Prerequisites: MKT 320; 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor. Recommended: MKT 422.

Course Descriptions approved for University Program are in italics.
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MST - Museum Studies

See the Museum Studies Minor for more information.

MST 310 Introduction to Museums 3(3-0)
An introduction to the role of museums in society, as well as to museum management, operations, and careers. Prerequisite: 36 hours of course credit.

MST 315 Museums, Stakeholders and Communities 3(3-0)
Conceptual and practical knowledge for dealing effectively with diverse museum audiences, collaborators, and stakeholders on mission-fulfilling activities that enhance the organization's value to society. Prerequisite: MST 310.

MST 320 Collections Stewardship and Curatorial Work 3(3-0)
This course covers basic museum collections management and care policies and procedures, as well as mission-based collections planning and curatorial research techniques. Prerequisite: MST 310.

MST 325 Public Programming in Museums 3(3-0)
This course focuses on developing mission-driven, audience-focused public and educational programs; planning, implementing and evaluating programs; and enhancing interpretive methods and skills. Prerequisite: MST 310.

MST 546 Introduction to Museum Work 3(3-0)
Exploration of the duties and responsibilities encountered in museum work. Collection care and development, exhibit preparation, and educational program development. Prerequisite: 56 hours of course credit.

MST 547 Museum Science Laboratory 3(3-0)
Laboratory work in materials and techniques utilized within the museum profession. Primary emphasis is on exhibit preparation, model-building, and replica-making for educational usage. Prerequisites: MST 546; 56 hours of course credit.

MST 550 Museum Collections Management and Care 3(3-0)
Curatorial techniques in museums including acquisition, cataloging, legal requirements, preservation, computerization and proper handling. Prerequisites: MST 546; 56 hours of course credit.

MST 551 Museum Education and Interpretation Techniques 3(3-0)
Interpretive methods used by museums including development and implementation of programs and enhancement of interpretive skills. Prerequisites: MST 546; 56 hours of course credit.

MST 575 Independent Study in Museum Studies 3(3-0)
Study of specific selected topics in museum theory or practice at a level suitable for advanced undergraduates or graduate students. Prerequisites: MST 510.

MST 598 Museum Internship 6(Spec)
Supervised work experience applying classroom concepts and skills in the operation and programming of a museum, historic site or other informal learning center. Prerequisites: Obtain permission of Director of the Museum Studies Program.
For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

MST 610 International Cultural Laws and Ethics 3(3-0)

MST 620 Museum Management 3(3-0)

MST 740 Seminar in Emergency Preparedness 3(3-0)

MST 750 Seminar in Advanced Exhibit Design and Construction 3(3-0)

MST 775 Seminar in Funding and Fundraising 3(3-0)

MST 798 Creative Endeavors in Museum Studies 3(3-0)

MTH - Mathematics

See the Department of Mathematics for more information.

MTH 051 Review for Elementary Teachers Mathematics Proficiency Test 1-2(Spec)
Review for elementary teachers proficiency tests on base ten numeration, common and fractional fractions, percentage, U.S. customary and metric measures, ratio and proportion, geometry, and algebra. Credit in this course does not count toward the total number of hours required for graduation. It does not count in determining whether you are a full-time student. CR/NC only.

MTH 101 Elementary Algebra 3(3-0)
The real number system, variables, algebraic expressions, exponents, Cartesian coordinate system, linear equations, percent, polynomial operations, reading graphs. Word problems emphasized. This course may only be used as a General Elective on the BS degree. Cannot be used to fulfill the Area 2 Natural Sciences requirement. CR/NC only. Prerequisite: Placement.

MTH 103QR Quantitative Reasoning for Informed Citizens 3(3-0)
Quantitative reasoning skills useful in an individual's private, civic, and professional life. Topics may include: financial management, insurance, personal health, and environmental and social concerns. Quantitative Reasoning.

MTH 105 Intermediate Algebra 3(3-0)
Rational and radical expressions and equations, integer and rational exponents, functions, graphs, systems of equations and inequalities, quadratic equations. Successful completion of this course satisfies the University Mathematics Competency requirement. This course may be offered in an online or hybrid format. Prerequisite: Placement or successful completion of MTH 101.

MTH 107 College Algebra 3(3-0)
Complex numbers, introduction to functions, zeros, graphing, linear functions, quadratic functions, intersections of graphs, interpreting graphs, inequalities, polynomial and rational functions, algebra of functions. Course does not count toward a major, minor in mathematics and except for students pursuing a B.S. in Ed., Elementary Education. Recommended: Successful completion of MTH 105.

MTH 109 Plane Trigonometry 3(3-0)
Solutions of triangles, trigonometric equations, and identities. No credit in MTH 109 after credit earned in MTH 130. Course does not count toward a major, minor in mathematics except for students pursuing a B.S. in Ed., Elementary Emphasis. This course may be offered in an online or hybrid format. Recommended: one and one-half years of high school algebra; or successful completion of MTH 107 and one year of high school geometry.

MTH 113 Mathematics: A Modeling Approach 3(3-0)
The role of mathematics in modeling real world phenomena is explored. Such mathematical areas as graph theory, linear programming, probability theory, and difference equations are developed as solution techniques for concrete problems from many disciplines. Recommended: Two years of high school mathematics or equivalent. (University Program Group II-B: Quantitative and Mathematical Sciences)

MTH 130 Pre-Calculus Mathematics 4(4-0)
Sets, mathematical induction, functions, theory of equations, analytic geometry. This course is approved for offering in a distance learning format. Recommended: MTH 107, 109.

MTH 132 Calculus I 4(4-0)
Limits, continuity, interpretations of the derivative, differentiation of elementary functions, applications of derivatives, antiderivatives, Riemann sums, definite integrals, fundamental theorem of calculus. This course may be offered in an online or hybrid format. Recommended: MTH 107, 109; or MTH 130. (University Program Group II-B: Quantitative and Mathematical Sciences)

MTH 133 Calculus II 4(4-0)
Techniques of integration, applications of definite integrals, improper integrals, elementary differential equations, infinite series, Taylor series, and polar coordinates. Prerequisite: MTH 132.

MTH 151 Mathematics for Elementary Teachers I 3(3-0)
Mathematical background for elementary teachers. Sets, number systems, operations with natural numbers, rational numbers, elementary number theory. Admission limited to students pursuing a B.S. in Ed., Elementary Emphasis. Prerequisites: EDU 107 and one of: MTH 105, 107, 109, 130, 132.

MTH 152 Mathematics for Elementary Teachers II 3(3-0)
Continuation of MTH 151. Decimals, percent, ratio/proportion, geometry (concepts and measurement), probability, statistics. Prerequisites: MTH 151 with a grade of C or better; one of: MTH 105, 107, 109, 130, 132.

MTH 175 Discrete Mathematics 3(3-0)
Topics in discrete mathematics including sequences, graphs, mathematical induction, recursion, number theory, combinatorial counting, difference equations, algorithms, and Boolean Algebra. No credit in MTH 175 after credit in MTH 375 or MTH 378. Prerequisite: MTH 130 or 132 or 133.

MTH 217 Business Calculus 4(4-0)
Differential and integration of algebraic, exponential, and logarithmic functions, applications of differentiation and integration, partial derivatives. Does not count toward a major or minor in mathematics. Recommended: MTH 107.

MTH 223 Linear Algebra and Matrix Theory 3(3-0)
Systems of linear equations, matrices, determinants, vectors, vector spaces, eigenvalues, linear transformations, applications and numerical methods. Prerequisite: MTH 132.

MTH 232 Linear Algebra and Differential Equations 3(3-0)
First order differential equations, systems of linear differential equations, matrices, vector spaces, linear transformations and eigenvalues. May not be counted toward major in Mathematics. Credit may not be earned in both MTH 223 and MTH 232, or in both MTH 334 and MTH 232. Prerequisite: MTH 132.

MTH 233 Calculus III 4(4-0)
Vectors and surfaces in 3D, vector-valued functions, functions of several variables, partial differentiation and some applications, multiple integrals, vector calculus. Prerequisites: MTH 133, Pre/Co-Requisites: MTH 223 or 232.

MTH 254 Probability and Statistics for K-8 Mathematics Teachers 3(3-0)
Examines applications of statistics, experimental probability, and theoretical probability suitable for teachers. Prerequisites: MTH 152 with a B or better.

MTH 256 Algebraic Modeling and Measurement for K-8 Math Teachers 3(3-0)
This course examines the concepts of algebraic thinking and measurement, focusing specifically on applications for teachers. Prerequisites: MTH 151 with grade of B or better, MTH 152 with grade of B or better; Signed major or minor in Elementary Mathematics.

MTH 261 Algebra for Secondary Teachers 3(3-0)
Abstract algebraic concepts are explored through a technology-enhanced approach connecting secondary mathematics curricula with undergraduate mathematics and pedagogy contexts. Prerequisites: MTH 223; signed major or minor in secondary mathematics.
Course Descriptions approved for University Program are in italics.

MTH 278 Mathematical Models 3(3-0)
Mathematical modeling of real world problems using concepts learned in algebra, calculus and statistics. Prerequisites: MTH 132 or MTH 217. Corequisite: STA 282 or STA 382.

MTH 296 Special Topics in Mathematics 1-6(Spec)
Subject matter not included in regular course. May be taken for credit more than once, total credit not to exceed 6 hours. Prerequisite: permission of instructor.

MTH 322 Introduction to Mathematical Proof 3(3-0)
Study of several basic concepts in mathematics including logic, set theory, relations and functions, cardinality, number systems, sequences. Pre/Co-requisites: MTH 175, 351; or one of: MTH 223, 232.

MTH 334 Differential Equations 3(3-0)
Definition and solution of first, second, and higher order differential equations. Prerequisites: MTH 133, MTH 223.

MTH 335 Mathematical Biology 3(3-0)
Discrete and continuous models of population growth, stability analysis of dynamical systems, biochemical reaction kinetics, and biological oscillators and switches. Prerequisite: MTH 132. Recommended: MTH 133 or STA 282 or 382.

MTH 341 College Geometry 3(3-0)
An advanced study of Euclidean and Non-Euclidean geometries from an axiomatic and historical standpoint. Prerequisite: MTH 332.

MTH 351 Geometry for K-8 Mathematics Teachers 3(3-0)
This course examines geometry focusing on axiomatic systems with the purpose of developing the ability to create mathematical proofs. Prerequisite: MTH 256.

MTH 361 - Field Experience in Teaching Mathematics 1(Spec)
Preparation for and experience in working with students in secondary (7-12) mathematics classrooms. Prerequisite: MTH 223.

MTH 362 Problem-Based and Technology Enhanced Geometry for Secondary Teachers 3(3-0)
Geometry content is explored through a problem-based and technology-enhanced approach connecting secondary mathematics curricula with undergraduate mathematics and pedagogical content. Prerequisites: MTH 332; C+ or better in MTH 261; signed major or minor in secondary mathematics teaching.

MTH 363 Problem-Based Probability and Statistics for Secondary Teachers 3(3-0)
Probability and Statistics content are explored through a problem-based and technology-enhanced approach connecting secondary mathematics curricula with undergraduate mathematics and pedagogical content. Prerequisites: MTH 332; C+ or better in MTH 261; signed major or minor in secondary mathematics teaching.

MTH 375 Discrete Structures 3(3-0)
Relation between set theoretic operations and computer operations, applications of graph theory, graphical algorithms, discrete algebraic structures. Prerequisites: MTH 133 or MTH 223, MTH 175 or MTH 332.

MTH 397 Independent Study 1-6(Spec)
The in-depth study of a topic in mathematics under the direction of a faculty member. May be taken for credit more than once, total credit not to exceed six hours. Prerequisite: Permission of instructor.

MTH 433 Methods of Applied Mathematics 3(3-0)
Topics in applied mathematics and boundary value problems and orthogonal functions, partial differential equations, and complex variables. Prerequisites: MTH 232, MTH 334.

MTH 436 Elements of Complex Variables 3(3-0)
Complex numbers, analytic functions, Laurent series, Cauchy integral formula. Prerequisites: MTH 232, 333.

MTH 438 Numerical Analysis I 3(3-0)
Computational methods for solving non-linear equations and systems of linear equations. Interpolation, numerical differentiation and integration. Prerequisites: MTH 133, 223.

MTH 439 Numerical Analysis II 3(3-0)
Solution of algebraic and to ordinary differential equations. Study of approximation theory and solutions to nonlinear systems of equations. Prerequisite: MTH 438.

MTH 444 Introduction to Differential Geometry 3(3-0)
Curves and surfaces. Frenet formulas, calculi on Euclidean space, tangent vectors and surface maps, Gauss map, shape operator, curvature, special curves on surfaces. Prerequisites: MTH 233, 332.

MTH 461 Teaching of Secondary School Mathematics 4(4-0)
Materials, teaching techniques for prospective secondary mathematics teachers. Course does not count as one of two 400 or 500 level courses on mathematics major. May not be counted toward a major or minor in mathematics except for students pursuing a B.S. in Ed. degree. Open only to seniors and approved juniors. Prerequisites: MTH 223, MTH 341.

MTH 462 Capstone on Teaching and Learning Mathematics for Secondary Teachers 3(3-0)
This course exposes pre-service secondary mathematics teachers to theory and practice of curriculum and instruction in secondary schools, introducing current literature and designing instructional units. Prerequisites: MTH 362, 363; signed secondary mathematics major or minor.

MTH 496 Special Topics in Mathematics 1-6(Spec)
Subject matter not included in regular course. May be taken for credit more than once, total credit not to exceed 6 hours. Prerequisite: See Course Search and Registration.

MTH 599 Capstone Course in Mathematics 3(3-0)
Material in core mathematics courses is unified through study of subject matter excluded from regular mathematics courses, in the areas of classical and applied mathematics. Prerequisites: MTH 133, MTH 332; permission of instructor.

MTH 520 Optimization Theory 3(3-0)
An introduction to the theory, practical applications and algorithms of optimization. Prerequisites: MTH 233.

MTH 521 Theory of Numbers 3(3-0)
Properties of integers, congruences, greatest common divisors and prime factorization, applications of number theory to computer science and/or cryptography. Prerequisite: MTH 332.

MTH 522 Math of Cryptology 3(3-0)
The mathematics and algorithms of classical and computer-age cryptology. Substitution, transposition, stream and block ciphers; DES, Rijndael and public key cryptology; cryptanalysis of cipher systems. Prerequisites: CPS 340 or MTH 332.

MTH 523 Modern Algebra I 3(3-0)
Groups, rings, integral domains, fields, and fundamental homomorphism theorems. Prerequisite: MTH 332 or graduate status.

MTH 524 Modern Algebra II 3(3-0)
Fundamental concepts of calculus for functions of one variable. Sequences, limits, continuity, differentiation, integration, exponential and logarithmic functions, arc length, series. Credits will not count towards M.A. or Ph.D. degree requirements in mathematics. Prerequisites: MTH 233 and MTH 332, or graduate status.

MTH 532 Advanced Calculus I 3(3-0)
Rigorous development of calculus for functions of several variables. Limits, continuity, differentiation, and integration. Prerequisite: MTH 532.

MTH 534 Applied Mathematics and Differential Equations 3(3-0)
Fundamental concepts of calculus for functions of several variables. Limits, continuity, differentiation, and integration. Prerequisite: MTH 532.

MTH 541 Actuarial Mathematics for Life Contingencies I 3(3-0)
Introduction to survival distributions and life tables, life annuities and life insurance, benefit premiums and benefit reserves. Prerequisites: STA 339; MTH 540.

MTH 542 Actuarial Mathematics for Life Contingencies II 3(3-0)
Introduction to multiple state models including multiple life models and multiple decrements models, pension mathematics, interest rate models, and cash flow analysis for insurance products. Prerequisites: MTH 541.

MTH 545 Introduction to Point-Set Topology 3(3-0)
Development of elementary point-set topology. Sets, functions, metric spaces, topological spaces, quotient surfaces, compactness, and connectedness. Prerequisite: MTH 332 or graduate status.

MTH 551 Mathematical Structures for K-8 Mathematics Teachers 3(3-0)
Problem-solving, set theory, logic, number theory, algebra, consumer mathematics and mathematical systems. Credit will not apply toward a master's degree in mathematics. Prerequisites: MTH 254 and 351.

MTH 553 History of Elementary Mathematics for K-8 Teachers 3(3-0)
A history of mathematical developments of western and non-western cultures for use in grades K-8. Credit can only be earned in one of the following: MTH 253 or MTH 553 and will not apply toward master's degree in mathematics. Prerequisites: MTH 254 and 351.

MTH 556 Microcomputers for Elementary Mathematics Teachers 3(3-0)
An introduction to the theory, practical applications and algorithms of optimization. Prerequisites: MTH 233.

MTH 558 Mathematics in Popular Culture 3(3-0)
This course exposes pre-service elementary mathematics teachers to theory and practice of curriculum and instruction in secondary schools, introducing current literature and designing instructional units. Prerequisites: MTH 362, 363; signed secondary mathematics major or minor.
MTH 565 Using Graphics Calculators in Mathematics Education 1(1-0)
Course is designed for secondary mathematics education majors and minors. Emphasis will be on the classroom use of graphic calculators to teach mathematics. Prerequisites: MTH 132; with MTH 223 as a corequisite.

MTH 566 Microcomputers for Secondary Mathematics Teachers 3(3-0)
Examines microcomputer use in secondary education with particular emphasis on mathematical applications. Open only to those students pursuing a B.S. in Ed., Secondary Emphasis, Prerequisite: MTH 223.

MTH 573 History of Mathematics 3(3-0)
History of arithmetic, algebra, geometry, calculus. Prerequisites: MTH 332 or MTH 341, or graduate status.

MTH 578 Combinatorics I 3(3-0)
Introduction to the basic principles of combinatorics and graph theory with applications to problems of nonmathematical origin. Prerequisites: MTH 523.

MTH 586 Operations Research I 3(3-0)
Mathematical theory and applications of mathematical programming. Linear programming duality, integer programming, mixed integer programming, and dynamic programming. Prerequisites: MTH 133.

MTH 587 Operations Research II 3(3-0)
Continuation of MTH 586. Theory and application of stochastic models in operations research. Inventory models, queueing theory. Markov chains, stochastic programming. Prerequisites: STA 382, MTH 586.

MTH 591 Seminar in the Solution of Putnam Problems 1-3(Spec)
Problem-solving techniques demonstrated through solutions of the Putnam Examination problems. Designed particularly for those students interested in participating in the Putnam Examination. Prerequisite: MTH 233; permission of instructor.

MTH 594 Seminar in Higher Mathematics 3(3-0)
Class presentation of results of independent study, and final comprehenusive written report in an approved subject. Prerequisite: one year of calculus; permission of instructor.

MTH 595 Special Topics in Mathematics Education 1-6(Spec)
Subject matter not included in regular mathematics education course. May be taken for credit more than once, total credit not to exceed 6 hours. Specific topics and pre/co-requisites will be announced in Course Search and Registration. May not be counted toward a major or minor in mathematics except for students pursuing a B.S. in Ed. degree. Pre/Co- requisites: See Course Search and Registration.

MTH 596 Special Topics in Mathematics 1-6(Spec)
Subject matter not included in regular course. May be taken for credit more than once, total credit not to exceed 6 hours. Pre/Co-requisite: See Course Search and Registration.

MTH 597 Independent Study 1-6(Spec)
Open to students with permission of instructor. May be taken for credit more than once, total credit not to exceed 6 hours. For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

MTH 619 Continuing Registration for Final Research Project 1(1-0)

MTH 623 The Theory of Groups 3(3-0)

MTH 625 Theory of Associative Rings 3(3-0)

MTH 627 Representation Theory of Lie Algebras 3(3-0)

MTH 632 Introduction to Real Analysis and Its Applications 3(3-0)

MTH 633 Real Variables 3(3-0)

MTH 634 Fourier Analysis 3(3-0)

MTH 636 Introduction to Complex Variables 3(3-0)

MTH 637 Complex Variable Theory 3(3-0)

MTH 638 Theoretical Numerical Analysis 3(3-0)

MTH 641 Topics in Geometry 3(3-0)

MTH 644 Differential Geometry 3(3-0)

MTH 645 Topology 3(3-0)

MTH 651 Basic Ideas and Procedures in Elementary School Arithmetic 3(3-0)

MTH 652 The Teaching of Measurement 3(3-0)

MTH 656 Teaching & Learning Mathematics with Technology 3(3-0)

MTH 658 Workshop in Teaching Mathematics 1-6(Spec)

MTH 661 The Teaching of Middle School Mathematics 3(3-0)

MTH 662 The Teaching of Secondary School Mathematics 3(3-0)

MTH 663 History of Advanced Mathematics 3(3-0)

MTH 672 Combinatorics II 3(3-0)

MTH 673 History of Advanced Mathematics 3(3-0)

MTH 678 Seminar in Combinatorics 3(3-0)

MTH 679 Special Topics in Mathematics 1-6(Spec)

MTH 687 Independent Study 1-9(Spec)

MTH 698 Plan B Project 1-2(Spec)

MTH 725 Topics in Algebra 3(3-0)

MUS - Music

See the School of Music for more information.

School of Music Course Numbering

Course numbers are coded according to content. The middle digit of the number indicates content as follows:

Course Content
Middle Digit

Theory and Composition 0
Music History and Literature 1
Pedagogy 3
Class Applied Instruction 4
Private Applied Instruction 5, 6, 7
Ensembles 8
Research and Special Studies 9

MUS 097 Recital Attendance 0(0-0)

Attendance at recitals and concerts in the School of Music. B.M. and B.M.E. students are required to register for and complete seven (7) semesters of MUS 097. B.A. and B.M. music students are required to register for and complete four (4) semesters of MUS 097. CR/NC only. Prerequisite: Admission to the School of Music.

MUS 101 Theory I 3(3-0)
Training in basic terminology and in melodic, harmonic, and rhythmic elements and processes of music. Prerequisite: Admission to the School of Music. Co-requisite: MUS 103.

MUS 102 Theory II 3(3-0)
Continuation of MUS 101. Prerequisites: Admission to the School of Music; MUS 101 with a C or better.

MUS 103 Sight Singing and Ear Training I 1(0-2)
Basic aural and vocal training in the melodic, harmonic, and rhythmic elements of music. Prerequisite: Admission to the School of Music.

MUS 104 Sight Singing and Ear Training II 1(0-2)
Continuation of MUS 103 (Sight Singing and Ear Training I). Prerequisites: Admission to the School of Music; MUS 103 with a C or better.

MUS 105 Supplemental Theory 2(0-2)

This course reinforces concepts taught in MUS 101. Prerequisite: Admission to the School of Music. Co-requisite: MUS 101.

MUS 107 The Craft of Composition 2(2-0)
An exploratory course in the craft of composing music. Prerequisite: MUS 101 or 206.

MUS 109 Introduction to Music Technology 1(1-1)
A hands-on introduction to the use of computers, software, synthesizers, and related equipment as they relate to music and music education. Prerequisite: Admission to the School of Music.

MUS 110 Music in Society 3(3-0)

An intercultural and interdisciplinary exploration of the elements of music. This course may be offered in an online or hybrid format. (Not open to music majors.) (University Program Group I-B: The Arts)

MUS 114 Listening Experience 3(3-0)

Objectives are to experience a variety of musical events, to develop musical awareness, to sharpen perception, and increase musical discrimination. Not open to music majors. May be offered as Writing Intensive. (University Program Group I-B: The Arts)

MUS 141 Vocal Techniques I 1(0-2)

Study and practice of basic techniques necessary to improve the singing voice (i.e. posture, breathing habits, tone, diction). Prerequisite: Admission to the School of Music.

MUS 142 Vocal Techniques II 1(0-2)

Continuation of work begun in MUS 141. Prerequisite: Admission to the School of Music; MUS 141 with a C or better.
MUS 144 Woodwind Techniques 2(0-4)
Flute, clarinet, and saxophone playing and teaching techniques. Prerequisite: Admission to the School of Music.

MUS 146 Brass Techniques 2(0-4)
Trumpet, Horn, Trombone, Euphonium-Baritone, and Tuba performing and teaching techniques. Prerequisite: Admission to the School of Music.

MUS 147 Piano Class I 1(0-2)
This course is designed to develop functional piano skills, such as sight reading, harmonization, basic repertoire, and technique appropriate to the level. Prerequisite: Admission to the School of Music; or signed Music Theatre Major.

MUS 148 Piano Class II 1(0-2)
This course is designed to continue the development of functional piano skills, such as sight reading, harmonization, basic repertoire, and technique. Prerequisites: Admission to the School of Music; or signed Music Theatre Major, MUS 147 with a C or better.

MUS 149 Class Guitar 1(0-2)
Group guitar instruction for non-music and music majors on correct technique, playing and reading chords, melodies, and standard works written for guitar.

MUS 150 Voice 1-12(Spec)
Individualized program of applied studio instruction in voice performance focusing on the foundations of technique, musicianship, literature, and performance practice. This course is repeatable and intended as a two-semester foundation and pre-requisite for study at the 200-level. Prerequisite: Admission to the School of Music or Music Theater Program.

MUS 151 Organ 1-12(Spec)
Individualized program of applied studio instruction in organ performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 152 Piano 1-12(Spec)
Individualized program of applied studio instruction in piano performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 153 Violin 1-12(Spec)
Individualized program of applied studio instruction in violin performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 154 Viola 1-12(Spec)
Individualized program of applied studio instruction in viola performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 155 Violoncello 1-12(Spec)
Individualized program of applied studio instruction in violoncello performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 156 String Bass 1-12(Spec)
Individualized program of applied studio instruction in string bass performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 157 Composition 1-4(Spec)
Applied study of music composition. The course is repeatable and intended as a two-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisites: Admission to the School of Music; minimum GPA of 3.0 in MUS 101, 102, 103, 104; permission of instructor.

MUS 159 Guitar 1-8(Spec)
Individualized program of applied studio instruction in guitar performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 161 Flute 1-12(Spec)
Individualized program of applied studio instruction in flute performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 163 Oboe 1-12(Spec)
Individualized program of applied studio instruction in oboe performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 165 Clarinet 1-12(Spec)
Individualized program of applied studio instruction in clarinet performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 167 Bassoon 1-12(Spec)
Individualized program of applied studio instruction in bassoon performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 169 Saxophone 1-12(Spec)
Individualized program of applied studio instruction in saxophone performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 171 Trumpet 1-12(Spec)
Individualized program of applied studio instruction in trumpet performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 173 Horn 1-12(Spec)
Individualized program of applied studio instruction in horn performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 175 Trombone 1-12(Spec)
Individualized program of applied studio instruction in trombone performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 177 Euphonium 1-12(Spec)
Individualized program of applied studio instruction in euphonium performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 178 Tuba 1-12(Spec)
Individualized program of applied studio instruction in tuba performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundation and pre-requisite for advanced study at the 300-level. Prerequisite: Admission to the School of Music.

MUS 180 Festival Chorus 1-8(Spec)
Preparation and performance of major choral/orchestral compositions. No audition required.

MUS 181 Men's Chorus 1-8(Spec)
Preparation and performance of choral works for the male voice. Open by audition to any student in the University.

MUS 182 Women's Chorus 1-8(Spec)
Preparation and performance of choral works for the female voice. Open by audition to any student in the University.

MUS 183 Concert Choir 1-8(Spec)
Preparation and performance of choral works. Open by audition to any student in the University.

MUS 185 Orchestra 1-8(Spec)
The rehearsal and performance of orchestral literature. Open by audition to any student in the University.

MUS 186 Band 1-8(Spec)
Preparation and performance of instrumental works. Open by audition to any student in the University.

MUS 187 String Orchestra 1-8(Spec)
The rehearsal and performance of string orchestral literature. Open by audition to any student in the University.

MUS 188 Men's Barbershop 1-8(Spec)
Preparation and performance of barbershop works for the male voice. Open by audition.
MUS 189 Introduction to Accompanying 1(0-2)
Experience in accompanying vocal and instrumental music. Prerequisite: Admission to the School of Music.

MUS 197 Special Topics 1-6(Spec)
Exploration of special topics in the field of Music. This course may be repeated when content does not duplicate previous special topic studies. Prerequisite: Admission to the School of Music.

MUS 201 Theory III 3(3-0)
Continuation of MUS 102. Study of chromatic harmony. This is the third course in a four-course sequence. Prerequisites: Admission to the School of Music; MUS 102 with a C or better.

MUS 202 Theory IV 3(3-0)
Study and analysis of forms in music from the Baroque, Classic, Romantic and 20th-century periods. Prerequisites: Admission to the School of Music; MUS 201 with a C or better.

MUS 203 Sight Singing and Ear Training III 1(0-2)
Continuation of MUS 104. Prerequisites: Admission to the School of Music; MUS 104 with a C or better.

MUS 204 Sight Singing and Ear Training IV 1(0-2)
Continuation of MUS 203. Prerequisites: Admission to the School of Music; MUS 203 with a C or better.

MUS 206 Understanding Musical Composition 3(3-0)
Develop basic theory skills in notation, sight-singing, listening, composition, and the aesthetic appreciation of music in Western culture. Not open to music majors.

MUS 209 Music Technology II 2(2-0)
A continuation of MUS 109 using computers, software, synthesizers, and related equipment as it relates to music and music education. Prerequisite: MUS 109.

MUS 211 Historical Survey of Music I 3(3-0)
Western music history from ancient times to c.1700. Includes an introduction to the music of selected non-Western cultures. Prerequisites: Admission to the School of Music; MUS 101 with a C or better.

MUS 212 Historical Survey of Music II 3(3-0)
Continuation of the work begun in MUS 211. Western music history from the Baroque through early Romanticism (c. 1700-1850). Prerequisite: MUS 211 with a C or better.

MUS 213 Jazz: An American Art Form 3(3-0)
A music literature course reviewing important trends and styles in the history of jazz. Open to all students. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. (University Program Group I-B: The Arts)

MUS 230 Introduction to Music Education 2(1-2)
An overview of music teaching methodologies and observations of these methods as they are used by public school music teachers. Prerequisite: Admission to the School of Music.

MUS 236 Piano Pedagogy I 2(2-0)
Introduction to elementary piano teaching methods and materials, including repertoire, sight-reading, technique, duets, and theory. Prerequisites: Admission to the School of Music; two semesters of MUS 151 or 152.

MUS 237 Piano Pedagogy II 2(2-0)
Continuation of Piano Pedagogy I with emphasis on the intermediate phase and teaching materials for that level. Prerequisite: MUS 236.

MUS 241 Diction Singers 2(1-2)
Elementary pronunciation techniques in French, German, and Italian as an aid to private voice study. Prerequisites: Admission to the School of Music; two semesters of MUS 150, 237.

MUS 244 Double Reed Techniques 1(0-2)
Oboe and bassoon playing and teaching techniques. Prerequisite: MUS 144.

MUS 246 String Techniques 2(0-4)
Teaching techniques for violin, viola, cello, and double bass. Prerequisite: Admission to the School of Music.

MUS 247 Piano Class I 1(0-2)
This course is designed to continue the development of functional piano skills, such as sight reading, harmonization, basic repertoire, and technique. Prerequisites: Admission to the School of Music; MUS 148 with a C or better.

MUS 248 Piano Class IV 1(0-2)
This course is designed to develop functional piano skills, such as sight reading, harmonization, basic repertoire, and technique appropriate to the level. Prerequisites: Admission to the School of Music, MUS 247 with a C or better.

MUS 249 Functional Piano 1(0-2)
Development of skills in harmonization, improvisation, transcription, and score reading for intermediate and advanced piano and organ students. Prerequisites: Admission to the School of Music, MUS 248 with a C or better. Pre-Co-requisites: MUS 151 or 152.

MUS 250 Voice 1-12(Spec)
Individualized program of applied studio instruction in voice performance. Building techniques, musicianship, literature, and performance practice studied in MUS 150. This course is repeatable and intended as a two-semester foundation and pre-requisite for study of Music at the 300-level. Prerequisites: Admission to the School of Music or Music Theater Program; Successful completion of a 200-level performance jury.

MUS 252 Jazz Piano 1-8(Spec)
Individual instruction in jazz piano performance. Prerequisite: Admission to the School of Music.

MUS 280 Introduction to Conducting 2(0-4)
Development of the physical and musical skills needed by a conductor. Prerequisites: Admission to the School of Music; MUS 202, 204.

MUS 281 Chamber Ensemble 1-8(Spec)
Chamber ensemble rehearsal and performance. Prerequisite: Admission to the School of Music.

MUS 282 Chamber Singers 1-8(Spec)
Preparation and performance of vocal chamber music from Medieval to contemporary with a focus on acapella music. Open by audition to any student in the University.

MUS 284 Techniques for the Singing Actor 1-6(Spec)
Preparation and performance of solo roles in scenes from standard operas, chamber operas, and/or musical theatre. Prerequisite: Admission to the School of Music or signed Music Theatre major.

MUS 285 Percussion Ensemble 1-8(Spec)
Preparation and performance of percussion ensemble works. Open by audition to any student in the University.

MUS 286 Jazz Ensemble 1-8(Spec)
Jazz ensemble rehearsal and performance. Prerequisite: Open by audition to any student in the University.

MUS 297 Special Topics 1-6(Spec)
Exploration of special topics in the field of Music. This course may be repeated when content does not duplicate previous special topic studies. Prerequisite: Admission to the School of Music.

MUS 302 Contrapuntal Techniques 3(3-0)
Study of contrapuntal techniques. Prerequisites: admission to Music candidacy; MUS 202.

MUS 304 Instrumentation and Scoring 3(2-2)
Study of the ranges, transpositions, timbral combinations, and tessitura strengths/weaknesses of orchestral and band instruments with practical application of scoring preexisting music. Prerequisites: Admission to Music candidacy; MUS 201.

MUS 309 Electroacoustic Music I 3(3-0)
This course covers the technology, techniques, and literature associated with electronic/electroacoustic music. The emphasis is on the composition and creation of music in various electroacoustic genres. Prerequisites: Admission to Music candidacy; MUS 209.

MUS 310 Music and the Mind 3(3-0)
An exploration of the various brain systems that are engaged by different musical styles and activities. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. Recommended: 56 credit hours completed. (University Program Group I-B: The Arts)

MUS 311 Historical Survey of Music III 3(3-0)
Continuation of the work begun in MUS 211 and MUS 212. Western music history from c.1850 to the present. Prerequisites: MUS 212 with a C or better; admission to Music Candidacy.

MUS 312 Musics of the World 3(3-0)
An introduction to musical systems of major non-Western cultures and folk and traditional music of Western continents. May be offered as Writing Intensive. Recommended: 56 credit hours. (University Program Group I-B: The Arts)

MUS 314 History of Symphonic Literature 3(3-0)
Study of the ranges, transpositions, timbral combinations, and tessitura strengths/weaknesses of orchestral and band instruments with practical application of scoring preexisting music. Prerequisites: Admission to Music candidacy; MUS 201.

MUS 315 Music and the Mind 3(3-0)
Study of the various composers and literature for the organ and the various periods and schools of organ building. Prerequisite: Admission to Music Candidacy.

MUS 317 Song Repertoire for Young Voices 2(2-0)
Study of solo vocal literature and materials suited for students at the secondary level. Prerequisite: Admission to Music Candidacy. Recommended: MUS 338.

MUS 330 Music for Elementary Classroom Teachers 2(2-0)
Fundamentals and methods of teaching music for elementary classroom teachers. Prerequisite: Admission to Teacher Education.

MUS 331 Instrumental Organization 2(2-0)
Includes all phases of instrumental organization and administration in the elementary, junior high, and senior high school. Prerequisites: admission to Music candidacy; MUS 230.

MUS 333 Music Education in the Elementary Grades 2(2-0)
Topics include objectives and instructional strategies for development of basic music concepts and skills in elementary classroom music. Prerequisite: admission to Music candidacy; MUS 230.
MUS 335 Instrumental Pedagogy 2(2-0)
Instrumental pedagogy and practicum for the student’s major instrument on the Bachelor of Music degree: Orchestral Instrumental concentration. Prerequisite: admission to Music candidacy.

MUS 338 Voice Pedagogy 2(1-2)
Problems, procedures, teaching lab and materials for teaching correct vocal production. Prerequisite: Admission to Music Candidacy.

MUS 339 Piano Pedagogy Practicum 1(1-1)
Supervised experience in teaching piano at the precollege and college levels in both the private and group settings. Prerequisite: admission to Music candidacy; MUS 237.

MUS 344 Percussion Techniques 2(0-4)
Teaching techniques for percussion. Prerequisites: admission to Music candidacy.

MUS 350 Voice 1-16(Spec)
Individualized program of applied studio instruction in voice performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a two-semester foundational and prerequisite for study at the 400-level or as a four-semester finalization of voice studies at the undergraduate level. Prerequisites: Admission to the School of Music or Music Theater Program; Successful completion of a 300-level performance jury.

MUS 351 Organ 1-16(Spec)
Individualized program of applied studio instruction in organ performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 352 Piano 1-16(Spec)
Individualized program of applied studio instruction in piano performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 353 Violin 1-16(Spec)
Individualized program of applied studio instruction in violin performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 354 Viola 1-16(Spec)
Individualized program of applied studio instruction in viola performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 355 Violoncello 1-16(Spec)
Individualized program of applied studio instruction in violoncello performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for advanced study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 357 String Bass 1-16(Spec)
Individualized program of applied studio instruction in string bass performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for advanced study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 358 Composition 2-8(Spec)
Advanced applied study of music composition. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; MUS 158; Successful completion of a composition jury.

MUS 359 Guitar 1-8(Spec)
Individualized program of applied studio instruction in guitar performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 360 Harpsichord 1-8(Spec)
Individualized program of applied studio instruction in harpsichord performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable. Prerequisites: Admission to Music Candidacy; Successful completion of a 300-level performance jury.

MUS 361 Flute 1-16(Spec)
Individualized program of applied studio instruction in flute performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 363 Oboe 1-16(Spec)
Individualized program of applied studio instruction in oboe performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 365 Clarinet 1-16(Spec)
Individualized program of applied studio instruction in clarinet performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 367 Bassoon 1-16(Spec)
Individualized program of applied studio instruction in bassoon performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 369 Saxophone 1-16(Spec)
Individualized program of applied studio instruction in saxophone performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 371 Trumpet 1-16(Spec)
Individualized program of applied studio instruction in trumpet performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 373 Horn 1-16(Spec)
Individualized program of applied studio instruction in horn performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 375 Trombone 1-16(Spec)
Individualized program of applied studio instruction in trombone performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 377 Euphonium 1-16(Spec)
Individualized program of applied studio instruction in euphonium performance focusing on advanced technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 379 Percussion 1-16(Spec)
Individualized program of applied studio instruction in percussion performance focusing on the foundations of technique, musicianship, literature, and performance practice. The course is repeatable and intended as a four-semester foundational and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 300-level performance jury.

MUS 381 Choral Conducting and Materials 2(0-4)
The study of advanced conducting techniques specific to choral ensembles. The course will focus on rehearsal methods, vocal techniques, music selection and score analysis. Prerequisites: MUS 280, Admission to Music Candidacy.

MUS 382 Advanced Instrumental Conducting 2(0-4)
Principles and performance of instrumental conducting. Prerequisites: MUS 280 with a grade of C or better; Admission to Music Candidacy.

Course Descriptions approved for University Program are in italics.
MUS 389 Service Playing 2(2-0)
Covers various worship services, liturgies, and hymn playing. Prerequisites: Admission to Music Candidacy; Successful completion of 300-level organ jury.

MUS 397 Special Topics 1-6(Spec)
Exploration of special topics in the field of Music. This course may be repeated when content does not duplicate previous special topic studies. Prerequisite: Admission to Music Candidacy.

MUS 413 History and Literature of Church Music 2(2-0)
A study of church music in the United States. Prerequisite: Admission to Music Candidacy; MUS 311.

MUS 431 Instrumental Classroom and Rehearsal Methods 2(2-1)
Methods and materials for teaching instrumental music, grades 5-12. Topics include sequential curriculum development, standards-based rehearsal design, and teaching in a heterogeneous setting. Includes pre-student teaching field experience. Prerequisites: MUS 230; admission to Music Candidacy, admission to teacher education program. Co-requisite: TEPD Pre-student teaching field experience. Recommended: MUS 144, 146, 244, 246, 344.

MUS 433 Secondary Choral & General Music Methods 3(3-0)
Principles, concepts, materials, and methods of a comprehensive secondary school choral and general music program. Prerequisites: MUS 280, 333; Admission to Music Candidacy; Admission to Teacher Education.

MUS 450 Voice 1-8(Spec)
Individualized program of applied studio instruction in voice performance expanding on advanced technique, musicianship, literature, and performance practice. This course is repeatable and intended as a two-semester foundation and prerequisite for professional study at the 700-level. Prerequisites: Admission to the School of Music; Successful completion of a 400-level performance jury.

MUS 490 Independent Study 1-12(Spec)
Student-initiated study guided by faculty member or faculty committee. This course is repeatable up to 12 hours when content does not duplicate previous independent studies. Prerequisite: Music Candidacy.

MUS 503 Advanced Counterpoint 2(2-0)
Advanced contrapuntal techniques and writing assignments in 18th century style. Prerequisites: MUS 302; Music Candidacy; or admission to the graduate music program.

MUS 504 Modern Compositional Styles/Techniques 2(2-0)
Exploration of significant trends in compositional techniques from 1900 to the present. Prerequisites: MUS 202 and Music Candidacy; or admission to the graduate music program.

MUS 505 Seminar in Contemporary Music Analysis 2(2-0)
Analysis of selected contemporary compositions. Prerequisites: Music Candidacy, MUS 202; or admission to the graduate music program.

MUS 506 Advanced Scoring 2(2-0)
Scoring for large ensembles. Prerequisite: MUS 304 and admission to Music Candidacy; or graduate standing in Music program.

MUS 511 Choral Literature I 1(2-0)
Detailed study of choral forms of the Renaissance and Baroque eras. Prerequisites: Admission to Music Candidacy or Admission to the Graduate Music Program.

MUS 512 Choral Literature II (Since 1750) 2(2-0)
Representative small choral forms suitable for secondary school. Special attention to style characteristics which contribute to interpretive techniques. Prerequisites: Admission to Music Candidacy or Admission to the Graduate Music Program.

MUS 514 Survey of Piano Literature 3(3-0)
Survey of piano literature from the Baroque period to modern times. Prerequisites: Music Candidacy or admission to the graduate music program.

MUS 515 History of Opera 3(3-0)
A survey of operatic literature from the Baroque to modern eras. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

MUS 516 Seminar in Piano Music 3-9(Spec)
Critical examination of the piano works of a selected composer, focusing on stylistic contributions to musical forms and genres. Repeatable up to nine hours when content previously studied is not duplicated. Prerequisite: Music Candidacy or admission to the graduate music program; MUS 514.

MUS 518 Song Repertoire 2(1-2)
A survey of art song repertoire. Prerequisites: Music Candidacy or admission to the graduate music program.

MUS 520 Jazz Arranging 3(3-0)
The study of basic arranging techniques used in writing music for small and large jazz ensembles. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

MUS 521 Advanced Jazz Arranging 3(3-0)
The study of modern advanced arranging techniques used in writing music for large jazz ensembles. Prerequisite: Admission to Music Candidacy or admission to the graduate music program; MUS 520.

MUS 531 Orff Techniques 2(1-2)
Philosophy, techniques, and pedagogy of the Orff-Schulwerk approach to music education. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

MUS 532 Dalcroze Eurhythmics 2(1-2)
Introduction to the music education philosophy and approach of Emile Jacques-Dalcroze. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

MUS 533 Kodály Pedagogy 2(1-2)
Philosophy, materials, and pedagogy of the Kodály method of music education. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

MUS 544 Music for Pre-School Children 2(2-0)
Musical activities for the preschool child designed to nurture musical potential and promote musical awareness. Prerequisite: Junior status or above; or graduate status.

MUS 553 Workshop in Music Education 1-4(Spec)
Practical applications of selected music education trends, techniques, or methodologies. Repeatable up to four hours when content previously studied is not duplicated. Prerequisites: Music Candidacy or admission to the graduate music program.

MUS 554 Organ Pedagogy Practicum 2(Spec)
Supervised experience in teaching the organ. Prerequisites: Admission to Music Candidacy; MUS 351; or admission to the graduate music program.

MUS 555 Jazz Piano 1-8(Spec)
Individual instruction in jazz piano performance. May be taken more than once, for 1-2 credits per enrollment, not to exceed eight credits. Prerequisites: Music Candidacy or admission to the graduate music program.

MUS 558 Jazz Improvisation Laboratory 2(1-2)
Advanced improvisation and ensemble leadership skills in a laboratory setting. This course is repeatable up to 4 credits. Prerequisites: Music Candidacy; or Admission to the Graduate Music Program.

MUS 597 Special Topics 1-6(Spec)
This course is repeatable. Prerequisite: Admission to Music Candidacy or admission to the graduate music program.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

MUS 607 Music Technology Seminar 3(3-0)
MUS 619 Continuing Registration for Final Research Project 1(1-0)
MUS 620 Jazz Harmony and Analysis 3(3-0)
MUS 621 Jazz Improvisation Pedagogy and Practicum 2(1-2)
MUS 622 Modern Jazz History 3(3-0)
MUS 624 Jazz Pedagogy 3(2-2)
MUS 631 Advanced Piano Pedagogy I 3(3-0)
MUS 632 Advanced Piano Pedagogy II 3(3-0)
MUS 633 Class Piano Pedagogy 3(3-0)
MUS 634 Piano Pedagogy Practicum 3(2-2)
MUS 701 Composition 2-8(Spec)
MUS 707 Analytical Styles I: Medieval-Classical 3(3-0)
MUS 708 Analytical Styles II: 19-21st Century 3(3-0)
MUS 711 Choral Mastelection 3(3-0)
MUS 713 Early Jazz and American Culture through 1945 3(3-0)
MUS 714 Wind Band Literature 3(3-0)
MUS 715 Rock ‘n Roll Seminar 3(3-0)
MUS 717 Historical Topics I: Medieval - Classical 3(3-0)
MUS 718 Historical Topics II: 19-20th Century 3(3-0)
MUS 719 Seminar in World Music 3(3-0)
MUS 720 Seminar in the Music of a Selected Composer 3-9(Spec)
MUS 731 Curriculum Design in Music Education 3(3-0)
MUS 732 History and Philosophy of Music Education 3(3-0)
MUS 733 Woodwind Pedagogy 3(3-0)
MUS 734 Brass Pedagogy 3(3-0)
MUS 735 Percussion Pedagogy 3(3-0)
MUS 736 String Pedagogy 3(3-0)
MUS 750 Voice 1-8(Spec)
MUS 751 Organ 1-8(Spec)
MUS 752 Piano 1-8(Spec)
MUS 753 Violin and Viola 1-8(Spec)
MUS 754 Viola 1-8(Spec)
MUS 755 Violoncello 1-8(Spec)
MUS 757 String Bass 1-8(Spec)
MUS 760 Harpsichord 1-8(Spec)
MUS 761 Flute 1-8(Spec)
MUS 763 Oboe 1-8(Spec)
MUS 765 Clarinet 1-8(Spec)
MUS 767 Bassoon 1-8(Spec)
MUS 769 Saxophone 1-8(Spec)
MUS 771 Trumpet 1-8(Spec)
MUS 773 Horn 1-8(Spec)
MUS 775 Trombone 1-8(Spec)
MUS 777 Euphonium 1-8(Spec)
MUS 778 Tuba 1-8(Spec)
MUS 779 Percussion 1-8(Spec)
MUS 780 Performance Ensembles 1-8(Spec)
MUS 781 Advanced Choral Conducting 3-6(Spec)
MUS 782 Advanced Instrumental Conducting 3-6(Spec)
MUS 784 Instrumental Rehearsal Techniques 3(3-0)
MUS 790 Independent Study 1-9(Spec)
MUS 791 Introduction to Music Research 3(3-0)
MUS 793 Research Project in Music Education 2(Spec)
MUS 795 Psychology of Music Teaching and Learning 3(3-0)
MUS 797 Special Topics 1-6(Spec)
MUS 798 Thesis 1-6(Spec)
MUS 799 Recital 4(Spec)

NSC - Neuroscience
See the Department of Psychology for more information.

NSC 401 Principles of Neuroscience I 4(4-0)
First of two upper-level courses for the Grad-Prep undergraduate Neuroscience majors covering the field of neuroscience comprehensively. Prerequisites: NSC 397, NSC 398, or NSC 399

NSC 402 Principles of Neuroscience II 4(4-0)
Second of two upper-level courses for the Grad-Prep undergraduate Neuroscience majors covering the field of neuroscience comprehensively. Prerequisite: NSC 401

NSC 496 Neuroscience Directed Research 1-6(Spec)
Research course for students who desire to investigate a research problem in neuroscience. Prerequisite: Must file written proposal approved by faculty sponsor in department office prior to registration. Recommended: NSC 394, NSC 395, or NSC 396

NSC 501 Principles of Neuroscience I 4(4-0)
First of two core courses for advanced (grad-prep) undergraduates and graduates providing comprehensive neuroscience fundamentals such as histology, key cells and molecules, and sensation mechanisms. Prerequisites: A sign-up for a major in Neuroscience Grad-Prep (Opt. B), PSY 387 (3) or BIS 392 (4); or graduate standing in the Neuroscience Graduate Program.

NSC 502 Principles of Neuroscience II 4(4-0)
Second of two core courses for advanced (grad-prep) undergraduates and graduates providing comprehensive neuroscience fundamentals. Prerequisites: NSC 501.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

NSC 600 Special Issues in Neuroscience 1-12(Spec)
NSC 690 Research Seminar Neuroscience 1-4(Spec)
NSC 696 Directed Research 1-12(Spec)
NSC 697 Independent Study 1-8(Spec)
NSC 789 Graduate Seminar in Neuroscience 1-12(Spec)
NSC 798 Thesis: Design 1-3(Spec)
NSC 799 Thesis: Implementation 1-3(Spec)
NSC 800 Neuroscience Research for Doctoral Candidacy 1-12(Spec)
NSC 898 Doctoral Dissertation: Design 1-12(Spec)
NSC 899 Doctoral Dissertation: Implementation 1-12(Spec)

OJB - Ojibwe
See the Department of Foreign Languages, Literatures, and Cultures for more information.

OJB 101 Elementary Ojibwe I 3(3-0)
Designed for students who have had no Ojibwe language instruction. Basic language skills. Introduction to Ojibwe culture via the language.

OJB 102 Elementary Ojibwe II 3(3-0)
Basic language skills. Continuation of OJB 101 including the continued introduction of the culture of the Ojibwe people. Prerequisite: OJB 101.

OJB 201 Intermediate Ojibwe I 3(3-0)
Review of grammar and further development of all language skills. Further explanation of Ojibwe culture. Prerequisites: OJB 101, OJB 102.

OJB 202 Intermediate Ojibwe II 3(3-0)
Designed for those who wish to continue the study of the Ojibwe language. The emphasis will be on the written language. Prerequisites: OJB 101, OJB 102; or knowledge of the Ojibwe language and OJB 201.

PED - Sports Instructional Program
(Activity)
See the Department of Physical Education and Sport for more information. Note: a limitation of 6 hours of PED and RLA courses may be applied toward the requirements for graduation.

PED 121 Steelhead Fly Tying 1(Spec)
This course introduces the materials and techniques of tying flies for river steelhead fishing. All materials will be provided through course fee.

PED 122 Diving, Beginning 1(Spec)
Beginning techniques of springboard diving. An aquatic fee.

PED 123 Aqua-Aerobics 1(Spec)
Students learn fitness concepts and aquatic safety principles and perform water based fitness exercises.

PED 127 Beginning Swimming 1(Spec)
Instruction in basic skills of water adjustment, gliding, floating, kicking and learning to swim across the pool; includes safety self-help techniques.

PED 129 Intermediate Swimming 1(Spec)
Introduction to swim strokes, backstroke, elementary backstroke, sidestroke, breaststroke, and butterfly. Recommended: PED 127 or ability to swim one length of the pool.

PED 130 Advanced Swimming for Fitness 1(Spec)
Fitness and conditioning swimming which includes advanced stroke techniques. Ideal for those with previous competitive swim experience. Recommended: Ability to swim three lengths of the pool using front crawl, backstroke and breaststroke.

PED 131 Disc Golf 1(Spec)
A course designed to provide students with skills and knowledge to participate in disc golf. Students must furnish own discs made specifically for disc golf.

PED 132 Introduction to Clogging 1(Spec)
Beginner level of clogging. Students will learn basic level clogging steps using a variety of music. Students will learn to read cue-sheets and understand the history of clogging. Identical to DAN 132. Credit may not be earned in more than one of these courses.

PED 133 Zumba 1(1-0)
Latin inspired dance fitness class incorporating Latin and International music and the core Zumba movements to improve and maintain cardiovascular fitness.

PED 134 Zumba Fitness 2(2-0)
Latin inspired dance fitness class incorporating Latin and International music to improve and maintain cardiovascular fitness. Course will include core and variations of Zumba movements.

PED 135 Hustle Dance Fitness 2(2-0)
Dance fitness class incorporating hip hop music to improve and maintain cardiovascular fitness. Course will include core and variations of Hustle Dance Fitness movements.

PED 136 Aerobic Kickboxing 2(Spec)
This course is designed to provide students with an aerobic workout while learning basic techniques based on various forms of martial arts.

PED 137 Fitness Walking 2(Spec)
Course will introduce fitness walking designed for students who want to begin a program to improve their cardiovascular endurance and learn basic fitness training principles.

PED 138 Cardio-Varity 2(Spec)
A beginning aerobic workout course comprised of conditioning activities and vigorous nonstop rhythmic movement patterns designed to improve or maintain cardiovascular endurance. Recommended: Physician approval.

PED 139 Step Aerobics 1(2-1)
A course comprised of step aerobic conditioning activities and vigorous movement patterns designed to improve or maintain cardiovascular endurance. Recommended: Physician approval.

PED 140 Turbo Kick 2(Spec)
Interval training workout with kickboxing moves choreographed to contemporary music intended to focus on development of movement combinations and core strength.

PED 141 Judo 2(2-0)
Judo is a Japanese martial art that is both an art and an Olympic Sport. It involves throwing and grappling techniques.

PED 142 Hapkido 2(Spec)
Hapkido is a Korean martial art that combines elements of Judo, Tae Kwon-Do and Aikido. It primarily focuses on self-defense techniques.

PED 144 Pilates 2(2-0)
Course designed to improve total fitness, posture, and appearance through exercise methods strengthening core postural muscles and developing body alignment using the Pilates model.

PED 145 Fundamentals of Gymnastics 1(Spec)
Designed primarily for students with no previous experience in gymnastics.

Course Descriptions approved for University Program are in italics.
PED 146 Yoga: Beginning 1(Spec)
This course focuses on the fundamentals of yoga through the practice of basic yoga postures and essential yoga breathing techniques.

PED 147 Introduction to Fitness Yoga 2(Spec)
This course focuses on yoga as a system of regular exercise to improve physical fitness.

PED 148 Yoga for Wellness 2(2-0)
This course focuses on the specific application of yoga poses and techniques to address various health and wellness issues.

PED 149 Yoga and Meditation 2(2-0)
This course focuses on yoga and meditation techniques to relax and revitalize the mind and body.

PED 150 Archery 1(Spec)
An introduction to the basic skills of the sport of archery.

PED 153 Jogging 1(Spec)
A course comprised of jogging designed for students who want to begin a program to improve their cardiovascular endurance.

PED 154 Bowling 1(Spec)
A course fee is charged.

PED 155 Beginning Fencing 1(Spec)
An introduction to the skills, strategies, and terminology of fencing. A fee is charged for equipment.

PED 156 Beginning Fencing 1(Spec)
An introduction to the skills, strategies, and terminology of fencing. A fee is charged for equipment.

PED 157 In-Line Skating 1(Spec)
Beginning techniques of in-line skating with a focus on safety and enjoyment.

PED 158 Beginning Figure Skating 2(Spec)
Beginning Figure Skating is intended to present basic skills to the class. The goal is for the skater to feel more secure on the ice and to have the ability to perform basic skills.

PED 159 Billiards, Beginning 1(Spec)
Development of beginning billiards skills.

PED 160 Racquetball, Beginning 1(Spec)
Student furnishes racquet, official ball, and eyeguard.

PED 161 Beginning Snowboarding 1(Spec)
Development of beginning snowboarding skills. Course fee.

PED 162 Snow Skiing, Beginning 1(Spec)
A course fee for lift tickets and lessons is charged. Student furnishes own equipment or rents it from ski resort.

PED 163 Cross Country Skiing 1(Spec)
Beginning class in cross country skiing involving on-snow techniques, waxing, proper equipment choices, and field trips.

PED 164 Individual Sports 2(Spec)
A course which will expose students to badminton, golf, and tennis, which are individual, lifetime sports.

PED 165 Tennis, Beginning 1(Spec)
Student furnishes own racket and balls.

PED 166 Beginning Foil Fencing 2(2-0)
Basics of fencing, footwork, blade work, and equipment use.

PED 168 Ice Hockey 2(Spec)
Course designed to gain an understanding, development, and appreciation of the skills of ice hockey.

PED 169 Workshop in Leisure Time Sports 1-6(Spec)
Course designed to gain an understanding, development, and appreciation of the skills of ice hockey.

PED 170 Fundamentals of Basketball 1(Spec)
Development of basic skills needed to play basketball.

PED 172 Introduction to Boxing 1(Spec)
Introduction to boxing training including instruction in swimming, biking, running and running technique. Course will prepare students to successfully complete a triathlon event. Prerequisite: Student must have previous instruction in swimming technique.

PED 173 Triathlon Training 2(Spec)
Course designed to provide students the opportunity to improve muscular strength and endurance through the utilization of resistant weight training.

PED 174 Team Sports 2(Spec)
Course designed to provide students the opportunity to improve muscular strength and endurance through the utilization of resistant weight training.

PED 175 Wallyball 1(1-0)
Wallyball combines the skills of volleyball, racketball, and handball.

PED 176 Soccer 1(Spec)
An introduction to the skills, strategies, and terminology of soccer through instruction and student participation.

PED 177 Softball 1(Spec)
Slow-pitch softball designed for beginners through advanced skilled performers.

PED 178 Volleyball, Beginning 1(Spec)
Introduction to basic skills, rules and strategy.

PED 179 Fundamentals of Floor Hockey 1(Spec)
To learn the fundamentals of floor hockey.

PED 180 Individual Program of Physical Activity 1-4(Spec)
Designed for students physically unable to participate in regularly scheduled activities.

PED 184 Military Physical Conditioning 1(Spec)
Develop physical conditioning using weight training equipment and cardiovascular exercises.

PED 185 Physical Conditioning and Body Mechanics 1(Spec)
Develop physical conditioning using weight training equipment and cardiovascular exercises.

PED 186 Physical Fitness for Life 2(2-0)
Identical to PED 186. Credit may not be earned in more than one of these courses.

PED 189 Weight Training and Conditioning 2(Spec)
This is a personal fitness course. It will cover the importance of muscular work for acquiring strength needed for successful performance in most physical activities and its relationship to the total conditioning program.

PED 222 Diving, Intermediate 1(Spec)
Intermediate techniques of springboard diving.

PED 236 Intermediate Aerobic Kickboxing 2(Spec)
Non-contact, fast-paced, aerobic workout designed for music utilizing kicks from martial arts and punches from boxing, while emphasizing heart rate monitoring and developing consistent form. Recommended: PED 136 or previous aerobic experience.

PED 238 Intermediate Aerobics 2(1-2)
This class provides increased length and difficulty of aerobic exercise. Designed to improve or maintain cardiovascular endurance for those with previous aerobic experience. Recommended: Previous aerobic experience; physician approval.

PED 244 Pilates: Intermediate 2(2-0)
Course is designed to strengthen the Pilates practice of students who have had previous Pilates experience. Students will perform movements using the Pilates ring. Prerequisite: PED 144.

PED 246 Yoga: Intermediate 1(Spec)
A course focuses on strengthening the yoga practice of students who have had previous experience with the basic foundations of yoga. Prerequisites: One of the following: PED 146, 147, 148, 149, or other previous yoga experience.

PED 253 Marathon 2(1-2)
Designed for physically and mentally prepare students to complete a marathon. Recommended: PED 153.

PED 254 Bowling, Intermediate 1(Spec)
To develop further understanding and appreciation of bowling. Develop further proficency in the fundamental skills of bowling. Course Fee. Recommended: PED 154.

PED 255 Intermediate Fencing 1(Spec)
Opportunity for students to continue beyond the beginning level of skill and strategy mastery. A fee is charged for equipment. Prerequisite: PED 142.

PED 256 Intermediate Golf 2(Spec)
Intermediate golf skills taught. Classes meet at local golf course chosen by instructor. Student furnishes own clubs and transportation. Recommended: Beginning golf skills.

PED 258 Intermediate Figure Skating 2(Spec)
Intermediate Figure Skating is intended to present more advanced skills and combination moves to the class. The goal is for skaters to learn and execute more difficult skills and to gain speed and confidence on the ice.

PED 261 Intermediate Snowboarding 1(Spec)
Continued development of snowboarding skills. Course fee. Recommended: PED 161.

PED 262 Snow Skiing, Intermediate 1(Spec)
A course fee for lift tickets and lessons is charged. Student furnishes own equipment or rents it from ski resort.

PED 265 Tennis, Intermediate 1(Spec)
This course is designed to develop intermediate-level tennis skills and introduce techniques and strategies beyond beginner level.

PED 266 Competitive Fencing 2(Spec)
Course will focus onPy s action ence, and tournament training in foil and épée. Prerequisites: PED 166 or PED 167.

PED 270 3-on-3 Basketball 1(Spec)
Development of skills needed to play 3-on-3 basketball. Recommended: PED 170.

PED 278 Volleyball, Intermediate 1(Spec)
Recommended: Skill test; student should perform spiking and defensive movements.

PED 285 Strength Training 1(Spec)
Course designed to provide students the opportunity to improve muscular strength and endurance through the utilization of resistant weight training.

PED 356 Golf, Advanced 2(2-0)
Development of advanced skills. Planning course strategy; rule interpretation; designing and administering tournaments; figuring handicaps, index, course slope. Class meets at golf course. Course fee is charged.
PED 358 Advanced Figure Skating 2(Spec)
Development of skills and combinations to gain proficiency in advanced figure skating. Skills and combinations include advanced jump and spin techniques. Recommended: PED 258; possession of intermediate figure skating skills as identified by the United States Figure Skating (USFS).

PED 360 Racquetball, Advanced 1(Spec)
Student furnishes racquet, official ball, and eye protection.

PED 361 Advanced Snowboarding 1(Spec)
To further understand, appreciate and develop proficiency in the skills of advanced snowboarding. Course fee. Recommended: PED 261.

PED 362 Snow Skiing, Advanced 1(Spec)
A course fee for lift tickets and lessons is charged. Student furnishes own equipment or rents it from ski resort.

PED 363 Indoor Racket and Paddle Sports 2(2-0)
Combines units in badminton-table tennis and/or tennis-racquetball; racket sports with somewhat similar strategies.

PED 365 Tennis, Advanced 1(Spec)
This course is designed to develop advanced-level tennis skills and introduce techniques and strategies beyond intermediate level. Recommended: PED 265.

PES - Physical Education Professional
See the Department of Physical Education and Sport for more information.

PES 104 Sport Skill Development - Secondary Level 3(Spec)
Sports for grades 7-12 for Physical Education Secondary minors and for Physical Education majors.

PES 105 Introduction to Physical Education & Skill Development 2(2-1)
Overview of physical education history, profession, sub-disciplines, professional organizations, and preparation for the skill tests required by the physical education teacher preparation program.

PES 115 Motor Development 2(2-0)
Comprehensive study of motor development across the lifespan as a change in functional capacity from prenatal development to elderly adult movement patterns.

PES 118 Sport in America 3(3-0)
A study of sport in America from different methodological perspectives. An historical and sociological investigation of sport as a social institution.

PES 120 Skin and Scuba Diving 1(Spec)
Students are taught safe skin and scuba techniques. Students provide their own, approved, snorkeling equipment. Course fee for equipment rental, use, and certification costs.

PES 143 Sexual Assault and Harassment/Awareness and Avoidance 2(2-0)
A class designed to provide students with appropriate knowledge and skills to deal appropriately with sexual assault and sexual harassment.

PES 145 Skill Development in Gymnastics 1(0-2)
A broad spectrum of methods used in K-12 programs. Emphasis on micro-teaching principles in the sports setting as they affect coaching styles, individual athletes, and athletic performance.

PES 172 Fundamentals of Baseball and Softball 1(Spec)
Development of basic skills needed to play baseball and softball.

PES 174 Fundamentals of Football 1(Spec)
A course covering basic skills, techniques, rules and strategies of football.

PES 176 Soccer 1(Spec)
Development of basic skills needed to play soccer and speedball.

PES 178 Power Volleyball 1(Spec)
Development of basic skills needed to play volleyball.

PES 186 Physical Fitness for Life 2(2-0)
Study of physical fitness concepts; development of a personal fitness profile and program. Recommended for everyone irrespective of age, sex, or skill and fitness level. Identical to PED 186. Credit may not be earned in more than one of these courses.

PES 190 Introduction to Sport Management 3(3-0)
Introduction to the field of sport management. Specific focus on the nature, scope, and significance of the industry. A survey of professional opportunities.

PES 203 Physical Education Program for Grades K-3 3(2-2)
Foundations for planning physical education for grades K-3. Studies of developmental characteristics of children grades K-3 are used to plan physical education programs.

PES 210 Mental Training for Sport Performance 3(3-0)
Development of the mental skills of self-concept, confidence, tension control, concentration, and visual imagery to allow students to perform to their potential in athletic competition.

PES 212 Applied Physiology and Kinesiology 3(2-2)
Emphasizes functional aspects of human performance and their application. Identical to HSC 212. Credit may not be earned in more than one of these courses. Prerequisite: HSC 211.

PES 215 K-12 Physical Education Programming 3(3-0)
A course covering the foundations of physical education curriculum development and the steps and procedures involved with designing a K-12 program. Prerequisites: PED 115, 186.

PES 220 SCUBA II - Open Water 1(Spec)
The second part of SCUBA training required for open water certification. Prerequisite: PED 120.

PES 224 WSI-Swimming and Water Safety 3(2-2)
Methods and techniques for teaching swimming courses as well as water safety. Course fee for Ability to swim 100 yards. Highly recommended: CPR and First Aid.

PES 235 Teaching Lifelong Activities 2(2-0)
An introduction to the basic skills needed to organize, demonstrate and teach selected lifelong noncompetitive physical activities. Equipment rental and property usage fees.

PES 244 Methods of Teaching Tumbling 2(2-0)
Methods and materials for teaching tumbling. Course includes concepts of safety, part risk management. Co-Requisite: PES 215.

PES 245 Gymnastics 3(Spec)
Methods and materials for teaching and spotting gymnastics.

PES 271 Basketball 2(2-0)
Methods and materials for the teaching of basketball. Prerequisite: PED 171; or intermediate skill.

PES 279 Sport First Aid 2(2-0)
First aid knowledge and skill tailored to the sport environment and the athletic coach. Prerequisites: HSC 205, 211; or concurrent enrollment.

PES 297 Special Topics in Physical Education and Sport 1-12(Spec)
Contains subject matter not included in courses currently listed in the Bulletin.

PES 300 Wilderness Experience for Leadership Development 3(2-2)
A comprehensive introduction to wilderness survival skills. Prerequisites: PES 203.

PES 309 Physical Education Program for Grades 4-6 3(2-2)
Development of the mental skills of self-concept, confidence, tension control, concentration, and visual imagery to allow students to perform to their potential in athletic competition.

PES 310 Physical Education for the Classroom Teacher 2(Spec)
Methods and applications of planning and teaching elementary physical education including individual and group activities, fitness activities, modified sport and precursors to lifetime activities. Prerequisites: PES 215.

PES 315 Methods in Teaching Physical Education 3(3-0)
A broad spectrum of methods used in K-12 programs. Emphasis on micro-teaching and development of reflective teaching practices including assessment of teaching performance. Prerequisites: PED 215; Passing Score on the PES Department’s Sports Skill Competency Assessment.

PES 318 Social, Historical, and Global Issues in Sport 3(3-0)
The globalization of sport as an industry, and society’s impact on sport—an historical perspective. Students will examine the prevailing theories relative to sport sociology.

PES 319 Women and Sport 2(2-0)
An investigation of the motivational and social implications of women’s participation in sport. Identical to WST 319. Credit may not be earned in more than one of these courses.

PES 320 Foundations of Sport Management 3(3-0)
The managerial fundamentals and principles applied to the sport industry: concepts and functions of management, organizational theories, human resources, integrated issues and trends. Prerequisites: PES 190 (C or better); minimum 36 credit hours.

PES 321 ARC Lifeguard Certification 3(Spec)
The CMU lifeguard course provides ARC, lifeguarding, CPR, and first aid certifications necessary to play water lifeguarding at a swimming pool or non-surf beach. This course may be offered in a hybrid format. Prerequisites: swim 500 yards continuously; surface dive to 5 feet and recover a 10 pound diving brick; surface dive to 5 feet and swim underwater for 15 yards; tread water for 1 minute.

Course Descriptions approved for University Program are in italics.
PES 322  Applied Skills & Methods - Team Sports 2(2-0)
Emphasis on the development and use of skills and strategies in lifetime team sports. Methods for teaching skills and strategies are a major emphasis. Prerequisites: PES 105, 115; successful completion of departmental Sports Skills Competency Assessment Program (SSCAP).

PES 323  Applied Skills & Methods - Individual Sports 2(2-0)
The development and use of game skills and strategies in contest-like environments in individual sports. Skill development and teaching methods are a primary emphasis. Prerequisites: PES 105, 215; successful completion of departmental Sports Skills Competency Assessment Program (SSCAP).

PES 324  Applied Skills & Methods - Rhythmic Activities 2(2-0)
Enable students to plan and implement effective rhythmic movement experiences for students across the K-12 curriculum. Prerequisites: PES 215.

PES 325  Applied Skills & Methods - Resistance Training 2(2-0)
Planning, implementation and assessment of resistance training techniques and modalities for grades 5-12. Prerequisites: PES 105, PES 215; Successful completion of departmental Sports Skill Competency Assessment Program (SSCAP).

PES 330  Human Movement Studies 3(3-0)
An integrated study of human movement including principles and assessment of applied human movement, and mechanical principles and movement patterns related to sport skills. Prerequisite: HSC 211.

PES 338  Teaching Aerobics 2(2-0)
Present basic methods of teaching low impact aerobics, high impact aerobics, and step aerobics. Prerequisites: PES 186, HSC 211 or HSC 214 and HSC 215. Recommended: Physician approval.

PES 347  Organization and Administration of Special Olympic Games 3(3-0)
Study of the philosophy, organization, and administration of the Special Olympics, with emphasis on the Michigan Games. Class participants assume administrative roles for the annual games.

PES 364  Sports Officiating 1-6(Spec)
Theoretical and practical experience in officiating high school sports. Fall: football, basketball, soccer; Spring: track and field, baseball, softball, volleyball; other sports on demand.

PES 365  Teaching and Coaching Tennis 3(3-0)
Foundations in tennis teaching methods; stroke analysis, strategies, physical and mental skill development, coaching responsibilities, and philosophies.

PES 366  Coaching of Track and Field 2(2-0)
Theory and techniques of coaching track. Prerequisite: PES 167.

PES 368  Coaching and Officiating of Wrestling 2(1-2)
Theory and techniques for coaching wrestling.

PES 370  Coaching of Basketball 2(2-0)
Theory and techniques of coaching men's basketball. Prerequisite: PES 170.

PES 372  Coaching of Baseball 2(2-0)
Theory and techniques for coaching baseball. Prerequisite: PES 172.

PES 374  Coaching of Football 2(2-0)
Theory and techniques of coaching football. Prerequisite: PES 174.

PES 375  Coaching Fastpitch Softball 2(2-0)
Theory and techniques of coaching fastpitch softball. Prerequisites: PES 172.

PES 376  Coaching Soccer 2(2-0)
Theory and techniques of coaching soccer. Prerequisites: PES 176.

PES 378  Coaching Volleyball 2(2-0)
Latest strategies and techniques in coaching volleyball. Prerequisite: PES 178.

PES 386  Special Physical Education 3(3-0)
Physical needs of the atypical individual, ameliorative effects of physical activity, school programs appropriate for exceptional children. Prerequisite: PES 315.

PES 387  Physical Education for the Physically Impaired 3(2-2)
Description of orthopedic and physical impairment. Interrelationships of physical, social, and emotional aspects. Development of activity experiences that are appropriate for specific impairments. Prerequisites: PES 386.

PES 390  Practicum in Physical Education and Coaching 1-3(Spec)
Offers the student an opportunity to assist in on-campus and off-campus experiences in the areas of sport, dance, intramurals or aquatics, etc. CR/NC only. Prerequisites: Permission of the department chairperson and PES 311, 560; HSC 205 for students who are receiving credit for an athletic coaching minor or an athletic coaching endorsement. Permission of the department chairperson and PES 215 for students receiving elective credit for physical education major or minors.

PES 391  Independent Study 1-6(Spec)
Independent research on a special problem or problems. CR/NC only. Prerequisite: permission of department chairperson.

PES 393  Field Study in Sport Management 1-4(Spec)
Provides exposure via experiences in select sport related organizations. Students enroll in 1 to 4 credits (45-180 clock hours to meet course requirements). Prerequisite: PES 190; Pre/Co-Requisite: PES 320.

PES 395  Pre-Student Teaching Field Experience 1(Spec)
Students observe an experienced physical educator and perform teaching functions under the direction of an elementary, middle, or high school teacher. CR/NC only. Prerequisite: PES 315; Admission to the Teacher Education Professional Development Program (SSCAP).

PES 401  Fundamentals of Motor Learning 3(3-0)
Components of successful motor performance. Theories of learning, nervous system, methods of practice, teaching methodology, and various psychological concepts related to physical education and athletics.

PES 405  Physical Education Peer-Tutor Teaching 2(1-1)
Physical education majors plan for and teach selected sports skills to prospective physical education majors/minors seeking to pass required sports skills competencies. Prerequisites: PES 315; Passing Score on SSSAP Test.

PES 406  Evaluation in Physical Education and Sport 2(2-0)
Selection criteria, methods, and procedures used in determining physical fitness, skill competency, content knowledge, and health status. Interpretation of results by fundamental statistical procedures is also addressed. Prerequisite: PES 215.

PES 415  Planning, Teaching, and Assessing: Practical Applications 3(3-0)
Practical experience in programming, teaching, and assessing school children. Prerequisite: PES 405.

PES 483  Physical Education for the Mentally Impaired 3(2-2)
Planning of movement experience appropriate for the mentally impaired, neurologically impaired, and emotionally disturbed. Prerequisite: PES 386.

PES 485  Theoretical Foundations of Strength and Conditioning 3(3-0)
Theory and applications of physiological, biomechanical, psychological components of physical performance needed to analyze, develop and implement strength and conditioning programs. NSCA standards and guidelines. Prerequisite: HSC 211 or HSC 214 and HSC 215.

PES 490  Practicum in Physical Education 1-3(Spec)
The opportunity to work in the area of classroom experience, extra class activities, interscholastics, clubs, and organizations. CR/NC only. Prerequisites: application to the department chairperson must be made in the semester prior to the one in which affiliation credit is earned.

PES 495  Senior Seminar in Physical Education 1(1-0)
A capstone experience, prior to student teaching, designed to integrate required physical education subject matter through case study, discussion, role playing, and organization of materials. CR/NC only. Minimum of 90 semester hours completed.

PES 499  Internship in Sport Management 2-12(Spec)
Provides practical capstone experience in a select sport related organization. Students enroll in 2 to 12 credits (a minimum of 400 clock hours) to meet course requirements. Prerequisites: Completion of PES 320 (C or better) and PES 393 (C or better), minimum 86 semester hours credit of undergraduate degree work, permission of advisor.

PES 508  Education on Sexual Aggression for School/Community 3(Spec)
This course addresses the realities of sexual aggression, and how schools, corporations, and communities can educate their respective populations on these topics. Identical to HSC 508. Credit may not be earned in more than one of these courses.

PES 525  International Travel Course in Sport 3(3-0)
A study abroad course that investigates the components of sport management from an international perspective, including historical and cultural influences on sport. Prerequisites: Permission of instructor.

PES 550  Sport Fundraising 3(3-0)
Provides theoretical and practical applications of fundraising in the sport industry. This course may be offered in an online or hybrid format. Prerequisites: Minimum 86 credit hours (senior status); or graduate status.

PES 560  Principles and Foundations of Coaching 3(3-0)
Practical and relevant information that is appropriate for interscholastic coaches. Includes eligibility for Coaches Advancement Program (C.A.P.) certification. Prerequisites: 56 hours of course credit.

PES 564  Sport Governance: Ethics, Morals, and Values 3(3-0)
Investigation of how ethics, morals, and values influence the interpretation of laws and adherence to rules governing sport competition by athletes, coaches, and administrators. Prerequisite: Minimum 86 credits (senior status); or graduate status.

PES 570  Advanced Coaching in Basketball 2(2-0)
Study of most recent basketball trends and new techniques, methods, and philosophies in the coaching of basketball.

PES 572  Advanced Coaching in Baseball 2(2-0)
Coaching philosophy, new techniques and drills, practice organization, coaching duties, and strategy. Prerequisite: PES 372.

PES 574  Advanced Coaching of Football 2(2-0)
Study of recent changes and new trends in coaching of football.

PES 592  Independent Reading 1(Spec)
Exploration of one or more aspects of the field of physical education by individual study. Prerequisite: Permission of the department chairperson and instructor required.
PES 595  Issues in Physical Education and Sport 1-6(Spec)
Investigation of selective major issues in physical education and sport. Prerequisite: permission of the instructor.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

PES 602  Sport Event Management: Theory & Application 3(Spec)

PES 603  Administration of Sport 3(3-0)

PES 606  Motor Learning and Human Performance 3(3-0)

PES 607  Physical Education Curriculum Analysis 3(3-0)

PES 610  Philosophy of Physical Education and Sport 3(3-0)

PES 611  Psychology of Sport 3(3-0)

PES 615  Analysis of Teaching in Physical Education 3(3-0)

PES 619  Continuing Registration for Final Research Project 1(1-0)

PES 620  Sport - An Interdisciplinary Study 3(3-0)

PES 625  Facilities for Sport and Physical Education 3(3-0)

PES 631  Physiology of Exercise 4(3-2)

PES 640  Sport and the Law 3(3-0)

PES 645  Financial Management of Sport 3(3-0)

PES 650  Sport Marketing 3(3-0)

PES 660  Biomechanics 3(3-0)

PES 670  Research Methods for Physical Education and Sport, Health and Recreation 3(3-0)

PES 672  Statistics for Physical Education and Sport, Health and Recreation 3(3-0)

PES 690  Practicum 1-4(Spec)

PES 691  Independent Study 3(Spec)

PES 693  Field Study in Physical Education and Sport 1-6(Spec)

PES 696  Seminar in Physical Education 2(2-0)

PES 698  Thesis 1-6(Spec)

PES 699  Sport Management Internship 3-6(Spec)

PES 703  Advanced Independent Reading 1-2(Spec)

PES 791  Independent Study 2(Spec)

PHA - Physician Assistant

See the School of Rehabilitation and Medical Sciences for more information. For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

PHA 608  Clinical Medicine I 4(4-0)

PHA 609  Clinical Medicine II 4(4-0)

PHA 610  Clinical Medicine III 3(3-0)

PHA 612  Obstetrics/Gynecology 3(3-0)

PHA 614  Pediatrics 3(3-0)

PHA 616  Surgery 2(2-0)

PHA 618  Emergency Medicine 2(2-0)

PHA 619  Continuing Registration for Final Research Project 1(1-0)

PHA 620  Infectious Diseases 3(3-0)

PHA 624  Issues in Practice 2(2-0)

PHA 625  Clinical Pharmacology 3(3-0)

PHA 626  Clinical Pharmacology II 3(3-0)

PHA 630  Clinical Procedures I 3(2-2)

PHA 631  Clinical Procedures II 3(0-6)

PHA 633  Scientific Basis of Medicine I 2(2-0)

PHA 634  Scientific Basis of Medicine II 2(2-0)

PHA 635  Scientific Basis of Medicine III 2(2-0)

PHA 640  Clinical Problem Solving I 3(0-11)

PHA 641  Clinical Problem Solving II 3(0-11)

PHA 642  Clinical Problem Solving III 3(0-11)

PHA 645  Critical Appraisal of Medical Literature and Evidence-Based Medicine 2(2-0)

PHA 650  Diagnostic Tests I 2(1-2)

PHA 651  Diagnostic Tests II 2(2-0)

PHA 652  Diagnostic Tests III 2(1-2)

PHA 660  History and Physical Examination I 3(2-2)

PHA 661  History and Physical Examination II 3(2-2)

PHA 662  History and Physical Examination III 4(2-4)

PHA 671  Preventive Medicine 1(1-0)

PHA 672  Applied Ethics for Physician Assistants 2(2-0)

PHA 673  Psychiatry 3(3-0)

PHA 690  Clinical Education I 16(0-40)

PHA 691  Clinical Education II 16(0-40)

PHA 692  Clinical Education III 16(0-40)

PHA 694  Clinical Clerkship Remediation 3-9(Spec)

PHA 697  Special Topics for Physician Assistants 1-9(Spec)

PFL - Philosophy

See the Department of Philosophy and Religion for more information.

PFL 100  Introduction to Philosophy 3(2-0)

Study of the basic issues and methods of philosophy. Depending on instructor, it may have either a problem or a historical orientation. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

PFL 105  Critical Reasoning in Everyday Life 3(3-0)

Designed to help the student think clearly, evaluate arguments, and develop a sensitivity to language. Emphasis is on the development of skills rather than theories.

PFL 118  Moral Problems 3(3-0)

Study of basic moral problems and proposed solutions to problems associated with violence, oppression, prejudice, and sex. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

PFL 140  Introduction to Logic 3(3-0)

A study of modern formal logic, with an emphasis on the development of general procedures for deciding whether any argument is correct. This course may be offered in an online or hybrid format. (University Program Group II-B: Quantitative and Mathematical Sciences)

PFL 145QR Reasoning and Probability 3(3-0)

A study of modern inductive reasoning, with emphasis on causal reasoning, probabilities, and decision theory as they relate to daily life. Quantitative Reasoning.

PFL 190  The Nature of Science 3(3-0)

A study of the nature of science and the philosophical problems which arise in connection with the natural and/or social sciences.

PFL 200  History of Philosophy: Classical Period 3(3-0)

Survey of ancient Greek philosophy, with emphasis on Plato and Aristotle.

PFL 205  American Philosophy 3(3-0)

Historical study of the development and distinctive themes of American philosophy from colonial times to the present. Emphasis on Pierce, William James, and John Dewey.

PFL 218  Ethical Theories 3(3-0)

Surveys philosophical theories about right and wrong, the good life, and the nature and justification of morality. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

PFL 225  Foundations of Cognitive Science 3(3-0)

Introduction to cognitive science, the problems it addresses, its evolving models of the mind, its interdisciplinary nature, and its broader ramifications. Identical to PSY 225. Credit may not be earned in more than one of these courses.

PFL 230  Philosophy of Religion 3(3-0)

The philosophical study of the meaning and justification of religious claims, including those about the nature and existence of God and human immortality. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

PFL 286  Philosophy In Literature 3(3-0)

Philosophical themes in selected literary works from ancient, medieval, modern, or contemporary sources.

PFL 297  Special Topics In Philosophy 1-12(Spec)

Study of areas in philosophy not included in courses currently listed in catalog.

PFL 300  History of Philosophy: Medieval Period 3(3-0)

A study of medieval philosophy from the earliest times to the modern period, with emphasis on major thinkers and schools.

PFL 302  History of Philosophy: Modern Period 3(3-0)


PFL 305  Chinese Philosophy 3(3-0)

A survey of Chinese philosophy from the earliest times to the modern period, with emphasis on major thinkers and schools.

PFL 307  Existentialism: From Kierkegaard to Sartre 3(3-0)

Introduction to the problems, methods, and history of existential thinking through the main texts of contemporary existentialism.

PFL 311  Human Nature, Human Rights 3(3-0)

A philosophical examination of classical theories of human nature and how these theories have shaped the development of the Universal Declaration of Human Rights. Recommended: One course in philosophy.

PFL 312  Philosophy of Humanitarian Law 3(3-0)

Exploration of philosophical and moral principles underlying the Geneva Conventions and other international laws aimed at reducing suffering and protecting human dignity during armed conflict. Recommended: One course in philosophy.

PFL 313  Justice, Human Rights, and the Philosophy of Nonviolence 3(3-0)

Focusing on questions of social and political philosophy, this course asks what we can learn from nonviolent movements about justice, power, democracy and human dignity. Recommended: One course in philosophy.
PHL 318 Business Ethics 3(3-0)
Application of ethical principles to such business issues as fair competi-
tion, employee obligations, and business's responsibilities to stockholders,
customers, employees, community, and society. This course is approved for
offering in a distance learning format.

PHL 320 Theory of Knowledge 3(3-0)
Study of skepticism, the justification of beliefs, and theories of truth.
Prerequisites: PHL 100 or PHL 140.

PHL 325 Philosophy of Mind 3(3-0)
An attempt to explain the nature of the mind. By examining historical and
contemporary philosophical works on the mind-body problem and related
topics. Recommended: Any PHL course. (University Program Group I-A: Human
Events and Ideas.)

PHL 328 Animal Ethics 3(3-0)
Study of ethical issues, both theoretical and applied, related to human
interactions with animals. Prerequisite: One of: PHL 118, 218, 318.

PHL 338 Medical Ethics 3(3-0)
Philosophical exploration of ethical issues in health care, such as the client-
professional relationship, medical resource distribution, research ethics,
organ allocation, end-of-life issues. Prerequisite: PHL 118 or 218.

PHL 340 Intermediate Logic 3(3-0)
First order quantificational theory is presented as a paradigm of formal
theories. In terms of this, some metatheoretic notions are introduced.
Prerequisite: PHL 140.

PHL 345 The Civil Rights Movement 3(3-0)
Examines the civil rights movement from 1954 to 1980s; based on PBS series:
Eyes on the Prize. Identical to PSC 325, REL 345, SOC 345. Credit may not be
earned in more than one of these courses. Prerequisites: Any one of the follow-
ing: HST 116, HST 117, HST 118, HST 119, HST 120, HST 121, HST 122, LAR 141,
LAR 142, LAR 143, PSC 100, PSC 105, PSC 112, REL 140, SOC 100. (University Program Group IV-C: Studies in Racism and Diversity in the
United States)

PHL 375 Philosophy of Social Science 3(3-0)
Comparison and analysis of the methods used in the social and natural
sciences paying particular attention to the underlying philosophical assump-
tions. Prerequisites: one course in Group II or Group III in the University
Program.

PHL 390 Philosophy of Science 3(3-0)
Study of problems that arise in a critical examination of science: explana-
tion, theory, confirmation, law, measurement, scientific change. Prerequisites:
PHL 140; one other course in Group II of the University Program.

PHL 397 Special Topics In Philosophy 1-12(Spec)
Study of areas of philosophy not included in courses currently listed in
catalog. Prerequisite: 3 hours of philosophy.

PHL 403 History of Philosophy: Nineteenth Century 3(3-0)
Analysis of philosophical texts selected from the work of thinkers such as
Hegel, Marx, Kierkegaard, and Nietzsche. Prerequisites: at least three (3)
credit hours in the history of philosophy.

PHL 404 History of Philosophy: Contemporary Period 3(3-0)
A study of some of the important philosophical trends since 1900.
Prerequisite: at least three (3) credit hours in the history of philosophy.

PHL 405 Major Philosophers 3(3-0)
An in-depth study of a major philosopher. Prerequisite: At least one of the
following: PHL 200, 300, 302, 403, 404.

PHL 410 Philosophy of Law 3(3-0)
Consideration of such questions as: What is a legal system, a law, a legal
right? What is the relation among law, morality, and custom?

PHL 418 Advanced Moral Philosophy 3(3-0)
An advanced study of contemporary moral theory, meta-ethics, and the
methodology of constructing and evaluating ethical theories. Prerequisite:
PHL 218.

PHL 421 Philosophy of Language 3(3-0)
Study of structure of language, relations between language and reality, and
interrelations among language, thought, and culture. Prerequisite: PHL 100, PHL 140.

PHL 422 Political and Social Philosophy 3(3-0)
Study of the ethical and political problems confronting the individual and
society.

PHL 426 Feminist Theory 3(3-0)
Examines the way women have been described by the Western philo-
sophical tradition from its beginnings to the present and offers alternative
analyses to this tradition. Identical to WST 426 and PSC 426. Credit may not be
earned in more than one of these courses. Prerequisites: permission of
instructor, or at least junior standing and either one course in philosophy or
one of the following courses: PSC 275, PSC 326, PSC 371, PSC 373, or PSC 378.

PHL 450 Phenomenology a Survey 3(3-0)
The study of the phenomenological method, its origin in the works of
Brentano and Husserl, and its application in the physical and social sciences.
Prerequisite: PHL 100.

PHL 480 Philosophy of the Arts 3(3-0)
Studies in the experience of arts and discussion of traditional and contem-
porary esthetics.

PHL 490 Senior Seminar in Philosophy 3(3-0)
A senior seminar for philosophy majors. May be offered as Writing
intensive. Prerequisites: Philosophy Majors with senior status or junior status
with permission of the instructor; at least 21 hours in Philosophy.

PHL 497 Special Topics In Philosophy 1-12(Spec)
Study of areas in philosophy not included in courses currently listed in
catalog. Prerequisite: at least 3 credits in philosophy; permission of instructor.

PHL 498 Independent Research 1-6(Spec)
Prerequisite: permission of instructor.

PHL 518 Professional Ethics 3(3-0)
An examination of the theories and methods used in ethical decision-
making; with application to common issues in law, journalism, technology,
research, education, and the health professions. This course may be offered in
an online or hybrid format. Prerequisite: junior status.

PHL 525 Philosophical Problems of the Self 3(3-0)
Advanced study of central philosophical questions about persons, such as
mind-body problem, the nature of personal identity, and the freedom of the
will. Prerequisites: PHL 100.

PHL 597 Special Topics In Philosophy 1-12(Spec)
Study of areas in philosophy not included in courses currently listed in
catalog. Prerequisite: permission of instructor.

PHL 598 Readings in Philosophy 1-6(Spec)
Selected studies of one or more philosophic works. Prerequisite: permis-
sion of instructor.

PHS - Physical Science
See the Department of Physics for more information.

PHS 101 Survey of Physical Science 3(3-0)
Introduction to the nature of the physical universe, the concepts and meth-
ods of historical science, and the history of scientific ideas. Developed through
lectures and demonstrations. (University Program Group II-B: Quantitative and
Mathematical Sciences)

PHS 151 Introductory Physical Science I 3(2-2)
Introduction to the concepts and methods of physical science. Focusing on
the physical science of solid matter, students are encouraged to draw conclusions
from desk-top experiments. Recommended for prospective elementary, special
education, and middle school teachers. Satisfies University Program Group II-
laboratory requirement. (University Program Group II-B: Quantitative and
Mathematical Sciences)

PHS 165 Horizons in Physical Science 1-6(Spec)
Student-selected topics for the non-science student. Topics such as
Stonehenge, energy conservation in the home, announced in Course Search
and Registration. No credit toward major or minor.

PHS 251 Introductory Physical Science II 3(2-2)
Continuation of PHS 151. The physical science of solid matter with empha-
sis on models of atoms and molecules. Prerequisite: PHS 151.

PHS 265QR Quantitative Physical Science 2(1-3)
Concepts and quantitative methods of physical science. Recommended for
prospective elementary school teachers. Quantitative Reasoning.
Prerequisite: MTH 152 (with a grade B- or better).

PHS 351 Physical Science for the Elementary Grades 3(2-2)
For teachers of grades one to six and junior high school general science
teachers. Prerequisite: PHS 265QR.

PHS 365 Topics in Physical Science 1-6(Spec)
Topics not ordinarily covered in regular courses. Prerequisite: permission
of instructor.

PHS 452 Physical Science for the Middle Grades 3(2-2)
Physical Science using investigative/laboratory approach. Structured to
give additional depth in subject matter used in middle school: motion, mat-
ter, energy, astronomy, electricity, nuclear energy. Prerequisites: PHY 131;
CHM 132.

PHS 453 - Field Experience in Teaching Physical Science 1(Spec)
Supervised experience in high school/middle school physical science.
Experience will include observation, participation in instruction, and critical
analysis of the experience. CR/NC only. Corequisite: PHS 452.

PHS 522 Workshop for Physical Science 3(2-2)
Development of units for use in the teaching of physical science, including
the preparation of simple equipment for science demonstrations. Course
designed primarily for teachers K-9. Prerequisite: PHS 251.

PHS 551 History and Literature of Physical Science 3(3-0)
Physical science in western civilization, emphasizing the scientific
revolution and reaching back to the middle ages and the ancient world.
Prerequisite: PHS 251.

PHS 563 Physical Science Practicum 2(Spec)
Practical experience in all aspects of teaching a physics class with a labora-
tory component. Prerequisite: permission of instructor.

PHS 565 Selected Topics in Physical Science 1-6(Spec)
Topics not ordinarily covered in regular courses.

PHS 590 Independent Study 1-6(Spec)
Individual study in an area not covered by regular courses. Prerequisite:
Prior permission of the instructor must be obtained.
PHY 100 Conceptual Physics 3(3-0)
An exploration of physical concepts, their social and philosophical implications, and the utility and limitations of physics for solution of problems in the modern world. The mathematical level will be that of beginning high school algebra. Not intended for potential science majors. This course may be offered in an online or hybrid format. (University Program Group II-B: Quantitative and Mathematical Sciences)

PHY 105QR Energy and Society: A Quantitative Perspective 3(3-0)
Understanding current and future energy problems using quantitative reasoning techniques. Topics covered span a range from the personal to the societal. Quantitative Reasoning.

PHY 110 Physics of Sports 3(3-0)
For students interested in physics of motion. Covers velocity, acceleration, force and momentum, as related to physical activity. (University Program Group II-B: Quantitative and Mathematical Sciences)

PHY 127 Table Top Physics 1(0-2)
Laboratory experience for students in PHY 100, PHY 110, or PHS 101. Hands-on group laboratory to investigate basic concepts in introductory physics. Satisfies University Program Group II laboratory requirement. Pre/Co-Requisite: PHY 100 or PHY 110. (University Program Group II-B: Quantitative and Mathematical Sciences)

PHY 130QR College Physics I 4(4-0)
Mechanics, heat, kinetic theory, and sound. The mathematics used is algebra and trigonometry. The sequences PHY 130-131, PHY 170-171 satisfy minimum requirements for medical and dental schools. Quantitative Reasoning. Recommended: MTH 106. (University Program Group II-B: Quantitative and Mathematical Sciences)

PHY 131 College Physics II 4(4-0)
A continuation of PHY 130 that covers the topics of electricity, magnetism, optics and modern physics. Prerequisite: PHY 130.

PHY 145QR University Physics I 4(4-0)

PHY 146 University Physics II 4(4-0)
Temperature and thermodynamics, electromagnetic interaction, electrical circuits, electromagnetic radiation, and optics. Not open to those with credit in PHY 131. Prerequisite: PHY 145. Pre/Co-requisite: MTH 133.

PHY 170 College Physics Laboratory I 1(0-2)
Experimental techniques of physics introduced by studying quantitative situations through error analysis, graphical analysis, small computer calculations, and fitting data to model functions. Laboratory experience for PHY 130. Satisfies University Program Group II laboratory requirement. Pre/Co-Requisite: PHY 130. (University Program Group II-B: Quantitative and Mathematical Sciences)

PHY 171 College Physics Laboratory II 1(0-2)

PHY 175 University Physics Laboratory I 1(0-2)
Laboratory experience for PHY 145. Introduction to experimental techniques and the treatment of experimental data. Satisfies University Program Group II laboratory requirement. Pre/Co-Requisite: PHY 145. (University Program Group II-B: Quantitative and Mathematical Sciences)

PHY 176 University Physics Laboratory II 1(0-2)
Laboratory experience for PHY 146. Introduction to electrical measurements and instrumentation. Introduction to techniques of optical measurements. Prerequisite: PHY 175. Pre/Co-Requisite: PHY 146.

PHY 180 Special Topics In Physics 1-6(Spec)
Special topics not included in standard courses in physics. Course may be taken for credit more than once; total credit not to exceed six hours. Prerequisites: See Course Search and Registration.

PHY 247QR Introduction to Modern Physics 3(3-0)
Historical development of modern physics; introduction to special relativity, atomic structure, and elementary quantum theory. Quantitative Reasoning. Prerequisites: PHY 146 or 131; MTH 132. Recommended: MTH 133.

PHY 252 Modern Concepts in Nuclear and Particle Physics 11-10

PHY 254 Lasers: Basic Principles and Practical Applications 11-10
An introduction to lasers and their applications for science and engineering students. Prerequisite: PHY 146.

PHY 256 Excursions into Condensed Matter 1(1-0)
An introduction to several topics in condensed matter physics for science and engineering majors. Prerequisite: PHY 247.

PHY 277 University Physics Laboratory III 1(0-3)

PHY 280 Special Topics In Physics 1-6(Spec)
Special topics not included in standard courses in physics. Course may be taken for credit more than once; total credit not to exceed six hours. Prerequisites: See Course Search and Registration.

PHY 312 Introduction to Mathematical Physics 3(3-0)
Introduction to the mathematical concepts and techniques used in mechanics, electromagnetism, and quantum mechanics. Pre/Co-Requisites: PHY 247; MTH 233, 334.

PHY 322 Intermediate Mechanics 3(3-0)

PHY 332 Electricity and Magnetism 3(3-0)
Electrostatic fields in vacuum and in dielectrics, magnetic fields associated with constant and variable currents, magnetic materials, Maxwell’s equations. Prerequisite: PHY 247; MTH 233, 334.

PHY 380 Special Topics In Physics 1-6(Spec)
Special topics not included in standard courses in physics. Course may be taken for credit more than once; total credit not to exceed six hours. Prerequisites: See Course Search and Registration.

PHY 442 Introductory Quantum Theory 4(4-0)
Introduction to quantum theory. Schrödinger equation, operators, angular momentum, harmonic oscillator, atomic hydrogen, perturbation theory, identical particles, radiation. Some applications will be considered. Prerequisites: PHY 312, 322, 332.

PHY 450 Thermal Physics 3(3-0)
Introduction to equilibrium thermodynamics and elementary statistical mechanics. Prerequisite: PHY 312, PHY 322.

PHY 480 Special Topics In Physics 1-6(Spec)
Special topics not included in standard courses in physics. Course may be taken for credit more than once; total credit not to exceed six hours. Prerequisites: See Course Search and Registration.

PHY 490 Independent Study 1-3(Spec)
Individual study in an area not covered by regular courses. Prerequisite: Open to physics majors or minors with at least junior standing who have obtained permission of the instructor.

PHY 491 Senior Physics Project 3(Spec)
Capstone experience for physics majors. Students enroll during their penultimate semester on campus. Prerequisites: PHY 312, 322, 332, 578. Prior permission of instructor.

PHY 505 Teaching Chemistry and Physics in the Secondary School 3(3-0)
Exposes pre-service secondary chemistry and physics teachers to theory and practice of teaching in secondary schools, design of instructional simulations and safety practices. Must be completed prior to student teaching. Identical to CHM 505. Credit may not be earned in more than one of these courses. Prerequisites: CHM 132 or CHM 161; PHY 131 or PHY 146; admission into the Teacher Education Program; signed major or minor in chemistry, physics, or chemistry-physics (secondary education); Junior standing. Graduate students must be enrolled in a teaching masters program. Pre/Co-requisite: CHM 505 or PHY 505.

PHY 507 Field Experience in Teaching Chemistry/Physics 1(Spec)
Supervised experience in high school chemistry and/or physics classes. Experience will include observation, participation in instruction, and critical analysis of the experience. Identical to CHM 507. Credit may not be earned in more than one of these courses. CR/NC only. Prerequisites: Students must be accepted into the Teacher Education Program and have Junior or Senior standing. Graduate students must be enrolled in a teaching masters program. Pre/Co-requisite: CHM 505 or PHY 505.

PHY 517 Computational Physics 3(3-0)
Introduction to standard numerical techniques applied to problems in physics, including numerical differentiation and integration, systems of differential equations, eigenvalues and eigenvectors, and Monte-Carlo simulations. Prerequisites: PHY 312, PHY 322, and PHY 332. Pre/Co-Requisite: PHY 442. Recommended: A basic knowledge of a programming language such as FORTRAN.

PHY 552 Nuclear Physics 3(3-0)
Radioactive transformations, detection of radiation, methods of producing high-speed particles, nuclear structure, fission, cosmic radiation and applications of radioactivity. Prerequisite: PHY 442.

PHY 554 Optics 3(3-0)
Geometrical and physical optics, electromagnetic theory of light, interference and diffraction from standpoint of Huygens’ principle, Fourier formalism, polarized light, principles and applications of lasers. Prerequisites: PHY 332.

PHY 556 Solid State Physics 3(3-0)
Atomic, molecular and crystal structure, energy levels of electrons, and bonding energies in molecules and solids. Prerequisites: PHY 442 Co-requisites: PHY 450.
PHY 578 Experimental Physics 2(0-6) Selected experiments utilizing the techniques of modern experimental physics. Prerequisite: PHY 277.

PHY 580 Special Topics 1-9(Spec) Topics not ordinarily covered in regular courses. Prerequisite: permission of instructor.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

PHY 614 Methods of Theoretical Physics 3(3-0)

PHY 619 Continuing Registration for Final Research Project 1(1-0)

PHY 624 Advanced Mechanics 3(3-0)

PHY 634 Advanced Electricity and Magnetism 3(3-0)

PHY 643 Quantum Mechanics I 3(3-0)

PHY 644 Quantum Mechanics II 3(3-0)

PHY 685 Seminar: Contemporary Physics 1-4(Spec)

PHY 780 Topics in Physics 1-9(Spec)

PHY 790 Independent Study 1-3(Spec)

PHY 798 Thesis 1-6(Spec)

PSC - Political Science

See the Department of Political Science and Public Administration for more information.

PSC 100 Introduction to Political Science 3(3-0)

An introduction to the historical and theoretical concepts and subject matter of political science, required for all political science majors and minors. This course may be offered in an online or hybrid format. (University Program Group III-B: Studies in Social Structures)

PSC 101 Political Behavior 3(3-0)

Focus is on the individuals and groups. This course may be offered in an online or hybrid format. (University Program Group III-B: Studies in Social Structures)

PSC 105 Introduction to American Government and Politics 3(3-0)

Examines the legal fundamentals of government and the politics actually works in the United States: civil rights, civil liberties, elections, media, interest groups, and more. This course may be offered in an online or hybrid format. (University Program Group III-B: Studies in Social Structures)

PSC 125 African-American Politics 3(3-0)

Examines issues of political economy, political participation, political efficacy, and alienation. Black Nationalism and Pan-Africanism. (University Program Group III-B: Studies in Social Structures)

PSC 150 Introduction to International Relations 3(3-0)

Introduction to theoretical tools used in the field of international relations. May be offered as Writing Intensive. This course may be offered in an online or hybrid format. (University Program Group III-B: Studies in Social Structures)

PSC 151 The U.S. and the World 3(3-0)

Prepares the student to confront the issues to be faced as a citizen of the US and as a member of the global society. (University Program Group III-B: Studies in Social Structures)

PSC 180QR Polls, Politics and Policy 3(3-0)

Introduction to quantitative reasoning to provide students with the skills necessary to interpret and critically assess the validity and reliability of political data. This course may be offered in an online or hybrid format. Quantitative Reasoning.

PSC 210 Introduction to Public Administration 3(3-0)

Provides a broad understanding of basic concepts and principles of public administration, including the role, structure, and functions of public agencies and how they operate. This course may be offered in an online or hybrid format.

PSC 242 Introduction to Comparative Politics 3(3-0)

An examination of relevant theories, concepts, and methods of comparative political analysis and application of these in the study of selected political systems. (University Program Group III-B: Studies in Social Structure)

PSC 261 State and Local Government 3(3-0)

Structure and functions of states, cities and counties, with emphasis on Michigan. This course may be offered in an online or hybrid format. (University Program Group III-B: Studies in Social Structures)

PSC 275 Great Political Thinkers 3(3-0)

A discussion of vital issues in the history of Western political thought, such as freedom, justice equality, and power. Authors include Plato, Aristotle, Machiavelli, Marx. This course may be offered in an online or hybrid format. (University Program Group I-A: Human Events and Ideas)

PSC 280 Introduction to Empirical Methods of Political Research 3(3-0)

Empirical research techniques including the scientific method, measurement, descriptive and inferential statistics, literature reviews, data collection, computer assisted data analysis, and research reporting. This course is approved for offering in a distance learning format. Prerequisites: PSC 100 or PSC 105; one other political science course.

PSC 300 Michigan Politics and Elections 3(3-0)

Analysis of Michigan election campaigns with focus on organization, strategies and tactics. Emphasis on election consequences for state's policy leaders, opinion, interests and government. Prerequisite: PSC 105 or PSC 261.

PSC 301 Law and Policy in Michigan State Government 3(3-0)

Analysis of Michigan's legislative process, policy issues, and state government policies. Emphasis on origination, shaping, negotiating, and content of state policy. Prerequisite: PSC 105 or PSC 261.

PSC 305 Midtier Teaching in Political Science 2(1-2)

The midtier experience provides observations and small-group instructional opportunities for students seeking secondary certification in political science. Course includes both campus instruction and field work. CR/NC only. Prerequisites: completion of EDU 107; 12 hours of political science.

PSC 313 Public Budgeting Processes 3(3-0)

Study of the creation and administrative management of public budgets. Emphasizes processes of budget preparation, adoption, administration and evaluation at various levels of government. This course may be offered in an online or hybrid format. Prerequisite: PSC 210.

PSC 320 The American Legislative Process 3(3-0)

Analysis of the legislative process, studying formal and informal devices used by legislative bodies in determining policy. Primary emphasis is on the United States Congress. This course may be offered in an online or hybrid delivery format. Prerequisites: PSC 105.

PSC 321 The American Chief Executive 3(3-0)

Development of the executive office of the United States, with emphasis on the Presidency. This course has been approved for offering in a distance learning format.

PSC 322 Judicial Process and Politics 3(3-0)

Focuses on the American judicial process, including federal and state courts, roles of judges and other actors, civil and criminal justice processes, and judicial policymaking. Recommended: PSC 100 or PSC 105.

PSC 323 American Parties and Politics 3(3-0)

Analysis of American political parties as instruments of democratic government. Their structures, functions, and organizations, with emphasis on nomination, campaigns, and elections.

PSC 325 The Civil Rights Movement 3(3-0)

Examines the civil rights movement from 1954 to 1980s; based on PBS series: Eyes on the Prize. Identical to PHL 345, REL 345, SOC 345. Credit may not be earned in more than one of these courses. Prerequisites: Any one of the following: HST 110, HST 111, HST 112, LAR 145, PSC 100, PSC 105, PSC 125, REL 140, SOC 100. (University Program Group IV-C: Studies in Racism and Diversity in the United States)

PSC 326 Women and Politics 3(3-0)

This course will look primarily at empirical studies of women's role in politics in the U.S. but also in other contexts. Identical to WST 326. Credit may not be earned in more than one of these courses.

PSC 327 Lobbying and Interest Group Behavior 3(3-0)

The reasons for, and the methods of, lobbying government officials in the United States, with an emphasis on implications for democracy. Recommended: PSC 105.

PSC 328 Campaigns and Elections 3(3-0)

Study of campaigns and elections in the United States, including candidate emergence and nominations, campaign organization, strategy, election results, and electoral reform.

PSC 340 African Political Systems and Processes 3(3-0)

A comparative survey of selected African political systems with focus upon Sub-Saharan Africa.

PSC 341 Comparative Politics: Eastern Europe 3(3-0)

Comparative analysis of selected Eastern European states, including Poland, Czech Republic, Hungary, former Yugoslavia, Romania, Bulgaria, and Hungary. Identical to EUR 303. Credit may not be earned in more than one of these classes.

PSC 343 Southeast Asian Political Systems and Processes 3(3-0)

The impact of culture on politics in several countries of Southeast Asia, including Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Indonesia, Singapore, Brunei and Philippines.

PSC 344 East Asian Political Systems and Processes 3(3-0)

Emphasis on selected states in East Asia. East Asia consists of China, Japan, and Korea. This course may be offered in an online or hybrid format. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

PSC 345 Middle Eastern Political Systems 3(3-0)

Comparative analysis of the politics of selected Middle Eastern states, including Egypt, Iraq, Saudi Arabia, Algeria, Jordan, Morocco, Iran, Israel and Turkey. This course is approved for offering in a distance learning format.

PSC 346 The Politics of Islam 3(3-0)

Political examination of Islam's revival as a political doctrine that poses a unique reading of modernity, world peace and democracy in the 21st century.

PSC 347 Comparative Politics: Western Europe 3(3-0)

Comparative analysis of selected European states, including Great Britain, France, Italy and Germany.

PSC 348 Latin American Political Systems 3(3-0)

A comparative analysis of politics in contemporary Latin America with focus on the impact of authoritarianism, international intervention, economic underdevelopment, and democratization. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)
PSC 351 International Relations 3(3-0)
Classical and contemporary theories of international relations. War, terrorism, and genocide. International law and organizations. Global economics and world poverty. Ethics in international relations.

PSC 352 US - Latin American Relations 3(3-0)
An examination of the political, military, and economic relations between Latin America and the United States.

PSC 353 Model United Nations 3(3-0)
Introduces students to the activities of the United Nations and the protocols and procedures of diplomacy in order to participate in United Nations simulations. Prerequisite: 26 credits completed.

PSC 354 Advanced Model United Nations 1(1-0)
Allows advanced students to further their knowledge of the protocols and procedures of diplomacy and participate in United Nations simulations. Prerequisite: PSC 353.

PSC 355 Model United Nations Lab 1-3(Spec)
This course is a "lab" for Model United Nations (PSC 353) and Advanced Model United Nations (PSC 354). Can be repeated up to a total of three credits: a one-credit lab for PSC 353 and a two-credit lab for PSC 354. Co-requisites: PSC 353 or 354, CR/NC only.

PSC 370 Gurus, Avatars, and Nukes: South Asian Politics 3(3-0)
This course will introduce students to South Asian politics. It will examine the evolution of political institutions, ethnic conflicts, and political crises in the region. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

PSC 371 American Political Thought 3(3-0)
Selective survey of dominant trends in American political thought from the revolutionary era to the present. This course may be offered in an online or hybrid format. (University Program Group I-A: Human Events and Ideas.)

PSC 372 American Radical Thought 3(3-0)
Study and analysis of the main social revolutionary ideologies of the left during the past 100 years in the United States.

PSC 375 Socialism, Fascism, and Liberalism 3(3-0)
Political and psychological analyses of socialist, fascist, and liberal ideologies.

PSC 378 Modern Democratic Theory 3(3-0)
Exploration of modern arguments for and against liberal democracy and discussion of the future of liberal democracy in the U.S. and elsewhere. (University Program Group I-A: Human Events and Ideas.)

PSC 380 Public Sector Research Methods 3(3-0)
Overview of common public sector research techniques and how research findings can be integrated into effective organizational decisions. Prerequisite: PSC 210.

PSC 381 Slavery, Tyranny, Democracy: Classical Origins of Modern Ideas 3(3-0)
This course examines the key concepts and authors of Greek and Roman political theory. Focus is on Plato and Aristotle. May be offered as Writing Intensive. Recommended: PSC 275. (University Program Group I-A: Human Events and Ideas.)

PSC 382 Modern Political Theory 3(3-0)
This course examines the key concepts and authors of modern political theory. Focus is on the social contract theorists: Hobbes, Locke, and Rousseau. Recommended: PSC 275. (University Program Group I-A: Human Events and Ideas.)

PSC 383 Contemporary Political Theory 3(3-0)
Examines some key authors and concepts of twentieth- and twenty-first century political theory. The course may include Nietzsche, Lenin, Freud, Rawls, or Nozick, among others. Recommended: PSC 275.

PSC 390 Independent Study 1-6(Spec)
Directed reading or research on an approved topic. Prerequisite: Open to students not on academic probation and who have completed 12 semester hours in political science, with the permission of the instructor.

PSC 393 Practicum in Citizen Engagement 1-12(Spec)
This course provides experiential learning in a variety of leadership techniques intended to facilitate citizen engagement in public decision making. CR/NC only. Prerequisite: Permission of instructor.

PSC 394 Practicum in Public Polling 1-12(Spec)
This course provides experiential learning in the use of public opinion polling to facilitate democratic processes and governance. CR/NC only. Prerequisites: PSC 280 and permission of instructor.

PSC 395 Internship in Government and Politics 1-12(Spec)
An integrative learning experience where students apply textbook knowledge to governmental and public affairs work experience. CR/NC only. Prerequisite: permission of instructor.

PSC 398 Special Topics in Political Science 1-9(Spec)
Consideration of subject manner not included in courses currently listed in catalog. May be taken more than once.

PSC 405 Methods for Teaching Political Science 3(3-0)
Lesson plans, objectives evaluations, organization and methods of teaching government and politics. Three weeks of mid-semester experiences. Prerequisites: completion of at least 15 hours of political science course work; at least junior status.

PSC 411 Public Sector Human Resources 3(3-0)
Study of the policies, strategies, and legal processes that define human resources management in public and nonprofit organizations. This course may be offered in an online and hybrid format. Prerequisite: PSC 210.

PSC 412 Nonprofit Administration 3(3-0)
Overview of the nonprofit sector emphasizing charitable organizations, the rationales for their existence, and the fundamental elements of nonprofit administration. This course may be offered in an online or hybrid format. Prerequisite: PSC 210.

PSC 414 Public Policy Analysis 3(3-0)
Advanced overview of the practice of public policy analysis and program evaluation. This course may be offered in an online or hybrid format. Prerequisite: PSC 280 or 380.

PSC 421 Constitutional Law: Powers of Government 3(3-0)
Examines major U.S. Supreme Court decisions concerning judicial review, separation of powers, federalism, fiscal and commerce powers, and economic liberties.

PSC 422 Constitutional Law: Civil Rights and Liberties 3(3-0)
Examines major U.S. Supreme Court decisions regarding the First Amendment, criminal procedure, racial and gender equality, and the right to privacy.

PSC 426 Feminist Theory 3(3-0)
Examines the way women have been described by the Western philosophical tradition from its beginnings to the present and offers alternative analyses to this tradition. Identical to WST 426 and PHL 426. Credit may not be earned in more than one of these courses. Prerequisites: permission of instructor, or at least junior standing and either one course in philosophy or one of the following courses: PSC 275, PSC 326, PSC 371, PSC 373, or PSC 378.

PSC 453 American Foreign Policy 3(3-0)
Analyzes the external interests of the United States and how they are pursued.

PSC 513 Citizen Engagement in Public Life 3(3-0)
This course examines trends in Americans’ participation in public life, as well as various approaches intended to increase their civic and political engagement. Prerequisite: PSC 105 or graduate status.

PSC 514 American Public Policy Making 3(3-0)
This course serves to integrate political institutions and levels of government in terms of policy development and implementation. Prerequisites: PSC 105 or graduate standing. This course is approved for offering in a distance learning format.

PSC 515 Comparative Public Policy 3(3-0)
Techniques of cross-national and other comparative policy analysis applied to social and economic policies of industrialized nations, especially Western Europe. This course may be offered in an online or hybrid format. May be offered as Writing Intensive.

PSC 516 Environmental Politics and Policy 3(3-0)
Analysis of relationships between politics and public policy in the environmental arena. Emphasis upon policy making process, political strategies, and alternative decision modes. Prerequisites: complete minimum of 56 credit hours of university course work.

PSC 520 American National Government and Politics 3(3-0)
This course will examine the major theoretical frameworks used in the study of American national government and politics and survey current research in the area. Prerequisites: a minimum of 9 hours of political science coursework, including PSC 105.

PSC 522 Regulatory Processes and Administrative Law 3(3-0)
Survey of the principles of administrative law and the policies of the U.S. regulatory processes. This course is approved for offering in a distance learning format.

PSC 523 Fundamentals of Grant Writing and Management 3(3-0)
This course examines grant seeking, writing, proposal development, management, and evaluation in public and nonprofit organizations. Prerequisite: Graduate standing or completion of 56 credit hours.

PSC 540 Cultural Heritage and Politics of Eastern Europe 3(3-0)
Comparative study of political systems of Soviet bloc countries and Yugoslavia.

PSC 551 Seminar in International Relations 3(3-0)
Significant aspects of international relations on the basis of timeliness and importance. This course is approved for offering in a distance learning format.

PSC 555 International Law I 3(3-0)
Processes of international law, role in international relations and organizations; effects on individual rights in peacetime through cases, treaties, customs, and legal rules. This course is approved for offering in a distance learning format.

PSC 556 International Law II 3(3-0)
This course supplements the study of the international legal regime examined in International Law I by focusing upon the newly established international criminal law regime. Recommended: PSC 555.
PSC 563 Politics and Policy in Urban Communities 3(3-0)
Examination of large and small city governments. Their political process, behavior and citizen participation. Emerging public policies and intergovernmental cooperation.

PSC 566 Intergovernmental Relations in the United States 3(3-0)
An analysis of the administrative and fiscal relationships between the national, state, and local governments, with emphasis on grants-in-aid and revenue sharing.

PSY 571 The Memory and Politics 3(3-0)
This course examines the role of the armed forces in politics. Theories about civil-military relations, coups d’ etats, and transitions to democracy will be analyzed. May be offered as Writing Intensive. Recommended: PSC 242 or graduate status.

PSY 583 Survey Research 3(3-0)
Development and utilization of quantitative data, with emphasis on behavioral research, public opinion polling, and statistical analysis.

PSY 585 Public Sector Information Technology Management 3(3-0)
To teach public administrators applied management techniques for public sector information systems, and the computer’s role in the management of information in a democracy. Prerequisites: PSC 210; 56 semester hours completed or graduate status.

PSY 590 Independent Study 1-6(Spec)
Prerequisite: Open to majors or minors who have completed at least 12 hours of political science with a B average; arrange with department chairperson and instructor.

PSY 598 Special Topics in Political Science 1-12(Spec)
Subject matter not included in courses currently listed in Bulletin.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

PSC 610 Foundation of Public Administration 3(3-0)

PSC 615 Politics and Regulation of Health Care Policy 3(3-0)

PSC 619 Continuing Registration for Final Research Project 1[1-0]

PSC 620 Nonprofit Management 3(3-0)

PSC 621 Board Governance and Executive Leadership 3(3-0)

PSC 623 Public Policy Processes and Evaluation 3(3-0)

PSC 642 Problems and Processes of International Development 13(3-0)

PSC 651 Comparative Political & Economic Systems 3(3-0)

PSC 655 Managing Modern Local Government 3(3-0)

PSC 661 Administration and Policy in American State Government 3(3-0)

PSC 675 Public Sector Emergency and Crisis Organizational Theory 3(3-0)

PSC 676 Emergency and Crisis Prevention, Preparedness and Response 3(3-0)

PSC 677 The Public Sector Role in Post-Disaster Recovery 3(3-0)

PSC 680 Methodology of Political Research 3(3-0)

PSC 681 Qualitative Research in Political Science and Public Administration 3(3-0)

PSC 682 Techniques of Political Research 3(3-0)

PSC 711 Public Personnel Administration Practice 3(3-0)

PSC 712 Implementation and Reform of Public Programs 3(3-0)

PSC 713 Public Budgeting and Finance 3(3-0)

PSC 714 Program Analysis and Evaluation 3(3-0)

PSC 730 Public Service Competencies 1(Spec)

PSC 740 Seminar in Comparative Politics 3(3-0)

PSC 761 Seminar in American State Government 3(3-0)

PSC 770 Justice, Freedom, Equality: Essential Political Ideas 3(3-0)

PSC 773 Administration and Ethics in Public Service 3(3-0)

PSC 774 Strategic Planning for Public/Non-Profit Organizations 3(3-0)

PSC 775 Organization Theory and Behavior 3(3-0)

PSC 780 Public Sector Research Methods 3(3-0)

PSC 785 Strategic Leadership 3(3-0)

PSC 790 Advanced Readings 1-6(Spec)

PSC 793 Practicum in Citizen Engagement 1-12(Spec)

PSC 794 Practicum in Public Polling 1-12(Spec)

PSC 795 Internship in Public Administration 1-6(Spec)

PSC 796 Applied Research in Public Administration 3(3-0)

PSC 798 Thesis 1-6(Spec)

PSY - Psychology

See the Department of Psychology for more information.

PSY 100 Introduction to Psychology 3(3-0)
Survey of concepts, methods, and fields of psychology. This course may be offered in an online or hybrid format. (University Program Group III-A: Behavioral Sciences)

PSY 200 Special Issues: Title to be listed 1-12(Spec)
Subjects of contemporary psychology not covered by regular curriculum. Prerequisites: See Course Search and Registration.

PSY 211QR Introduction to Psychological Statistics 3(3-0)
Basic descriptive and inferential statistics are considered, including measures of central tendency and variability, the normal distribution, the t-test, ANOVA, correlation, and chi-square. This course may be offered in an online or hybrid format. Quantitative Reasoning. Prerequisites: PSY 100 and completion of Mathematics Competency.

PSY 220 Developmental Psychology 3(3-0)
Research-based findings on the development of human behavior from conception through late adulthood. This course may be offered in an online or hybrid format. Prerequisite: PSY 100.

PSY 225 Foundations of Cognitive Science 3(3-0)
Introduction to cognitive science, the problems it addresses, its evolving models of the mind, its interdisciplinary nature, and its broader ramifications. Identical to PHL 225. Credit may not be earned in more than one of these courses.

PSY 250 Abnormal Psychology 3(3-0)
Nature, causes, and treatment of mental disorders. This course may be offered in an online or hybrid format. Prerequisite: PSY 100.

PSY 285 Research Methods 3(3-0)
An introduction to the various research methodologies in psychology. This course may be offered in an online or hybrid format. Prerequisites: PSY 100; PSY 211 or BIO 500 and HSC 544 with a grade of C or better.

PSY 301 Sports Psychology 3(3-0)
The relationship between psychology and sport from the perspective of theory, research, and practice. Topics include personality, cognition, motivation-emotion, social processes, and sport. This course may be offered in an online or hybrid format. Prerequisite: PSY 100.

PSY 310 Psychological Testing 3(3-0)
The relationship between psychology and sport from the perspective of theory, research, and practice. Topics include personality, cognition, motivation-emotion, social processes, and sport. This course may be offered in an online or hybrid format. Prerequisite: PSY 100.

PSY 322 Psychology of Infancy and Early Childhood 3(3-0)
Human development from conception through preschool years. Emphasis on research relevant to understanding development and implications of research for preventing and lessening common developmental problems. Prerequisites: PSY 220 or HDF 100 or EDU 280.

PSY 324 Childhood and Adolescence 3(3-0)
Psychological development from childhood through the college years. Main topics are personality, social, and cognitive development. This course may be offered in an online or hybrid format. Prerequisite: PSY 220 or HDF 100 or EGU 280.

PSY 325 Psychology of Aging 3(3-0)
Empirical approach to understanding changes and continuities in physiological, cognitive, perceptual, behavioral, and social functioning in later life. Prerequisites: PSY 220 or signed Gerontology Minor.

PSY 330 Social Psychology 3(3-0)
Empirical approach to understanding individual social behavior. Deals with the person and the social environment with a focus in attitudes, interpersonal behavior, and group processes. Prerequisite: PSY 100. This course is approved for offering in a distance learning format.

PSY 332 Evolutionary Psychology 3(3-0)
Examines human behavior from an evolutionary perspective. Topics include evolutionary theory, sex and mating, child rearing, social relationships, and evolutionary applications to health and work. Prerequisite: PSY 100 or ANT 171. Recommended: BIO 151.

PSY 334 Psychology of Women 3(3-0)
Explores psychological issues pertaining specifically to women in the following areas: affective and cognitive functioning, personality theories, adult role behaviors, sexuality and physical and mental health. Identical to WST 334. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format.

PSY 336 Industrial/Organizational Psychology 3(3-0)
The psychology of work and organizations. Introduction to the use and application of psychology in the workplace. Prerequisite: PSY 100. This course is approved for offering in a distance learning format.

PSY 337 Psychology of Advertising 3(3-0)
Psychological principles and concepts applied to advertising and selling, promotion, buyer attitudes, consumer behavior, psychological measurement, and prediction in advertising. Prerequisite: PSY 100.

PSY 339 Psychology and Law 3(3-0)
Introduction to the application of principles and theories of psychological research in the legal system. Prerequisite: PSY 100.

PSY 340 Studies in Personality 3(3-0)
A survey of the major theories and principles that are used to describe/explain the individual. The primary focus will be on evaluating and testing theories via research findings. This course may be offered in an online or hybrid format. Prerequisite: PSY 100.

PSY 350 Clinical Interviewing and Counseling 3(3-0)
Theory and practice of psychological interviewing and counseling. Recommended: PSY 220, PSY 250. Prerequisites: PSY 100.
Course Descriptions approved for University Program are in italics.

**PSY 370 Applied Behavior Analysis 3(3-0)**
Applied behavior analysis is the use of principles of learning to address behavior problems of individuals in their natural environments. Prerequisite: PSY 100.

**PSY 379 Health Psychology 3(3-0)**
Study of the relationship between psychological variables and health, including physiological factors, psychological influences affecting health, behavior and chronic disease. Psychology's contribution to health promotion. This course may be offered in an online or hybrid format. Prerequisite: PSY 100. Recommended: HSC 106.

**PSY 382 Perception 3(3-0)**
Perception as the result of psychological and physiological processes. Some of the topics covered are vision, audition, pain perception, illusions, pattern recognition and perceptual development. Prerequisites: PSY 100; a University Program Program II course; competency in written English and mathematics.

**PSY 383 Learning and Memory 3(3-0)**
Introduction to the major theoretical-empirical views that characterize the area of learning and memory. This course may be offered in an online or hybrid format. Prerequisite: PSY 100.

**PSY 384 Behavior Analysis 3(2-2)**
Study of empirically-derived principles of behavior and their application to parenting, education, therapy, self-management and the treatment of the developmentally disadvantaged. Has animal lab component. Prerequisite: PSY 100.

**PSY 385 Applications of Research Methods 3(3-0)**
Second course in psychological research methodology. Students design, execute, interpret, and report psychological research. This course may be offered in an online or hybrid format. May be offered as Writing Intensive. Prerequisites: PSY 285 with a grade of C or better; ENG 201.

**PSY 387 Behavioral Neurosciences 3(3-0)**
Overview of the neurobiological processes underlying organismic behavior. Surveys neurobiological explanations of sensation, movement, motivation, emotion, sleep, learning, neurological disorders, recovery mechanisms. This course may be offered in an online or hybrid format. Prerequisites: One of the following: PSY 100, BIO 101, BIO 105, BIO 110, BIO 151, HSC 211.

**PSY 400 Special Issues: Title to be listed 1-12(Spec)**
Subjects of contemporary psychology not covered by regular curriculum. Prerequisite: See Course Search and Registration.

**PSY 409 History of Psychology 3(3-0)**
The historical roots of psychology and their present day manifestations are analyzed. Emphasis is on the more direct antecedents of current thought and practice. Prerequisites: PSY 285, PSY 383.

**PSY 450 Clinical Psychology 3(3-0)**
Introduction to the diagnostic, therapeutic, and research activities of the clinical psychologist. Prerequisite: PSY 250.

**PSY 459 Stress 3(3-0)**
Defines stress and how to measure it, evaluates evidence about causes/ correlates of stress, and introduces strategies to deal with stress. This course is approved for offering in a distance learning format. Prerequisites: PSY 100.

**PSY 487 Neuroscience Seminar 1-2(Spec)**
Analysis of current research in specified areas of neurosciences; critiquing and discussing primary literature and the students' current research relating to specific topics. Students will repeat this course for a maximum of 2 credits. Identification of BIO 441; Credit may not be earned in more than one of these courses. Prerequisites: signed neurosciences major and prior or concurrent neuroscience research experience through BIO 403 or PSY 496.

**PSY 496 Directed Research 1-6(Spec)**
For students who desire to investigate a research problem in psychology. Prerequisite: Must file a written proposal approved by a faculty sponsor in the departmental office prior to registration.

**PSY 497 Independent Study 1-4(Spec)**
For students who accept responsibility for studying a psychological problem on their own. Prerequisite: Must file a written proposal approved by a faculty sponsor in the departmental office prior to registration.

**PSY 498 Undergraduate Honors Thesis 3(Spec)**
The student, with guidance from two faculty sponsors, researches and writes an undergraduate thesis. Prerequisites: PSY 211 or STA 282 or STA 382 with a grade of B or better; PSY 285 with a grade of B or better; overall GPA of 3.0.

**PSY 500 Special Issues 1-12(Spec)**
Subjects of contemporary psychology not covered by regular curriculum. Prerequisites: See Course Search and Registration.

**PSY 501 Workshop 1-18(Spec)**
Study of problem-oriented subjects for persons already working in psychological services with the intent of continuing their professional growth. Prerequisite: See Course Search and Registration.

**PSY 502 Teaching Assistant in Psychology 1-3(Spec)**
Development of practical skills for effective teaching of psychology. No more than 3 hours of PSY 502 may be applied to a student’s psychology major or minor. Prerequisite: permission of instructor.

**PSY 503 Principles and Applications of Sign Language and Manual Systems 3(3-0)**
Focused study in the principles of the application of signed and manual communication with Deaf and other populations for educational, clinical, and human service settings.

**PSY 509 Behavioral Pharmacology 3(3-0)**
This course covers basic principles of pharmacology, receptor theory, drug classes, methods in basic pharmacology and behavioral pharmacology, and research and theory in behavioral pharmacology. Prerequisites: PSY 100; PSY 383 or 384 or 387 or graduate status.

**PSY 510 Principles of Psychological Measurement 3(3-0)**
Problems and procedures in scaling and in correlational methods related to testing reliability, validity, and measurement error. Prerequisite: PSY 310, PSY 211.

**PSY 511 Statistics in Psychology 3(3-1)**
An extension of topics introduced in PSY 211, with emphasis upon hypothesis testing and statistical inference. Prerequisite: PSY 211.

**PSY 531 Group Dynamics 3(3-0)**
Conceptual and empirical background in the dynamics of face-to-face groups and related interpersonal areas. Emphasis is cognitive-theoretical rather than experiential. Prerequisite: PSY 330 or graduate standing.

**PSY 533 Psychology of Racism 3(3-0)**
This course explores racism from a psychological viewpoint. The processes involved in the development, maintenance and change of racist attitudes are considered. Prerequisites: Junior or higher standing; PSY 330 or SOC 201, a Social Sciences method class.

**PSY 534 Psychology and the Courtroom 3(3-0)**
The application of psychological principles and theories to the courtroom. Prerequisites: coursework in basic statistics (e.g., PSY 211) and research methods (e.g., PSY 285); or graduate standing.

**PSY 535 Organizational Psychology 3(3-0)**
The study of organizations as complex social systems with analyses of individual and group behavior in organizations and responses of organizations to their environment. Prerequisite: PSY 336 or graduate standing.

**PSY 536 Personnel Psychology 3(3-0)**
This course examines the identification, measurement, and development of individual differences. Topics include job analysis, criterion development, personnel selection, training, and performance evaluation. Prerequisites: PSY 211, 336; or Graduate Standing. Recommended: PSY 310.

**PSY 537 Organizational Behavior Management 3(3-0)**
Behavior analysis in business, industry, and human service settings. Applied research in organizations is emphasized. Empirical rather than theoretical approach. Prerequisites: PSY 336 or PSY 370 or PSY 384 or graduate standing.

**PSY 538 Occupational Health Psychology 3(3-0)**
The study of health and stress in organizations as a complex process, with analyses of resources, stressors, coping, stress responses, and consequences. Prerequisites: PSY 336 and 379, or graduate standing.

**PSY 544 Theories of Personality 3(3-0)**
Theories regarding the structure and functions of personality. Prerequisite: PSY 340.

**PSY 555 Psychopathology of Children 3(3-0)**
Problems of children deviating from the norm in behavior and adjustment. Prerequisites: PSY 220, PSY 250.

**PSY 559 Rehabilitation Psychology 3(3-0)**
Psychological concepts in understanding physical disability from the perspectives of the individual, family, and society will be emphasized. Designed for advanced students in health professions. Prerequisites: PSY 100, 225; or graduate standing.

**PSY 562 Therapeutic Intervention: Foundations 3(3-0)**
Foundational skills for therapeutic intervention including theory and technique. Prerequisite: PSY 350 or graduate standing.

**PSY 563 Psychology of Reading 3(3-0)**
Reviews the cognitive processes that operate in skilled reading and focuses on reading development and reading difficulties in K-6th grade. Prerequisite: PSY 220, 285, 383; or graduate status.

**PSY 570 Behavioral Assessment and Treatment Planning 3(3-0)**
This course provides an overview of behavioral assessment procedures. Specific topics include functional behavior assessment, functional analysis, task analysis, data collection, and function-based intervention design. Prerequisite: PSY 370, 384, or graduate status.

**PSY 571 Research Methods in Behavior Analysis 3(3-0)**
Introduction to the fundamentals of behavioral analytic research methods. Prerequisite: PSY 370, 384; or graduate standing.

**PSY 575 Autism Spectrum Disorder: Characteristics and Etiology 3(3-0)**
This course will review the behavioral and educational characteristics of students with autism spectrum disorders. Knowledge of this disorder will also be examined. Identical to SPE 530. Credit may not be earned in more than one of these courses. Prerequisites: senior or graduate status.

**PSY 579 Behavioral Medicine 3(3-0)**
Applications of behavior analysis and social learning in medicine, dentistry, and physical health. Prevention, treatment, and long-term maintenance are all considered. Prerequisite: PSY 384 or PSY 370 or graduate standing.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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**PHT - Physical Therapy**

See the School of Rehabilitation and Medical Sciences for more information. For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

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**PSY-PTH 373**
REL 101 World Religions: An Introduction to the Study of Religion 3(3-0)
Basic forms of religious thought, practice, and expression studies as a compo-
nent of human life; includes a survey of major religious traditions. This course is
approved for offering in an online or hybrid delivery format. May be offered as
Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

REL 130 Religion in America 3(3-0)
An introduction to the varieties of religious thought, practice, and expres-
sion in America; emphasis on the interactions between religious traditions and
American culture and politics. May be offered as Writing Intensive. (University
Program Group I-A: Human Events and Ideas.)

REL 140 Religion, Race and Discrimination in America 3(3-0)
Introduction to the religious expressions of Americans who have experienced
racial discrimination, with emphasis on Native American, African-American,
and Hispanic-American communities. (University Program Group IV-C: Studies
in Racism and Diversity in the United States)

REL 207 Women in Religion 3(3-0)
Roles and images of women in major religious traditions; emphasis on
religious reform, creation of alternative institutions, new concepts of spiritual-
ity. Identical to WST 207. Credit may not be earned in more than one of these
courses. May be offered as Writing Intensive. (University Program Group I-A:
Human Events and Ideas.)

REL 220 Religious Traditions of China 3(3-0)
Study of the basic character of Chinese religious traditions. Examines Chinese
Buddhism, Confucianism, Chinese folk religions, and Daoism. (University
Program Group IV-B: Studies in Cultures Outside of the Anglo-American
Tradition)

REL 221 Religious Traditions of Japan 3(3-0)
Study of Japanese religious traditions including Japanese Buddhism, Shinto,
Japanese folk religions, and the New Religions of Japan. (University Program
Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

REL 222 Religious Traditions of India 3(3-0)
Major features of the religious traditions arising from India, including Hindu,
Jaina, Buddhist, and Sikh traditions. Stresses the significance of religious practice
in Indian society. (University Program Group IV-B: Studies in Cultures Outside of
the Anglo-American Tradition)

REL 235 Religion and Social Issues 3(3-0)
Introduction to religious and ethical thought in personal, social and institu-
tional contexts. Topics such as violence, sexism/heterosexism, racism, ecology,
or poverty may be examined. May be offered as Writing Intensive. (University
Program Group I-A: Human Events and Ideas.)

REL 240 African-American Religion 3(3-0)
Origins, development, and contemporary character of African-American
religion, including Christianity, Islam, and new religious movements. (University
Program Group IV-C: Studies in Racism and Diversity in the United States)

REL 250 Creation, Conquest, and Chaos: Introduction to the Old
Testament 3(3-0)
The literature, history, and religion of ancient Israel in its Near Eastern context
as disclosed through study of the Hebrew Bible in English translation. (University
Program Group I-A: Human Events and Ideas.)

REL 260 From Gospel to Apocalypse: Introduction to the New Testa-
ment 3(3-0)
Intensive study of selected portions of New Testament literature, with an
introduction to the Hellenistic-Roman age through study of selected background
documents. (University Program Group I-A: Human Events and Ideas.)

REL 301 Myth and Meaning 3(3-0)
Study of myth and myth-making as expressions of humankind's quest for
order and meaning in life. Examines myth in general and in specific cultural
settings.

REL 302 Witchcraft, Magic, and Occult Phenomena 3(3-0)
A study of witchcraft in its European and African settings as well as a study of
the intellectual history of witchcraft and occultism.

REL 303 Goddesses 3(3-0)
Interdisciplinary study of nature and role of goddesses in selected cultures,
ancient and modern. Examination of issues raised when contemporary
groups employ/reinvent goddess concepts. Identical to WST 303. Credit may
not be earned in more than one of these courses.

REL 304 Religion and Psychology 3(3-0)
Surveys classic and contemporary psychological theories of religion,
including the behavioral, comparative, and cognitive perspectives; also
explores the psychological role of religion in human life.

REL 305 Mysticism 3(3-0)
Exploration of mystic experience, including consideration of its place in
religion's history, its modes of expression, and the major mystical figures in
the world's religions.

REL 313 Christianity 3(3-0)
Development of the Christian religious tradition from Jesus of Nazareth
to its major contemporary branches: Orthodoxy, Roman Catholicism, and
Protestantism. (University Program Group I-A: Human Events and Ideas.)

REL 314 Islam 3(3-0)
Muhammad and the Qur’an, the Sunni and Shi’a split; nine subcultures of
the Muslim world: Shari’a; women in Islam; jihad; terrorism; Islamism, and
Sufism. (University Program Group IV-B: Studies in Cultures Outside of the
Anglo-American Tradition)

REL 315 Judaism 3(3-0)
Judaism as a multifaceted approach to identity and lifestyle, both personal
and societal; religious expressions such as Torah, myth, ritual, festivals, holy days.
(University Program Group I-A: Human Events and Ideas.)

REL 320 The Buddha Tradition 3(3-0)
The general nature of the Buddhist tradition, with attention to particular
developments within it (e.g., tantra, Zen). Primarily examines Buddhism's role
in selected Asian cultures. This course may be offered in an online or hybrid
format. (University Program Group IV-B: Studies in Cultures Outside of the
Anglo-American Tradition)

REL 334 Death and Dying 3(3-0)
Religious and cultural explanations of death and responses to dying, death
and mourning; religious, ethical, biomedical ethical and legal issues, e.g., health
care, suicide, abortion, euthanasia. This course may be offered in an online or
hybrid delivery format. May be offered as Writing Intensive. (University Program
Group I-A: Human Events and Ideas.)

REL 336 Religion and Film 3(3-0)
Examines the interrelations of film and religion, including the representa-
tion of religion in film and the ways film functions religiously in modern
media culture. Prerequisites: 45 credit hours completed.

REL 340 Modern Religious Thought 3(3-0)
Studies major issues in modern religious thought: e.g., religion and sci-
ence, theological liberation; Christianity and the encounter of world
religions.

REL 342 From Spirituals to Gospel 3(3-0)
The development of African-American religion from 19th century to the
present through an examination of the nature and function of religious song.
No knowledge of music theory required.

REL 345 The Civil Rights Movements 3(3-0)
Examines the civil rights movement from 1954 to 1980s; based on PBS series:
Eyes on the Prize. Identical to HST 345, PSC 125, SOC 345. Credit may not be
earned in more than one of these courses. Prerequisites: Any one of the follow-
ing: HST 110, HST 111, HST 112, LAR 145, PSC 100, PSC 105, PSC 125, REL 140,
SOC 100. (University Program Group IV-C: Studies in Racism and Diversity in
the United States)

REL 347 African American Reflections on Racism 3(3-0)
Impact of and resistance to racism treated in theoretical works (theol-
y, ethics, social sciences) and illustrated in the lives and creative works of
African Americans.

REL 351 Prophecy and Prophets 3(3-0)
Psychological and spiritual phenomenon of propheticism in the Ancient
Near East; intensive study of Old Testament prophetic literature; historical
context, literary form, theological content.

REL 361 Religion in Colonial Latin America 3(3-0)
This course examines the interaction of European, African, and Native
American religions during the colonial period in Latin America. Identical
to HST 361. Credit may not be earned in more than one of these courses.
Recommended: Any Latin American history and/or Religion course.

REL 362 The Apocalyptic Message and Method 3(3-0)
Exploration of apocalyptic thought and literature; examination of its sig-
nificance and continuing influence; evaluation of its method and approach.

REL 363 Ethics and Morality in the Bible 3(3-0)
Examination of representative biblical codes of conduct, their underlying
ethical principles, and their application to perennial moral issues, such as
killing, sexuality, and economic justice.

REL 365 The Sayings of the Historical Jesus 3(3-0)
Study of Jesus’ teaching, its environment, sources and methods used for
its recovery, literary forms in which it was transmitted, and reconstruc-
tion of its contents.

REL 367 Paul: His Life, Letters and Legacy 3(3-0)
Study of Paul’s environment, life, work, and letters and his influence on the
subsequent history of Christian thought.

REL 375 Terrorism, Jihad, and Islamism 3(3-0)
Historical introduction to Muslim terrorists, jihad, and Islamism; exploration
of the psychology of terrorism and of the contested designations of martyrdom and suicide. Prerequisite: 45 credit hours completed.

Course Descriptions approved for University Program are in italics.
REL 376 *Women in Muslim Cultures* 3(3-0)
A survey of women’s lives, roles, and issues such as gender segregation, education, and veiling among the peoples of Muslim societies and cultures. Prerequisite: 45 credit hours completed.

REL 377 *Sufism: Mystical Islam* 3(3-0)
A survey of the various phenomena that comprise Sufism: mystical knowledge, spiritual practice, and culture; inner spirituality; master-disciple relationships; Sufi fellowships; and saint veneration. Prerequisite: 45 credit hours completed.

REL 381 *History of Israel* 3(3-0)
Israel and Palestine from ancient times to the present, including background to contemporary Zionism and the conflict with Arab nationalism. Identical to HST 382. Credit may not be earned in more than one of these courses.

REL 397 *Special Studies* 1-9(Spec)
Each offering studies a selected topic using readings, discussions, lectures, and research as appropriate.

REL 492 *Readings in World Religion* 1-9(Spec)
Advanced independent study for the interested and qualified student. Prerequisite: permission of instructor.

REL 493 *Readings in American Religion* 1-9(Spec)
Advanced independent study for the interested and qualified student. Prerequisite: permission of instructor.

REL 494 *Readings in Religion and Society* 1-9(Spec)
Advanced study for the interested and qualified student. Prerequisite: permission of instructor.

REL 495 *Readings in Biblical Studies* 1-9(Spec)
A scholarly study of a limited portion of the Bible, making use of historical, linguistic, and archaeological studies. Prerequisite: permission of instructor.

REL 498 *Readings in the Greek Bible* 1-9(Spec)
The direct study of the Greek Old and/or New Testament. Prerequisite: permission of instructor.

REL 501 *Seminar in the Study of Religion* 3(3-0)
The study of religion as an academic discipline, including a selection of leading scholarly approaches to the investigation of religious phenomena. May be offered as Writing Intensive. Prerequisites: 9 credit hours in Religion.

REL 505 *Research Seminar* 3(3-0)
A seminar supporting research projects in religion, primarily intended for seniors who are religion majors. May be offered as Writing Intensive. Prerequisites: for undergraduates, a signed Religion major with completion of REL 501. For graduate studies, permission of instructor.

REL 597 *Special Topics* 1-6(Spec)
Advanced study of selected topics using readings, discussions, lectures, and research as appropriate.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

REL 642 *African-American Sacred Song* 3(3-0)

**RLA - Recreation and Leisure Activities**

See the Department of Recreation, Parks, and Leisure Services Administration for more information. Note: a limitation of 6 hours of PED and RLA courses may be applied toward the requirements for graduation.

RLA 116 *Introduction to Fly Fishing* 1(1-0)
Introduction to basic fly fishing techniques and methods. Not to be applied to an RPL major or minor. CR/NC only.

RLA 120 *Introduction to Fly Tying* 1(1-0)
Introduction to beginning fly tying methods to attract freshwater game fish in lakes and streams. Not to be applied to RPL major or minor. CR/NC only.

RLA 150 *Canoe Camping and Touring* 1(1-0)
Fundamentals of canoe camping and touring on lakes and rivers. Not to be applied to RPL major or minor. CR/NC only.

RLA 155 *Introduction to Sailing* 1(1-0)
Introduction to the concepts and skills of sailing. Not to be applied to a RPL major or minor. CR/NC only.

RLA 158 *Whitewater Rafting* 1(1-0)
Introduction to the fundamentals of whitewater rafting. Focus on river reading skills, strokes, rescues, and safety. Not to be applied to a RPL major or minor. CR/NC only.

RLA 160 *Introduction to Recreational Kayaking* 1(1-0)
Introduction to beginning kayaking skills for kayak touring. Not to be applied to RPL major or minor. CR/NC only.

RLA 165 *Introduction to Freestyle (Skate) Cross Country Skiing* 1(1-0)
Introduction to the techniques of freestyle (skate) cross country skiing. Not to be applied to a RPL major or minor. CR/NC only.

RLA 168 *Introduction to Snowshoeing* 1(1-0)
Introduction to the concepts, equipment, and skills of snowshoeing. Not to be applied to a RPL major or minor. CR/NC only.

RLA 170 *Beginning Rock Climbing* 1(1-0)
Basic concepts of rock climbing and rappelling. Focus will be on belaying, knot tying, gear selection, and movement on the rocks. Not to be applied to an RPL major or minor. CR/NC only.

RLA 180 *Introduction to Backpacking* 2(1-1)
Basic concepts of backpacking for the recreational backpacker, focusing on equipment, packing, cooking, hiking, and environmental ethics. Not to be applied to RPL major or minor. CR/NC only.

RLA 200 *Special Activity Topics in Recreation* 1-3(Spec)
Designed for students to be introduced to recreation activity topics and skills at lifetime leisure pursuits. Repeatable up to 3 credits when content previously studied is not duplicated. Not to be applied to RPL major or minor. CR/NC only.

RLA 217 *Advanced Fly Fishing* 1(1-0)
Advanced techniques of fly casting and fly fishing for trout and warm water game fish. Not to be applied to a RPL major or minor. CR/NC only. Prerequisite: RLA 166.

RLA 220 *Advanced Fly Tying* 1(1-0)
Advanced techniques of fly tying for freshwater fish. Not to be applied to RPL major or minor. CR/NC only. Prerequisite: RLA 120.

RLA 225 *Recreational Crafts* 2(2-0)
Leading and designing innovative, cost effective and creative recreational crafts for a variety of cultural and ability groups. Not to be applied to RPL major or minor. CR/NC only.

RLA 270 *Advanced Rock Climbing* 2(2-0)
Learning advanced concepts of rock climbing, focusing on climbing anchors, advanced movement techniques, and safety. Not to be applied to RPL major or minor. CR/NC only. Prerequisite: RLA 170.

**RPL - Recreation, Parks, Leisure Services Administration**

See the Department of Recreation, Parks, and Leisure Services Administration for more information.

RPL 102 *Leisure in Your Life* 3(3-0)
A study of leisure and its implications for an individual’s quality of life.

RPL 118 *Introduction to Recreation, Parks, and Leisure Services* 2(2-0)
The nature, scope, and significance of recreation, parks, and leisure in today’s world. A survey of professional opportunities.

RPL 200 *Special Topics in Recreation* 1-6(Spec)
Concentrated study of a current recreation topic.

RPL 204 *Introduction to Community Recreation Administration* 3(3-0)
An introduction to the interrelationships of community organizations sharing a recreation responsibility.

RPL 205 *Outdoor Leadership* 3(2-2)
Introduction to outdoor leadership; study of leadership in outdoor and camp settings.

RPL 206 *Recreation Activities Leadership* 3(3-0)
Methods, techniques, leadership styles, and organization of recreational activities including sports, crafts, cultural arts, games, and teambuilding initiatives.

RPL 209 *Inclusive Recreation with Diverse Populations* 2(2-0)
Introduction of inclusive recreation and activity programming with diverse populations. Recommended: RPL 118.

RPL 210 *Introduction to Therapeutic Recreation* 3(3-0)
An introduction to the use of recreational activity as a therapeutic or treatment intervention for individuals with chronic health issues or disability. Recommended: RPL 118.

RPL 216 *Introduction to Outdoor Recreation* 3(3-0)
Introduction to history and development of Outdoor Recreation as a profession. Overview of federal, state, and local governments as providers of outdoor recreation.

RPL 218 *Teaching of Outdoor Skills* 3(3-0)
Techniques of teaching four traditional outdoor recreation pursuits (shooting sports, fishing, canoeing, and map and compass). Emphasis on assisting people to develop lifetime outdoor recreation skills.

RPL 219 *Camp Counseling and Leadership* 3(3-0)
Introduction to techniques and practices for camp counseling and leadership positions.

RPL 261 *Introduction to Private and Commercial Recreation* 3(3-0)
An introduction to the broad areas of, and career opportunities in, commercial recreation and facility management.

RPL 303 *Independent Reading* 1(Spec)
In-depth exploration of one or more aspects of the field of the leisure services profession through individual study.

RPL 307 *Management Skills in Leisure Services* 3(3-0)
The development of conceptual and human relations skills necessary to the successful management of a leisure service agency. Prerequisites: RPL 118. One of the following: RPL 204 or 216 or 261.
RPL 310 Pre-Internship in Leisure Services 1(1-0)
Preparation for participation in the internship experience. Should be taken two semesters prior to internship. CR/NC only. Prerequisites: RPL 204 or 210 or 216 or 261.

RPL 318 Field Course in Recreation Specialization 1-15(Spec)
Supervised practical, field work experience within a leisure services organization.

RPL 320 Professional Internship in Recreation 1-30(Spec)
In-depth, capstone internship experience in commercial, community, therapeutic, or outdoor recreation. Prerequisite: RPL 310.

RPL 321 International Practicum in Leisure Services 1-30(Spec)
In-depth, practical field experience for international students with a leisure or recreation agency.

RPL 333 Production of Festivals and Events 2(1-2)
The production and management of events and festivals through student application and fieldwork. Required attendance at course-identified event for service learning component. Prerequisites: RPL 430; signed Event Management Minor or Recreation, Parks & Leisure Services Administration major.

RPL 340 Therapeutic Recreation: Developmental Disabilities 3(3-0)
Assessment, planning, and therapeutic recreation programming for individuals with intellectual and developmental disabilities. Pre/Co-requisite: RPL 210 or RPL 209.

RPL 341 Therapeutic Recreation: Physical Disabilities 3(3-0)
Assessment, planning, and therapeutic recreation programming for individuals with physical disabilities. Pre/Co-requisite: RPL 210 or PES 386 or SPE 126.

RPL 342 Therapeutic Recreation: Behavioral Health 3(3-0)

RPL 343 Tourism 3(3-0)
An examination of where and why the hospitality services industry client travels at home and abroad and the economic impact of tourism expenditures. Identical to HSA 343. Credit may not be earned in more than one of these courses. Recommended: 56 semester hours completed; admission to Professional Business Studies, or listed on signed major or minor.

RPL 345 Therapeutic Recreation: Gerontology 3(3-0)
Assessment, planning, and therapeutic recreation programming for individuals with age related disabilities. Pre/Co-requisite: RPL 210 or GRN 247.

RPL 346 Recreation for Senior Citizens 3(3-0)
Proposing, organizing, administering, and conducting recreation activities for older adults.

RPL 347 Special Olympics: Management, Coaching, and Volunteerism 3(3-0)
Organize, conduct, coach or direct athletes involved in Special Olympic competition. Students will work with Special Olympics Michigan. CR/NC only.

RPL 348 Aquatic Therapy Seminar 1(1-0)
Explore the benefits and techniques of aquatic therapy when servicing individuals with neurological, neuromuscular, and orthopedic disorders. All students will practice techniques in the water. Pre/Co-Requisite: RPL 341. Recommended: Signed major in Allied Health field.

RPL 349 Facilitation Techniques in Therapeutic Recreation 3(3-0)
An in depth review of the unique facilitation techniques, interventions, or modalities implemented by the recreational therapist. Prerequisites: RPL 118, 210 and one of the following: RPL 340, 341, 342, 345.

RPL 350 Administration and Operations of Aquatic Facilities 3(3-0)
This course provides operational knowledge and skills for the administration, operations and programming of aquatic facilities for private or public sector leisure service agencies. Prerequisite: Junior class standing.

RPL 351 Pharmacology for Therapeutic Recreation 2(2-0)
Essentials of pharmacology for therapeutic recreation and other allied health professions. Prerequisites: Two of the following: RPL 340, 341, 342, 345.

RPL 358 Foundations of Outdoor and Environmental Education 3(3-0)
Introduces to the foundational concepts, principles, and teaching methods of outdoor and environmental education for non-formal and formal education settings.

RPL 359 Advanced Expedition Planning 3(3-0)
Advanced concepts of wilderness expedition planning. The course focuses on equipment, techniques, and the leadership of land and water based expeditions. Prerequisites: RPL 205, 216. Recommended: prior backpacking experience.

RPL 360 Advanced Wilderness Adventure Trip Facilitation 3(Spec)
Development of wilderness adventure facilitation skills including group management, group goal setting, environmental ethics, advanced camping, and wilderness navigation skills. Prerequisite: RLA 180. Recommended: Prior backpacking and camping experience.

RPL 365 Wilderness First Responder 3(3-0)
In-depth emergency medical training for wilderness settings. Prerequisite: RPL 216.

RPL 370 Leave No Trace Ethics 1(1-0)
Examines the seven principles of Leave No Trace. Instruction in effective Leave No Trace teaching techniques and certification as professional Leave No Trace Trainers. Prerequisite: RPL 216 and RPL signed major/minor.

RPL 400 Special Issues in Leisure Services 1-6(Spec)
In-depth study of a special issue in leisure services. May be repeated up to six credits for different topics. Prerequisites: One of the following: RPL 204, 261, 216 or 210; or a signed RPL minor; or a signed Event Management minor.

RPL 405 Administration of Community Leisure Services 3(3-0)
The organization and administration of community leisure services. Prerequisites: RPL 118; one of the following: RPL 204, 216, 261.

RPL 420 Planning and Facility Design for Leisure 3(3-0)
Basic concepts related to master planning for leisure services; planning and design of recreation areas and sites; planning, design, and construction of recreation facilities.

RPL 430 Planning Recreation Programs and Events 3(3-0)
Development and implementation of recreation experiences and events for diverse populations in a variety of leisure service settings. Prerequisite: One of the following: RPL 204, 216, 261; or signed Event Management minor.

RPL 431 Planning Community Recreation Programs & Events 3(3-0)
Development and implementation of recreation programs and events for diverse populations in a variety of community and/or nonprofit leisure service settings. Prerequisite: One of the following: RPL 204, 216, 261, signed Event Management minor.

RPL 435 Leadership in Adventure Education Programming 3(3-0)
Leadership in trip-planning, risk management, and outdoor etiquette in adventure education. In-depth content in facilitation, processing, camp skill set, and environmental ethics. Weekend trips required. Prerequisites: RPL 205.

RPL 436 Facility Operations and Maintenance 3(3-0)
Operation and maintenance of areas and facilities for parks, recreation, and leisure services including specialized facilities; aquatic, ice arenas, sport fields, and natural areas. Prerequisites: RPL 204 or 261 or signed Event Management Minor. Recommended: RPL 307 or 405.

RPL 438 Meeting and Exposition Planning 3(3-0)
The development of skills and knowledge necessary for successful planning and management of conventions, meetings, and expositions in a commercial recreation setting. Prerequisite: RPL 430.

RPL 440 Special Event Administration 3(3-0)
Explore the dynamics of the event industry. Develop skills in event administration, logistics, revenue development, proposals, design, planning and coordination of large-scale special events. Prerequisites: RPL 430. Cannot take RPL 438 and RPL 440 in the same semester.

RPL 460 Quality Service Systems in the Leisure Service Industry 3(3-0)
Develop an orientation toward and philosophy of quality service principles and practices as they relate to a variety of leisure service industries. Fee required. Prerequisites: RPL 118; RPL 204 or 261; or signed Event Management minor.

RPL 470 Park and Natural Resource Management 3(3-0)
Management of federal, state, and local park systems, and natural resource areas. Focuses on environmental issues, administration, planning, personnel, marketing, and maintenance. Prerequisites: RPL 118; one of the following: RPL 204, 216, 261.

RPL 497 Community Recreation Professional Seminar 1(1-0)
Senior level capstone course focusing on community recreation trends and issues, continuing professional development, and resources for continuing education. Prerequisites: Students must be in their last semester of on campus enrollment with a minimum of 24 RPL credits and have a signed RPL Community Leisure Services Administration major.

RPL 498 Independent Study 1-6(Spec)
Student-initiated project or study of a topic related to recreation, parks, or leisure services guided by a faculty member. Prerequisite: Permission of instructor.

RPL 499 Independent Research in Leisure Services 1-3(Spec)
Research on a topic of interest to the student. Topic, outcomes, and hours must be approved prior to enrollment. CR/NC only. Prerequisites: Permission of instructor.

RPL 508QR Budgeting & Funding for Leisure Service Agencies 3(3-0)
Budgetary and fund development procedures for leisure service agencies. Quantitative Reasoning. Prerequisites: RPL 204 or RPL 216 or RPL 261 or graduate status. Pre/Co- prerequisites: RPL 338 or RPL 430 or RPL 431.

RPL 511 Liability and Risk Management in Leisure Services 3(3-0)
Situational analysis of the legal systems impacting the delivery of recreation and leisure services. Emphasis on applied legal understanding and loss control strategies. This course may be offered in an hybrid format. Prerequisite: 6 credits in RPL or signed Event Management Minor; or Graduate Status.

RPL 518 Research & Philosophy in RPL 3(3-0)
This course explores the philosophical, social, and historical foundations of parks, recreation and leisure. Develops skills for research in leisure service settings. Prerequisites: 14 credits in RPL or graduate status.
RPL 521 Fund Development & Grant Writing for Public & Non-profit Organizations 3(3-0)
Processes and applied skills for fund development and grant writing for public and nonprofit organizations. This course may be offered in an online or hybrid format. Pre/Co-requisites: RPL 405 or 508 or senior or graduate status.

RPL 545 Marketing of Leisure Services 3(3-0)
Provides a basis for applying marketing principles and techniques to the provision of leisure services. This course is approved for offering in a distance learning format. Prerequisites: 6 credits in RPL or signed Event Management minor or graduate status.

RPL 552 Environmental Interpretation 3(3-0)
Development of the skills to produce and implement interpretive programs in parks, camps, natural areas, and visitor and nature centers located in urban and rural areas. Prerequisites: RPL 358 or Graduate status.

RPL 570 Wilderness Issues and Policy 3(3-0)
Exploration of wilderness as a unique natural resource context. Examines legislative origins, policy decisions, and management philosophies in relation to current issues and trends. Prerequisites: RPL 216 or graduate status.

RPL 580 Programming for Therapeutic Recreation 3(3-0)
Programming techniques for Therapeutic Recreation. Prerequisites: RPL 210 or graduate status. Pre/Co-Requisites: Two of the following: RPL 340, 341, 342, 344, 345.

RPL 581 Therapeutic Recreation: Issues and Trends 3(3-0)
Current issues and trends related to therapeutic recreation service delivery including: professional credentialing, third-party reimbursement, accreditation standards, legislation, ethics, and other administrative issues. Prerequisite: RPL 210 or graduate status. Pre/Co-Requisites: Two of the following: RPL 340, 341, 342, 344, 345.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

RPL 600 Advanced Issues in Recreation 1-6(Spec)
RPL 603 Advanced Independent Reading in Recreation 1(Spec)
RPL 605 Administration of Leisure Services Systems 3(3-0)
RPL 610 Leisure Research 1(1-0)
RPL 611 Evaluation in Recreation and Leisure Services 3(3-0)
RPL 615 Practicum in Recreation Supervision and Administration 1-6(Spec)
RPL 618 Issues in Leisure 3(3-0)
RPL 619 Continuing Registration for Final Research Project 1(1-0)
RPL 620 Planning for Parks and Recreation Facilities 3(3-0)
RPL 636 Recreation Facility Operations and Management 3(3-0)
RPL 640 Recreation Program and Event Administration 3(3-0)
RPL 652 Outdoor Recreation 3(3-0)
RPL 698 Graduate Internship 1-6(Spec)
RPL 699 Graduate Project 1-6(Spec)
RPL 791 Independent Study 2(Spec)
RPL 798 Thesis 1-6(Spec)

RUS - Russian
See the Department of Foreign Languages, Literatures, and Cultures for more information.

RUS 101 Elementary Russian I 4(4-0)
Designed for students who have had no Russian. Basic language skills. Introduction to the culture of the Russian-speaking countries. Students who have completed more than one year of Russian in secondary schools will not receive credit.

RUS 102 Elementary Russian II 4(4-0)
Basic language skills. Continuation of RUS 101. Prerequisite: RUS 101.

RUS 201 Intermediate Russian I 4(4-0)
More practice in hearing and speaking Russian, and exercises in reading and writing the language. Prerequisite: RUS 102.

RUS 202 Intermediate Russian II 4(4-0)
Continuation of RUS 201. Prerequisite: RUS 201.

SAM - Science of Advanced Materials
See the Graduate Bulletin for information on the program.

SAM 560 Introduction to Rheology 3(3-0)
Introduction to the flow and deformation of materials under stress. Applications to polymeric and biological systems, MRI, 333, 334; or graduate standing. Recommended: CHM 345 or CHM 331 or PHY 312 or EGR 358.

SAM 570 Multiscale Modeling and Simulation of Materials 3(3-0)
Simulation, modeling, and their applications of polymers, colloids, biomaterials, gels, liquid crystals, drug interactions, and nanomaterials on the molecular, mesoscopic, and bulk level. Prerequisites: MTH 233, 334; or graduate standing. Recommended: CHM 345 or 331 or PHY 332 or EGR 355.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

SAM 620 Chemical Principles in the Science of Materials 3(3-0)
SAM 630 Physical Principles in the Science of Materials 3(3-0)
SAM 685 Current Topics in the Science of Advanced Materials 1-5(1-0)
SAM 690 Special Topics in Science of Advanced Materials 1-5(Spec)
SAM 710 Advanced Materials I: Polymers, Composites and Biomaterials 3(3-0)
SAM 720 Inorganic and Nanomaterials Laboratory 4(2-6)
SAM 721 Polymeric and Biomaterials Laboratory 4(2-6)
SAM 722 Material Surface Characterization Laboratory 3(1-6)
SAM 723 Engineering Materials Laboratory 4(2-6)
SAM 785 Seminar in the Science of Advanced Materials 1(1-0)
SAM 790 Independent Study in Advanced Materials 1-3(Spec)
SAM 795 Internship in the Science of Advanced Materials 1-6(Spec)
SAM 796 Directed Research in the Science of Advanced Materials 1-36(Spec)
SAM 899 Dissertation 1-12(Spec)

SCI - Sciences
See the College of Science & Technology for more information.

SCI 109 Critical Thinking in Science and Technology 1-3(Spec)
Critical thinking and problem solving skills developed within the context of current topics in science and technology. A freshman experience course in Science and Technology.

SCI 165 Earth Systems Science for Elementary Teachers 3(2-2)
Inquiry-based survey of Earth systems tailored to students pursuing a degree in Elementary Education; human impact on and changes in the environment through time.

SCI 197 Special Studies in Science 1-12(Spec)
Primarily for freshmen or sophomores. Prerequisite: permission of instructor.

SCI 320 Fundamentals of Fermentation Science 3(3-0)
The science of brewing focusing on the biochemistry and microbiology involved in the process of brewing beer. Prerequisites: BIO 110; CHM 120 or 132.

SCI 321 Fermentation Analyses 3(1-4)

SCI 322 Applied Fermentation Science 3(1-5)
A practical application of fermentation science principles in the production and analysis of beer. Pre/Co-requisites: SCI 320, 321, 323.

SCI 323 Brewery Facilities and Operations 3(3-0)
Study of the design, equipment, operation, and maintenance of a modern brewery. Pre/co-requisite: SCI 320.

SCI 397 Special Studies in Science 1-12(Spec)
Primarily for juniors and seniors. Prerequisite: permission of instructor.

SCI 400 Teaching Integrated Science in Secondary School 3(2-2)
Methods of teaching integrated science in the secondary school; including development of lessons in accord with best practices and state content expectations. Course must be completed prior to student teaching. Prerequisites: AST 111; BIO 208; CHM 132; GEL 201 or 230; GEO 105 or 201; PHY 130; EDU 325; admission to the Teacher Education Program.

SCI 410 Teaching Integrated Science K-8 3(3-0)
Development of teaching methods and laboratory skills necessary for teaching science in grades K-8. Prerequisites: BIO 101; CHM 120; PHS 151; GEO 130; GEO 105 or 201; EDU 345; admission to the Teacher Education Program.

SCI 420 Internship in Fermentation Science 4(Spec)
Internship in a production brewery or other brewing-related industry. Prerequisites: SCI 320, 321, 322, 323.

SCI 490 Contemporary Issues in Earth Science 11-1(Spec)
A capstone course for earth science education majors. Students will investigate connections and interrelationships between Earth system components and how these affect civilization and society. This course has been approved for offering in a distance learning format. Prerequisites: 36 credits of required and cognate courses on the earth science education major completed with a minimum average GPA of 2.7.

SCI 497 Topics in Science Education 1-4(Spec)
Topics of special interest for integrated science majors that are not normally included in existing courses. Specific topics and instructor’s prerequisites will be announced in Course Search and Registration. Prerequisites: See Course Search and Registration.

SCI 597 Special Studies in Science 1-12(Spec)
Primarily for graduate students. Prerequisite: permission of instructor. For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

SCI 730 Seminar 11-1(Spec)

SCI 790 Research in Science Education 2-4(Spec)
SCI 798 Thesis 1-6(Spec)
SOC - Sociology

See the Department of Sociology, Anthropology and Social Work for more information. Note: Prerequisites for any undergraduate course in sociology may be waived by permission of the department chair and the instructor.

SOC 100 Introductory Sociology 3(3-0)
Systematic introduction to the field of sociology, its theories, concepts, and methods. Explores social relationships within the context of social structure. This course may be offered in an online or hybrid format. (University Program Group III-B: Studies in Social Structures)

SOC 150QR Public Opinion, Social Sciences, and Social Welfare 3(3-0)
Data to understand public opinion and social welfare. Measurement of concepts. Ways of representing data with tables, graphs, and statistics. Computer applications. Identical to SWK 150. Credit may not be earned in more than one of these courses. Quantitative Reasoning.

SOC 200 Introduction to Social Research and Analysis 3(3-0)
First in a two-part methods sequence with SOC 350. Basic research issues. Univariate, bivariate, multivariate analysis techniques in sociology and social work. Computer applications. Prerequisites: SOC 100; completion of math competency.

SOC 201 Social Psychology 3(3-0)
Examines the links between social structure and self. Substantive topics may include: agency, emotions, socialization, attitudes, gender, inequality, deviance, conflict, and social change. (University Program Group III-A: Behavioral Sciences)

SOC 205 Social Justice in a Global Society 3(3-0)
Introduction to key concepts in global social justice, foundational human rights instruments and processes, contemporary manifestations of social injustice, and the role of social action. Identical to ANT 205; credit may not be earned in more than one of these courses. (University Program Group III-B: Studies in Social Structures)

SOC 210 Sociology of Science and Technology 3(3-0)
Social aspects of science and technology including their organization, personnel, social effects, relationship to government and education, and policy implications. Prerequisites: SOC 100 or 201 or 221.

SOC 214 Sociology of Sexuality 3(3-0)
Sociological examination of human sexuality, sexual identity and community. Identical to WST 214; credit may not be earned in more than one of these courses. Prerequisite: SOC 100.

SOC 215 Youth, Deviance, and Institutions 3(3-0)
Sociological theories and research on youth considered "deviant" and their experiences with social institutions. Emphasis - topics such as runaway, prostitution, foster children, anorexia, addictions, sexuality. Prerequisite: SOC 100 or 201 or 221.

SOC 220 Introduction to Social and Criminal Justice 3(3-0)
Components of the justice system. Social, criminal, and community-based focus. History, structure, functions, and philosophy of criminal justice system, and relationships to a just society. Prerequisite: SOC 100.

SOC 221 Social Problems 3(3-0)
Explores the nature and extent of major social problems. Examines structural, institutional, constructionist and normative elements, and encourages critical engagement with types of proposed solutions. (University Program Group III-B: Studies in Social Structures)

SOC 222 Juvenile Delinquency 3(3-0)
Nature, distribution, social construction, and theories of delinquency. Social reactions to delinquency including development of juvenile court and actions of juvenile justice agencies. Prerequisite: SOC 100 or SOC 201 or SOC 221.

SOC 223 Urban Structures and Change 3(3-0)
Culture and social system of the city. Demographic structures, patterns of conflict and cooperation, and problems peculiar to urban social organization. May be offered as Writing Intensive. Prerequisite: SOC 100 or 221.

SOC 301 Sociological Theory 3(3-0)
A review of sociological thought within its social and historical context, focusing on Marx, Weber, Durkheim, and the perspectives of symbolic interactionism and feminism. Prerequisites: SOC 100 or 201 or 221.

SOC 302 Social Inequality 3(3-0)
Race, class, and gender and other forms of social strata. The bases, consequences, and correlates of position in the system of stratification. Prerequisites: SOC 100 or 201 or 221; or SOC/ANT 101 and a signed Global Justice Minor.

SOC 303 Sociology of Population 3(3-0)
Quantitative and qualitative aspects of the population of societies, including their composition, distribution, and movement. Prerequisite: SOC 100 or 221.

SOC 304 Collective Behavior 3(3-0)
Behavior in situations where institutionalized norms do not apply, such as panics, riots, and social movements. Prerequisites: SOC 200 and 350; SOC 301.

SOC 307 Social Movements, 1960s to the Present 3(3-0)
A survey of social movements of the past several decades that have promoted progressive social change, equal rights, liberation, and peace. Prerequisites: SOC 100 or 201 or 221; or SOC/ANT 101 and a signed Global Justice Minor.

SOC 311 Sociology of Education 3(3-0)
Contributions of sociology to an understanding of education as a social process. Prerequisite: SOC 100 or SOC 201 or SOC 221.

SOC 314 Public Opinion and the Mass Media 3(3-0)
The methods and findings of social research on public opinion, and the effects of the mass media on values and attitudes. Prerequisite: 6 hours of coursework in PSC, PSY or SOC.

SOC 317 Sociology of Sex and Gender 3(3-0)
Analysis of the role of gender in institutions such as the economy, the family, and the schools. Gender inequality and factors that promote its reproduction. Identical to WST 317. Credit may not be earned in more than one of these courses. Prerequisite: SOC 100 or 221 or 222.

SOC 320 Sociology of Aging and Retirement 3(3-0)
Aging as a social phenomenon: with focus on aging in industrial societies. Prerequisite: SOC 100 or 201 or 221.

SOC 321 Deviant Behavior 3(3-0)
Relationship between social structure and deviant behavior. Prerequisite: SOC 100 or 201 or 221.

SOC 322 Racism and Inequality 3(3-0)
Relations among dominant and subordinate groups focusing on racism as structural inequality. This course may be offered in an online or hybrid format. (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

SOC 324 Criminology 3(3-0)
Nature, distribution, social construction, and theories of crime. Introduction to criminal justice processes. Prerequisite: SOC 100 or SOC 201 or SOC 221.

SOC 326 Inequalities and Justice Processes: Race, Class and Gender 3(3-0)
Empirical and theoretical critique of class, race, and gender inequalities in justice processes that impede effective solutions to social problems. Prerequisite: SOC 100 or SOC 201 or SOC 221.

SOC 345 The Civil Rights Movement 3(3-0)
Examines the civil rights movement from 1954 to 1980s; based on PBS series: Eyes on the Prize. Identical to PHL 345, PSC 325, REL 345. Credit may not be earned in more than one of these courses. Prerequisites: Any one of the following: HST 110, HST 111, HST 112, LAB 143, PSC 100, PSC 105, PSC 125, REL 140, SOC 100, (University Program Group IV-C: Studies in Racism and Cultural Diversity in the United States)

SOC 350 Social Research Methodologies 3(3-0)
Second in methods sequence with SOC 200. Research methodologies. Observation and surveys; two from: experiments/single subject design; program evaluation; interviewing/focus groups; ethnography/community studies. Prerequisites: SOC 100; 200 with a grade of "C" (2.0) or better; or for PSY majors, PSY 211 with a grade of "C" (2.0) or better; six additional hours of sociology and/or social work.

SOC 370 Global Environmental Issues 3(3-0)
Social and cultural dimensions of global population issues, food and energy policies, destruction of indigenous lifeways, roles of multinational organizations, environmental racism, and environmental movements. Identical to ANT 370. Credit may not be earned in more than one of these courses.

SOC 397 Independent Study 1-12(Spec)
Directed reading or research on an approved topic. Not open to students on academic probation. Prerequisites: SOC 100 or 201 or 221; permission of instructor.

SOC 399 Special Topics in Sociology 1-12(Spec)
Consideration of subject matter not included in courses currently listed in catalog.

SOC 402 Analysis of Social Change 3(3-0)
Factors explaining large-scale change in the Western and non-Western worlds. Change in smaller units such as the family and community. Prerequisite: SOC 100 or 201 or 221.

SOC 403 Political Sociology 3(3-0)
Social bases of American politics. Sociological theories and research on political behavior and distribution of power in the United States. Prerequisites: SOC 200, 301, 350; or PSC 280 and at least one PSC course at the 300-level or above.

SOC 409 Victimology 3(3-0)
Victimology is the scientific study of victims. Different forms of victimization, victim-offender relationships, and the interactions between victims and social systems/institutions are examined. Prerequisite: SOC 100.

SOC 410 Women, Crime and Deviance 3(3-0)
Exploring the theories, concepts, and social constructions fundamental to the conceptualization of women as victims, offenders, and workers in the criminal justice system. Identical to WST 410. Credit may not be earned in more than one of these courses. Prerequisites: SOC 301, 350.

SOC 411 The Family 3(3-0)
Family as a contested social institution embedded in changing social and cultural contexts. Explores kinship systems, family diversity, social organization, social conflict, family policy, and change. Prerequisites: SOC 100 or 201 or 221.

Course Descriptions approved for University Program are in italics.
SOC 412 Sociology of Adolescence 3(3-0)
- Transition from childhood to adulthood. Emphasis on topics such as identity, peers, relationships with parents, school, and the media. Prerequisite: SOC 100 or 201 or 221.

SOC 413 Sociology of Work 3(3-0)
- Work and professions in post-industrial society: historical perspectives, work ideology, work organization, employment relations, and globalization. Prerequisites: 9 hours in Sociology.

SOC 414 Sociology of Motherhood 3(3-0)
- Sociological analysis of the institution of motherhood, including ideologies, social policies, motherhood and wage earnings, teenagers and single mothers, medicalization, and social stressors. Prerequisites: SOC 100 or 201 or 221.

SOC 415 Sociology of Sport 3(3-0)
- Social structure and consequences of sport as an institution in societies. Prerequisite: SOC 100 or 201 or 221.

SOC 418 Sociology and Popular Culture 3(3-0)
- Musical culture in the U.S. Elements of popular culture include television, radio, recording, advertising, spectator sports, hobbies, food, and fashions. Prerequisites: SOC 100 or SOC 201 or SOC 221.

SOC 422 Youth Welfare 3(3-0)
- Issues pertaining to youth welfare are related to broader organizational and structural features of society, including historical and comparative (international) perspectives. Identical to SWK 422. Credit may not be earned in more than one of these courses. Prerequisites: SOC/ANT 101 and a signed Global Justice Minor; or SOC 100 and a signed Youth Studies Minor; or SOC 200, SOC 301, and SOC 350.

SOC 425 Sociology of Childhood 3(3-0)
- Explores peer culture, social problems, children in families, social policies, and social change of children ages 3-12. Also emphasizes race, class, and gender studies. Prerequisites: SOC 100 or 201 or 221.

SOC 444 Human Trafficking 3(3-0)
- This course examines modern-day human trafficking within the context of social justice and human rights. Prerequisite: SOC 100 or ANT 205 or SOC 205 or PSC 351.

SOC 450 Ethnographic Methods and Research Design 3(3-0)
- Ethnographic methods, ethics, and research design in cultural anthropology. Identical to ANT 450. Credit may not be earned in more than one of these courses. Prerequisite: ANT 170.

SOC 457 Globalization and Society 3(3-0)
- Effects of the global economy on the division of labor, transnational migration, social inequality, ethnic identities, gender relations, and other aspects of social organizations. Identical to ANT 457. Credit may not be earned in both of these courses. Prerequisites: SOC 100 or 201 or 221.

SOC 501 Development of Sociological Theory 3(3-0)
- In-depth analysis of classical sociological theory focusing on Marx, Durkheim, Weber, and Mead. The historical and intellectual context in which these theorists wrote is emphasized. Prerequisites: SOC 100, 201, 221; or graduate standing.

SOC 502 Theories of Race Relations in Sociology 3(3-0)
- Contributions to sociological theories of race and ethnic relations by major theorists. This course may be offered in an online or hybrid delivery format. Prerequisites: SOC 301, 323, 350; or regular admission to the Sociology graduate program.

SOC 506 Comparative Cultural Systems 3(3-0)
- Explores theories of cultural development, with particular emphasis on urban and post-industrial cultures. Students investigate cultures different from their own. Identical to ANT 506. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: SOC 301, 323, 350; or regular admission to the Sociology graduate program.

SOC 507 Class and Poverty in America 3(3-0)
- Examination of theories of social class and their application to American society. Review of empirical literature on class and poverty in the U.S. Prerequisites: SOC 300 or SOC 200, 350; SOC 301; or admission to Graduate Program.

SOC 512 Industrial Sociology 3(3-0)
- Characteristics of industrial societies. Relationship of the organization of industrial work to that of nonwork culture, institutions, and roles. Prerequisites: SOC 300 or both SOC 200 and 350; SOC 301; or regular admission to the Sociology Graduate Program.

SOC 514 Sociology of Health and Illness 3(3-3)
- Social forces that affect the health of populations and individuals, as well as the operations of a major social institution, that of medical care. Prerequisites: Completion of a University Group IIIB Course or regular admission to the Sociology Graduate Program.

SOC 515 Custodial Institutions 3(3-0)
- The structural organizational, and functional dimensions of custodial institutions in American society, emphasizing social process of jails, prisons, training schools, mental hospitals, and nursing homes. Prerequisites: SOC 300 or SOC 200, 350 or PSC 280; SOC 301; or regular admission to the Sociology Graduate Program.

SOC 521 Advanced Study of Deviant Behavior 3(3-0)
- Contemporary issues in deviance theory and research. Prerequisites: SOC 300 or both SOC 200 and 350, SOC 301; SOC 321; or regular admission to the Sociology Graduate Program.

SOC 523 Community Corrections and Alternative Sentencing 3(3-0)
- Justice policies and practices of community corrections and alternative sentencing are featured, including intermediate sanctions, probation, parole, and prisoner reentry. Prerequisites: SOC 300 or both SOC 200 and 350; SOC 301; SOC 220 and an additional 9 hours of social and criminal justice coursework; or regular admission to the Sociology Graduate Program.

SOC 524 Sociology of Law 3(3-0)
- The association of law and social justice, social organization, stratification, and social control. Current issues in justice, law, and conflict resolution. Prerequisites: SOC 200, 350 (or SOC 300); SOC 301; or graduate standing.

SOC 525 Internship in Social and Criminal Justice 6(Spec)
- Supervised practical experience in a criminal or social justice organization. CR/NC only. Prerequisites: SOC 523 with a grade of C or better; permission of the course instructor.

SOC 526 Police and Community Relations 3(3-0)
- Community and police perceptions of police role in democratic society, police discretion, use of force, community policing, and related topics. Prerequisites: SOC 301, 350.

SOC 527 Community-Based Justice 3(3-0)
- Interdisciplinary approach to community as locus of justice, and justice as locus of community. Reviews and critiques a broad range of community study; community development; peacebuilding practices. Prerequisites: SOC 200, 301, 350 or regular admission to the Sociology Graduate Program.

SOC 530 Capstone Experience in Youth Studies 3(3-0)
- Capstone course experience for Social Justice Major: Youth Studies concentration students to work with youth in community settings and meet on campus to reflect on field experience. Prerequisites: SOC 100, 215, 411, 412, 425; ANT 200 or SOC 311; SOC 422 or SWK 422. Co-requirements: Concurrent enrollment in one of the following is permitted: SOC 311, 411, 412, 422, 425, or SWK 422.

SOC 531 Capstone Experience in Global Justice 3(3-0)
- Capstone course synthesizes course work on the issues of global social justice/injustice. Explores roots, consequences, types, policy approaches, and strategies for pursuing global justice. Identical to ANT 531. Credit may not be earned in more than one of these courses. Prerequisites: SOC/ANT 101; 15 hours in the Global Justice Minor; Completion of the Service Learning component of the Global Justice Minor; and Approval of the Global Justice Advisor. May be taken by SOC or ANT Majors with the approval of the Global Justice Advisor. Or, graduate standing.

SOC 532 Global Aging: Cross-Cultural Aging in a Globalized World 3(3-0)
- Comparative study of cultural shapings, expressions and experiences of contemporary aging. Social and cultural responses to perceived problems of aging. Transformations of aging under globalizaton. Cross listed with ANT 532. Credit may only be earned for one of these courses. Prerequisite: Six credits of cultural anthropology, gerontology and/or sociology.

SOC 590 Gender, Culture & Society 3(3-0)
- Analysis of gender roles in various cultures; theoretical approaches to explaining gender role variation. Identical to ANT 590 and WST 590. Credit may not be earned in more than one of these courses. Prerequisites: 6 hours of anthropology and/or sociology and/or women's studies.

SOC 599 Special Topics in Sociology 1-10(Spec)
- Consideration of subject-matter not included in courses currently listed in catalog. For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

SOC 601 Contemporary Sociological Theory 3(3-0)

SOC 602 Professional Seminar 3(3-0)

SOC 605 Sociology of Knowledge 3(3-0)

SOC 607 Methodology of Sociological Research 3(3-0)

SOC 611 Human Difference Within and Between Families 3(3-0)

SOC 619 Continuing Registration for Final Research Project 1(1-0)

SOC 621 Social Control and Justice Systems 3(3-0)

SOC 631 Workshop on Qualitative Research 3(3-0)

SOC 632 Techniques of Sociological Research 3(3-0)

SOC 699 Special Topics in Sociology 1-10(Spec)

SOC 795 Independent Reading 1-6(Spec)

SOC 798 Thesis 1-6(Spec)

SPE - Special Education

See the Department of Counseling and Special Education for more information.

SPE 126 Introduction to Special Education 3(3-0)
- Education of students who deviate significantly from the norm intellectually, physically, emotionally, socially, or educationally.
SPE 322 Curriculum and Instruction for Students with Special Needs 6(6-0)
Special education instructional design and methodology. Includes critical teaching behaviors, strategy instruction, classroom organization and management, and assessment. Prerequisites: SPE 126 with grade of C or better.

SPE 323 Classroom Management for Students with Special Needs 3(3-0)
Intervention approaches to design positive classroom environments. Includes identification of behavioral/affective issues, social skills instruction, and proactive classroom management approaches. Prerequisites: SPE 126 with a grade of C or better; SPE 322 with a grade of C+ or better. Co-requisites: SPE 323 may be taken as a co-requisite with SPE 324.

SPE 324 Special Education Classroom-Based Assessment 6(2-8)
This course is designed to present information on the most current trends in classroom-based assessment, with emphasis placed on Curriculum-Based Assessment Methods. NOTE: Application to register for this course must be filed during the semester prior to registration for approval. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and 323 with a grade of C+ or better; admission to Teacher Education. Pre/Co-requisite: SPE 323 may be taken as a co-requisite with SPE 324.

SPE 455 Special Education Student Teaching Seminar 3(3-0)
This seminar provides review and discussion of a variety of topics related to the special education student teaching experience at the elementary through secondary level. CR/NC only. Prerequisites: Students must have 75 percent of major/minor coursework completed; GPA of 2.7 or better in major/minor coursework; overall GPA of 2.5 or better. Co-requisite: SPE 456 or SPE 458.

SPE 456 Special Education Student Teaching: Emotional Impairment 6(Spec)
This course provides a full-time ten-week field experience working with students with emotional impairment in a classroom appropriate to the special education endorsement. Prerequisites: Elementary Regular Education Students: Completion of EDU 107, 320, and 330 with grades of C+ or better; completion of EDU 343, 345, 362, and 363 with a grade of C+ or better. No grades less than a C+ in all EDU classes. Secondary Regular Education Students: Completion of EDU 107, 290, 310, 325 with grades of C+ or better. No grades less than a C+ in all EDU classes. Both: Approval by major and minor departments indicating that 75 percent of coursework is completed with a GPA of 2.7 or better. Overall GPA of 2.7 or better. Completion of SPE 578, 579, and 581 with grades of C+ or better.

SPE 458 Special Education Student Teaching: Cognitive Impairment 6(Spec)
This course provides a full-time ten-week field experience working with students with cognitive impairment in a classroom appropriate to the special education endorsement. Prerequisites: Elementary Regular Education Students: Completion of EDU 107, 320, and 330 with grades of C+ or better; completion of EDU 343, 345, 362, and 363 with a grade of C+ or better. No grades less than a C+ in all EDU classes. Secondary Regular Education Students: Completion of EDU 107, 290, 310, 325 with grades of C+ or better. No grades less than a C+ in all EDU classes. Both: Approval by major and minor departments indicating that 75 percent of coursework is completed with a GPA of 2.7 or better. Overall GPA of 2.7 or better. Completion of SPE 519, 521, and 522 with grades of C+ or better.

SPE 466 Independent Study 1-3(Spec)
Individualized research or project dealing with a problem in special education. Prerequisite: permission of department chairperson.

SPE 500 Parent and Professional Relationships in Special Education 3(3-0)
Establishing and maintaining collaborative relationships with parents and professionals. Study of effects of an exceptional child on the family and methods for meeting their needs. This course is approved for offering in a distance learning format. Prerequisite: Junior standing or graduate status.

SPE 504 Teaching Students in Inclusive Settings 3(3-0)
Theory and practice of the instruction of students who have disabilities in general education settings. This course is approved for offering in a distance learning format. Prerequisite: Junior standing or graduate status.

SPE 510 Advanced Technology in Education 3(2-3)
Students will study and practice the integration of technology in classroom instruction and management, with emphasis upon software evaluation and lesson design. Identical to EDU 590. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisite: EDU 280 or junior standing.

SPE 519 Students with Cognitive Impairment 3(3-0)
Causes, diagnostic procedures, and research concerning individuals with cognitive impairment. Grade of C+ or better required to count toward degree. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and 323 with grades of C+ or better; admission to Teacher Education. Graduate students may be admitted with permission of instructor.

SPE 521 Teaching Students with Cognitive Impairment 3(3-0)
Special techniques and materials used in instruction of students who have cognitive disorders. Grade of C+ or better required to count toward degree. This course may be offered in an online or hybrid format. Prerequisites: SPE 126 with grade of C or better; SPE 322, SPE 323 with grades of C+ or better; admission to Teacher Education. Graduate students may be admitted with permission of instructor.

SPE 522 Field Experience-Cognitive Impairment 3-6(Spec)
University-supervised practice and application of knowledge and strategies for teaching students with cognitive impairment. Grade of C+ or better required to count toward degree. Prerequisites: SPE 126 with a grade of C or better; SPE 322, 323, 324, 519 and 521 with grades of C+ or better; admission to Teacher Education.

SPE 529 The Gifted Student 3(3-0)
Characteristics of individuals with superior abilities. Reviews special curricula and teaching procedures for improving the learning and adjustment of these students. This course has been approved for offering in a distance learning format. Prerequisites: Junior standing or graduate status.

SPE 530 Autism Spectrum Disorder: Characteristics and Etiology 3(3-0)
Known causes of this disorder will also be examined. Identical to PSY 575. Credit may not be earned in more than one of these courses. Prerequisite: Senior or graduate status.

SPE 531 Autism Spectrum Disorder: Educational Implications 3(3-0)
Presentation of special techniques and materials used in best practice instruction of students with autism spectrum disorders. This course may be offered in an online or hybrid format. Prerequisites: SPE 530 and senior or graduate status.

SPE 536 Field Experience: Autism 3(Spec)
Practice and application of knowledge and strategies for teaching students with autism under faculty supervision. Application to register for this course must be filed during the semester prior to registration for approval. Prerequisites: SPE 530, SPE 531, PSY 586, PSY 682, CDO 550, and graduate status.

SPE 545 Special Education Workshop 1-6(Spec)
Study of trends, alternative approaches, and innovative curricula in programming for the exceptional student. This course is a variable credit topical workshop. This course is approved for offering in a distance learning format. Prerequisite: Junior standing or graduate status.

SPE 550 Teaching Culturally Diverse Students 3(3-0)
Survey of sociocultural influences on the performance of students from varying backgrounds, and educational provisions made for them in public schools including an anti-bias curriculum. This course is approved for offering in a distance learning format. Prerequisites: Junior standing or graduate status.

SPE 570 Career Development and Transition 3(2-0)
Lifespan issues for persons with disabilities, stressing curriculum content and instructional strategies that promote interdisciplinary career development and transition education at all age levels. This course is approved for offering in a distance learning format. Prerequisites: SPE 126 with a grade of C or better; junior standing or graduate status.

SPE 577 Introduction to Specific Learning Disability 3(3-0)
Systematic introduction to the identification, diagnosis and remediation of specific learning disabilities. This course is approved for offering in a distance learning format. Prerequisite: Junior standing or graduate status.

SPE 578 Students with Emotional Impairment 3(3-0)
Diagnostic procedures, therapy, and research concerning children and youth with emotional impairment. Grade of C+ or better required to count toward degree. This course may be offered in an online or hybrid format. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and 323 with grades of C+ or better; admission to Teacher Education.

SPE 579 Teaching Students with Emotional Impairment 3(3-0)
Special techniques and materials used in instruction of students who have emotional and behavioral disorders. Grade of C+ or better required to count toward degree. This course may be offered in an online or hybrid format. Prerequisites: SPE 126 with a grade of C or better; SPE 322, 323 with grades of C+ or better; admission to Teacher Education. Graduate students may be admitted with permission of instructor.

SPE 581 Field Experience-Emotional Impairment 3-6(Spec)
University-supervised practice and application of knowledge and strategies for teaching students with emotional impairment. Grade of C+ or better required to count toward degree. Prerequisites: SPE 126 with a grade of C or better; SPE 322, 323, 324, 578, 579 with grades of C+ or better; admission to Teacher Education.

SPE 585 Early Childhood Special Education 3(3-0)
Current issues in early childhood special education aligned with developmentally appropriate practices, working with families, professionals, and curriculum focused on children birth to eight. This course may be offered in an online or hybrid format. Prerequisites: HDF 100 or EDU 280; or junior standing; or graduate status.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

SPE 600 Current Issues in Special Education 3(3-0)

SPE 619 Continuing Registration for Final Research Project 1(1-0)

SPE 640 Administration of Special Education 3(3-0)

SPE 645 Special Education Workshop 1-6(Spec)

SPE 667 Independent Study 1-6(Spec)

SPE 675 Teaching the Student with Learning Disabilities 3(3-0)

SPE 678 Education of Students with Severe Emotional Impairment 3(3-0)
SPN - Spanish

See the Department of Foreign Languages, Literatures, and Cultures for more information.

**SPN 101 Elementary Spanish I 4(4-0)**
Designed for students who have had no Spanish. Basic language skills. Introduction to the culture of the Spanish-speaking countries. Students who have previous preparation in Spanish are required to take a placement exam. Students who have had more than two years of high school Spanish may enroll only with permission of instructor. Recommended: SPN 101. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**SPN 201 Intermediate Spanish I 4(4-0)**
Further development of all language and reading skills, a review of grammar, and exploration of Hispanic culture. Recommended: SPN 102. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**SPN 202 Intermediate Spanish II 4(4-0)**
Designed to develop fluency in reading Spanish; cultural emphasis. Recommended: SPN 201. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**SPN 210 Study Abroad 1-12(Spec)**
Intended for students studying abroad. Prerequisite: permission of instructor.

**SPN 214 Intermediate Conversation and Composition 3(3-0)**
Designed to develop fluency and accuracy in written and oral composition. Recommended: SPN 202; or may be taken concurrently with SPN 202. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

**SPN 301 Study Abroad 1-12(Spec)**
Intended for advanced students studying abroad. Prerequisite: SPN 202; permission of instructor.

**SPN 320 Spanish Pronunciation 3(3-0)**
Provides an understanding of Spanish articulatory phonetics and helps students improve pronunciation by training them in Spanish articulatory habits to make their pronunciation more native-like. Recommended: SPN 214.

**SPN 331 Advanced Grammar and Composition 3(3-0)**
Designed to develop greater accuracy in grammar and fluency in written expression in Spanish. Prerequisites: SPN 202, 214.

**SPN 335 Spanish for Business 3(3-0)**
Designed for students interested in acquiring practical Spanish vocabulary related to business, and in developing writing, reading and speaking skills through business documents in Spanish. Prerequisite: SPN 214.

**SPN 341 Advanced Spanish Conversation 3(3-0)**
Intended for those with some skill in speaking Spanish who wish to achieve greater fluency. Recommended: SPN 202 and SPN 214.

**SPN 370 Advanced Studies in Spanish 1-12(Spec)**
Special topics may include language, literature and/or culture. May be repeated when the content is not a duplication of a previous special topics offering. Prerequisite: SPN 331.

**SPN 376 Culture and Civilization of Spain 3(3-0)**
Spanish culture and civilization focusing on political, social, intellectual, and artistic developments and their influence on the history and present of Spain. May be offered as Writing Intensive. Prerequisite: SPN 331.

**SPN 377 Culture and Civilization of Latin America 3(3-0)**
Historical and cultural development of Latin America from the pre-Columbian era through the present. May be offered as Writing Intensive. Prerequisite: SPN 331.

**SPN 378 Survey of Spanish Literature (Beginning to 1700) 3(3-0)**
Literature of Spain from the Middle Ages to 1700. Prerequisite: SPN 331.

**SPN 379 Survey of Spanish Literature (1700 to Present) 3(3-0)**
Literature of Spain from the eighteenth century to the present. Prerequisite: SPN 331.

**SPN 380 Survey of Spanish-American Literature (Beginnings to Modernism) 3(3-0)**
General acquaintance with the literature of Spanish America from its beginnings to the modernist movement. Selections from representative authors. Prerequisite: SPN 331.

**SPN 389 Survey of Spanish-American Literature (Modernism to Present) 3(3-0)**
General acquaintance with the literature of Spanish America from modernism to the present. Selections from representative authors. Prerequisite: SPN 331.

**SPN 404 Drama of the Siglo de Oro 3(3-0)**
A study of major and lesser playwrights of the 17th century. Recommended: SPN 376 or SPN 377; One of: SPN 386, 387, 388, 389.

**SPN 405 Modern and Contemporary Spanish Novel 3(3-0)**
Development of the novel in Spain from the nineteenth century to the present. May be offered as Writing Intensive. Prerequisites: SPN 376 or SPN 377; One of: SPN 386, 387, 388, 389.

**SPN 410 Study Abroad 1-12(Spec)**
Intended for advanced students studying abroad. Prerequisites: Six hours of Spanish at the 300 level; permission of instructor.

**SPN 411 Practicum in Teaching Spanish 2-1(Spec)**
Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting materials for secondary-level classrooms. Practical experience through mini-teaching situations. Prerequisites: Two 300-level courses; passing the competency exam; departmental permission.

**SPN 412 Practicum: Secondary Field Experience 1(Spec)**
Pre-student teaching experience in middle or high school teaching situation. CR/NC only. Co-requisite: SPN 411.

**SPN 415 Spanish-American Novel 3(3-0)**
Representative masterpieces of the novel as they reflect the political and social conditions of the Spanish-American countries. May be offered as Writing Intensive. Prerequisite: SPN 376 or SPN 377; One of: SPN 386, 387, 388, 389.

**SPN 416 Spanish-American Drama and Essay 3(3-0)**
Representative masterpieces of the two genres as they reflect the political and social conditions of the Spanish American countries. Recommended: SPN 376 or SPN 377; One of: SPN 386, 387, 388, 389.

**SPN 417 Spanish-American Poetry and Short Story 3(3-0)**
Representative masterpieces of the two genres as they reflect the political and social conditions of the Spanish-American countries. Recommended: SPN 376 or SPN 377; One of: SPN 386, 387, 388, 389.

**SPN 421 Foreign Language in Elementary Schools 1(1-0)**
Techniques for teaching and testing foreign language skills, planning lessons and units, and selecting texts, cultural materials and teaching aids. Practical experience through mini-teaching situations. Corequisite: SPN 411.

**SPN 422 Practicum: Elementary Field Experience 1(Spec)**
Pre-student teaching experience in elementary school teaching situation. CR/NC only. Co-requisite: SPN 421.

**SPN 431 Advanced Writing in Spanish 3(3-0)**
Writing Spanish in different registers, giving special consideration to the command of grammar, vocabulary, spelling, and style. Emphasis on expository and argumentative texts. May be offered as Writing Intensive. Prerequisites: SPN 331 with a B- or better; SPN 376 or SPN 377.

**SPN 470 Advanced Studies in Spanish 1-12(Spec)**
Special topics may include language, literature and/or culture. May be repeated when the content is not a duplication of a previous special topics offering. Recommended: SPN 376 or SPN 377; One of: SPN 386, 387, 388, 389.

**SPN 508 Contemporary Spanish Novel and Short Story 3(3-0)**
Outstanding novels and short stories of Spain since 1940 reflecting politics, society, economics, and culture of Spain after the Civil War. Recommended: Three (3) credits in Spanish at the 400 level.

**SPN 585 Introduction to Hispanic Linguistics 3(3-0)**
Seminar on the major aspects of Hispanic Linguistics such as sound patterns, word-formation, sentence structure, meaning and context, discourse structure, regional and social variation. Prerequisite: One 400-level SPN course; or graduate standing in the M.A. Spanish Program.
SPN 591 Special Topics in Spanish 1-9(Spec)
Special topics may include language, literature and/or culture. May be repeated when the content is not a duplication of a previous special topics offering. Recommended: Three (3) credits in Spanish at the 400-level; or graduate standing in M.A. Spanish Program.

SPN 595 Theory and Practice of Translation 3(3-0)
Seminar on the historical, theoretical and practical aspects of translation. The link between linguistic and cultural factors and their relationship to translation will be emphasized. This course may be offered in an online or hybrid format. Prerequisites: SPN 375; one SPN 400 level course; or graduate standing in M.A. Spanish Program.

SPN 597 Independent Study 1-6(Spec)
The in-depth study of a topic under the direction of a faculty member who together with a student designs the format of the study. Prerequisites: permission of instructor and department chairperson; three (3) credits in Spanish at the 400 level.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

SPN 601 Studies in U.S. Latino Cultures 3-6(3-0)

SPN 619 Continuing Registration for Final Research Project 1(1-0)

SPN 620 Special Topics in Spanish-American Literature 3-9(Spec)

SPN 621 Colonial to 19th-Century Spanish American Literature 3(3-0)

SPN 622 20th and 21st-Century Spanish American Literature 3(3-0)

SPN 623 Critical Thinking through Hispanic Literature 3(3-0)

SPN 630 Themes in Spanish Peninsular Literature and Cultures 3-9(Spec)

SPN 631 Medieval and Golden Age Spanish Literature 3(3-0)

SPN 632 Eighteenth to Twenty-first Century Spanish Literature 3(3-0)

SPN 640 History of the Spanish Language 3(3-0)

SPN 650 Stylistics 3(3-0)

SPN 655 Spanish Pragmatics and Critical Discourse Analysis 3(3-0)

SPN 660 Spanish Phonology 3(3-0)

SPN 665 Second Language Acquisition: Theory and Practice 3(3-0)

SPN 670 Study Abroad: Latin America 3-6(Spec)

SPN 680 Study Abroad: Spain 3-6(Spec)

SPN 697 Individual Study for the Comprehensive Examination 3(3-0)

SSC - Social Sciences
See the College of Humanities and Social and Behavioral Sciences for more information.

SSC 197 Special Studies in Social Science 1-12(Spec)
Primarily for freshmen or sophomores. Prerequisite: permission of instructor.

SSC 397 Special Studies in Social Science 1-12(Spec)
Primarily for juniors and seniors. Prerequisite: permission of instructor.

SSC 597 Special Studies in Social Science 1-12(Spec)
Primarily for graduate students. Prerequisite: permission of instructor.

STA - Statistics
See the Department of Mathematics for more information.

STA 103QR Evidence-based Problem Solving in Modern Society 3(3-0)

STA 282QR Introduction to Statistics 3(3-0)
Descriptive statistics, probability, sampling distributions, statistical inference, and regression. Course does not count on major, minor in mathematics. Credit may not be earned in more than one of these courses: STA 282, STA 382, STA 392. Quantitative Reasoning. This course may be offered in an online or hybrid format. Recommended: MTH 105 or competency.

STA 382QR Elementary Statistical Analysis 3(3-0)
An introduction to statistical analysis. Topics will include descriptive statistics, probability, sampling distributions, statistical inference, and regression. Credit may not be earned in more than one of these courses: STA 282, STA 382, STA 392. Quantitative Reasoning. Prerequisite: MTH 130 or 132 or 133. (University Program Group II-B: Quantitative and Mathematical Sciences).

STA 392 Probability and Statistics for Engineers 3(3-0)
An introduction to statistical analysis emphasizing engineering applications. Topics include descriptive statistics, probability, sampling distributions, estimation, hypothesis testing, regression, quality control, and reliability. Credit may not be earned in more than one of these courses: STA 282, 382, and 392. Prerequisite: MTH 133.

STA 539 Probability Foundations of Actuarial Science 3(3-0)
Fundamental probability tools for quantitatively assessing risk, with emphasis on application of these tools to problems encountered in actuarial science. Prerequisites: FIN 317; STA 584.

STA 575 Statistical Programming for Data Management and Analysis 3(3-0)
Introduction to statistical programming for managing and analyzing data, including programming logic, data manipulation, missing data handling, basic techniques for analyzing data and creating reports. This course may be offered in an online or hybrid format. Prerequisites: STA 282 or 382 or 392; or graduate standing.

STA 580 Applied Statistical Methods I 3(3-0)
Applications of statistical analysis methods including the usage of computer software packages. Topics include simple and multiple regression, diagnostics, forecasting, and analysis of variance. This course may be offered in an online or hybrid format. Prerequisites: STA 282 or 382 or 392; or graduate standing.

STA 582 Experimental Designs 3(3-0)
Randomized block designs, Latin square designs, factorial designs, fractional factorial designs, response surface methods, robust designs. Prerequisite: STA 580.

STA 583 Nonparametric Statistics 3(3-0)
Theory and applications of nonparametric methods. Topics include one, two, and several sample problems, rank correlation and regression, Kolmogorov-Smirnov tests and contingency tables. Prerequisites: STA 282 or 382 or 392; or graduate standing.

STA 584 Mathematical Statistics I 3(3-0)
Probability defined on finite and infinite samples spaces, conditional probability and independence, random variables, expectations, moment-generating functions, probability models, limit theorems. Prerequisite: MTH 233.

STA 585 Mathematical Statistics II 3(3-0)
Introductory topics from mathematical theory of statistics: population distributions, sampling distributions, point and interval estimation, tests of hypotheses. Prerequisite: STA 584.

STA 586 Clinical Trials and Survival Analysis 3(3-0)
Simple and advanced statistical techniques used in the analysis and interpretation of clinical research data. Emphasis on statistical techniques commonly used in chronic disease analysis. Prerequisite: STA 282 or 382 or 392; or graduate standing.

STA 587 Statistical Theory and Methods for Quality Improvement 3(3-0)
Statistical theory and methods for optimizing quality and minimizing costs: classical and recently developed on-line methods and Taguchi's off-line quality and robust designs. Prerequisites: STA 580.

STA 588 Sampling Techniques 3(3-0)
Principals of sampling; simple random sampling; stratified random sampling; systematic sampling; cluster sampling; sample size determination; ratio and regression estimates; comparisons among the designs. Prerequisites: STA 282 or 382 or 392; or graduate standing.

STA 589 Time Series Forecasting 3(3-0)
Introduction to basic time series forecasting techniques. Topics include forecasting, Box-Jenkins models, time series regression, and transfer function models. Prerequisite: STA 580.

STA 590 Applied Statistical Methods II 3(3-0)
Multivariate ANOVA, multiple comparison procedures, analysis of covariance, repeated measures analysis, unbalanced data and missing data analysis. Prerequisites: STA 580 and MTH 223.

STA 591 Data Mining Techniques I 3(3-0)
Data mining techniques for analyzing large and high dimensional data. Topics include data mining strategy, exploratory analysis, predictive modeling techniques, model assessment and comparison. This course may be offered in an online or hybrid format. Prerequisites: STA 580 or graduate standing.

STA 592 Six Sigma: Foundations and Techniques for Green Belts 3(3-0)
Six Sigma problem solving strategy for continuous improvement. Topics include DMAIC and PDMA strategies and applications, tools and statistical techniques used in the strategies. Prerequisites: STA 282 or 382 or 392; or graduate standing.

STA 595 Introduction to Bayesian Statistics 3(3-0)
Introduction to Bayesian analysis and applications. Topics include principles of Bayesian statistics, Bayesian linear models and generalized linear models. Prerequisites: STA 580, 584 or graduate standing.

STA 596 Special Topics In Statistics 1-6(Spec)
Subject matter not included in regular courses. May be taken for credit more than once, total credit not to exceed 6 hours. Prerequisite: permission of the instructor.

STA 597 Independent Study 1-6(Spec)
The in-depth study of a topic in statistics under the direction of a faculty member. May be taken for credit more than once, total credit not to exceed six hours. Prerequisite: Permission of instructor.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

STA 675 Advanced Statistical Data Management and Simulation 3(3-0)
STA 678 Categorical Data and Survival Analysis 3(3-0)
STA 682 Linear Models 3(3-0)
STA 684 Theory of Statistical Inference 3(3-0)
STA 686 Multivariate Analysis 3(3-0)

Course Descriptions approved for University Program are in italics.
SWK - Social Work

See the Department of Sociology, Anthropology, and Social Work for more information.

SWK 100 Introduction to Social Work 3(3-0)
Knowledge, skills, and values for social work generalist practice within micro, mezzo, and macro client systems. Emphasis on culturally-competent and evidence-based practice. Prerequisites: Admitted to the Social Work Program; all SWK program required volunteer hours completed; SWK 315, 374, Co-requisite: SWK 375.

SWK 315 Social Work Generalist Practice I 3(3-0)
Generalist communication skills through interviewing and information exchange with micro, mezzo and macro client systems. Develop ability to assess information obtained. Prerequisites: Must have minimum of 2.5 GPA; signed Social Work Major; applied to the Social Work Program; 100 completion of 24 credit hours. Pre/Co-requisites: SWK 250; SOC 350. Co-requisite: SWK 374.

SWK 321 Social Work Generalist Practice II 3(3-0)
Knowledge, skills, and values for social work generalist practice within micro, mezzo, and macro client systems. Emphasis on culturally-competent and evidence-based practice. Prerequisites: Admitted to the Social Work Program; all SWK program required volunteer hours completed; SWK 315, 374, Co-requisite: SWK 375.

SWK 470 Social Work Practicum I 4(Spec)
Analysis and evaluation of social policies and social welfare services. Emphasis on social action, social and economic justice and impact on at-risk groups. Prerequisites: Admitted to the Social Work Program; SWK 250, SOC 221 or 302, SWK 470, Co-requisites: SWK 480.

SWK 470 Social Work Practicum I 4(Spec)
200 hours of supervised experience in a social work setting. CR/NC only. Prerequisites: Admitted to the Social Work Program; SWK 321, 375. Co-requisite: SWK 331, 471.

SWK 471 Social Work Practicum Seminar I 2(2-0)
Students consciously and critically integrate knowledge with direct practice observed in a field agency and compare generalist practice as implemented in different agencies. Prerequisites: Admitted to the social work program; Co-requisite: SWK 470.

SWK 480 Social Work Practicum II 4(Spec)
Continuation of 200 hours of supervised experience in a social work setting. CR/NC only. Prerequisites: Admitted to the Social Work Program; SWK 470, 471 with a B- or better. Pre/Co-requisite: SWK 450, Co-requisite: SWK 481.

SWK 481 Social Work Practicum Seminar II 2(2-0)
Students consciously and critically integrate knowledge with direct practice as performed in a field agency and compare generalist practice as implemented in different agencies. Prerequisites: SWK 471 with a B- or better, SWK 470. Pre-Co-requisite: SWK 450, Co-requisite: SWK 480.

SWK 490 Community Development: A Critical Approach 3(3-0)
Integrative capstone experience that synthesizes knowledge, skills, and applications in community development and community-based social work in an approved agency project proposal. May be offered in an online or hybrid format. Pre/Co-requisite: SWK 470 (for Social Work students) or Prerequisite: 86 semester hours and signed major in Bachelor of Science degree with an option in Community Development.

SWK 597 Independent Study 1-12(Spec)
Directed reading or research on approved topic. Prerequisite: Completion of at least 75 undergraduate credits or graduate standing. Recommended: SWK 100.

SWK 599 Special Topics in Social Work 1-12(Spec)
Consideration of subject matter not included in courses currently listed in the Bulletin. Prerequisite: Completion of at least 75 undergraduate credits or graduate standing. Recommended: SWK 100.
TAI 307 Studio: Movement 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of movement. Prerequisite: written permission of instructor.

TAI 308 Studio: Script Creation 1-4(Spec)
Script creation through adaptation of nondramatic materials or creation of original dramatic material for potential use in laboratory theatre or oral interpretation activities. Prerequisite: written permission of instructor.

TAI 309 Studio: Stage Management 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of stage management. Prerequisite: written permission of instructor.

TAI 310 Studio: Sound 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of sound. Prerequisite: written permission of instructor.

TAI 311 Studio: Properties 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of properties. Prerequisite: written permission of instructor.

TAI 312 Studio: Scenery Construction and Rigging 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of scenery construction and rigging. Prerequisite: written permission of instructor.

TAI 313 Studio: Scene Design 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of scene design. Prerequisite: written permission of instructor.

TAI 314 Studio: Lighting 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of lighting. Prerequisite: written permission of instructor.

TAI 315 Studio: Lighting Design 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of lighting design. Prerequisite: written permission of instructor.

TAI 316 Studio: Technical Direction 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of technical direction. Prerequisite: written permission of instructor.

TAI 317 Studio: Costuming 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of costuming. Prerequisite: written permission of instructor.

TAI 318 Studio: Wardrobe Management 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of wardrobe management. Prerequisite: written permission of instructor.

TAI 319 Studio: Makeup 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of stage makeup. Prerequisite: written permission of instructor.

TAI 320 Studio: Theatre Management 1-4(Spec)
Major participation in faculty/staff-supervised university theatre or oral interpretation activities in the area of box-office management. Prerequisite: written permission of instructor.

TAI 321 Studio: Dramaturgy 1-4(Spec)
Major participation in faculty and/or staff-supervised university theatre or oral interpretation activities in the area of dramaturgy. Prerequisite: Written permission of instructor.

TAI 352 Music Theatre Scene Study 3(1-2)
Analysis and presentation of musical theatre scenes (duets, trios, groups). Study of character development in various music theatre styles. Prerequisites: MUS 250; TAI 182.

TAI 371 Readers Theatre 3(3-0)
Scripting and directing alternative texts for performance, including narrative fiction, lyrical poetry, personal narratives, and nonfictional prose. Prerequisite: TAI 170.

TAI 373 Oral Interpretation for Children 3(3-0)
General education approach to the art of oral interpretation as a dynamic means of experiencing literature for children and communicating it to children.

TAI 376 Interpretation of Drama 3(3-0)
Specialized study of dramatic literature with particular attention to analysis, performance, styles of drama, stage speech, and appropriate dialects. Prerequisite: TAI 170.

TAI 377 Costuming 13(3-0)
Survey of costume history, Egyptian to the present; introduction to design and construction techniques.

TAI 378 Stage Combat 3(2-2)
Basic principles of stage combat as they apply to hand-to-hand, quarterstaff, and rapier-and-dagger techniques. Prerequisite: TAI 182.

TAI 379 Acting for the Camera 3(3-0)
The creative process and special technical aspects of acting for the camera. Prerequisites: TAI 182.

TAI 380 Musical Theatre History 3(3-0)
Examination of American Musical Theatre history and forms from 1866 to the present.

TAI 382 Acting III 3(3-0)
Period movement patterns, pantomime techniques, and regional and cultural dialects, with individual scenes prepared for critical evaluation. Prerequisite: TAI 182, TAI 282.

TAI 383 Voice for the Actor 3(3-0)
Vocal techniques for actors. Designed to provide the student with a general understanding of vocal technique and theory, as they apply to characterization and acting. Prerequisites: TAI 182, TAI 302.

TAI 384 Movement for the Actor 3(3-0)
Movement techniques for actors. Designed to provide the student with a general understanding of movement technique and theory, as it applies to characterization and acting. Prerequisite: TAI 182.

TAI 385 Audition Techniques 3(3-0)
Practical audition skills including monologue selection, analysis and performance, cold readings, audition etiquette and protocol. Prerequisites: TAI 182, TAI 282.

TAI 399 Theatre and the Holocaust 3(3-0)
This course examines how theatre was/is used to represent and respond to the Holocaust and Nazi culture. Historical, political, ethical, and aesthetic questions are explored. (University Program Group IV-B: Studies in Cultures Outside of the Anglo-American Tradition)

TAI 452 Music Theatre Performance 3(2-2)

TAI 460 BFA Capstone Project 3(0-6)
Major capstone project in theatre (including music theatre) and/or interpretation. Prerequisite: Must be approved by TAI or Music Theatre faculty/staff advisor(s) prior to registration. Must be completed in final year of study.

TAI 476 Lighting Design 3(3-0)
Theory and application of basic principles used in designing lighting for the theatre. Prerequisite: TAI 177. Recommended: TAI 314.

TAI 477 Scene Design 3(3-0)
Theory and application of basic principles used in designing scenery for the theatre. Prerequisite: TAI 177.

TAI 478 Theatre Management 3(3-0)
Concepts and methods of theatre management and promotion: box-office procedures, house management, and publicity.

TAI 481 Directing 3(3-0)
Responsibilities, philosophies, and techniques of the stage director. Emphasis on preparation of scenes for evaluation. Prerequisite: TAI 182.

TAI 490 Independent Study 1-4(Spec)
Student-initiated study guided by faculty member or faculty committee. Undergraduate prerequisites: an overall B average, permission of advisor and staff advisor(s) prior to registration. Must be completed in final year of study.

TAI 499 Senior Capstone 3(3-0)
Capstone course that integrates academic and production experiences in theatre with students' career goals. Prerequisites: senior standing and completion of 30 hours of the TAI major.

TAI 518 Advanced Make-up 3(2-2)
Practical application of advanced make-up materials and techniques, including both two-dimensional and three-dimensional make-up. Prerequisite: TAI 278. Recommended: ART 260, 261.

TAI 569 History of American Theatre 3(3-0)
Development of drama and theatre in America from colonial times to the present. Prerequisites: 6 hours of TAI coursework.

TAI 570 Oral Interpretation of Prose Fiction 3(3-0)
Specialized study of the short story and novel, in both individual and group performances. Prerequisites: one course in oral interpretation; one course in fictional literature.

TAI 571 Oral Interpretation of Poetry 3(3-0)
Specialized study of poetry. Prerequisites: one course in oral interpretation and one course in poetic literature.

TAI 572 Special Topics in Oral Interpretation 1-9(Spec)
Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours. Prerequisite: one course in oral interpretation and/or a major in English.

TAI 573 Seminar: Interpretative Reading 3(3-0)
History of the art of interpretative reading, its current theories and possible trends. Prerequisite: one course in interpretative reading.

TAI 574 History of Drama and Theatre I 3(3-0)
Development of drama and theatre in Western Culture from ancient origins to 1700. Prerequisites: 6 hours of TAI coursework.

Course Descriptions approved for University Program are in italics.
TAI 575 History of Drama and Theatre II 3(3-0)
Continuation of TAI 574. History of Drama and Theatre I. Development of drama and theatre in Western Culture from 1700 to 1945. Prerequisites: 6 hours of TAI coursework.

TAI 577 Special Topics in Technical Theatre 1-9(Spec)
Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours. Prerequisites: Two from the following: TAI 177, TAI 278, TAI 377, TAI 477.

TAI 578 Special Topics in Theatre 1-9(Spec)
Current topics for each semester listed in Course Search and Registration. 3 hours each; maximum credit 9 hours. Prerequisites: Two undergraduate courses in theatrical production.

TAI 579 Costume Design and Construction 3(3-0)
Location of costume requirements consistent with federal and international standards. Design constraints imposed by manufacturing processes and design's impact on product quality and cost. Prerequisite: TEC 320.

TAI 580 Dramatic Theory and Criticism 3(3-0)
Analysis of significant theories of theatre and drama. Prerequisite: TAI 574 or TAI 575.

TAI 581 Advanced Directing 3(3-0)
Continuation of TAI 481. Directing. Emphasis on the rehearsal and performance of one-act plays for public presentation. Prerequisites: TAI 177 and TAI 481. Admission by approval of instructor only (contact CDA office for procedure).

TAI 583 Women in the Contemporary American Theatre 3(3-0)
Examines the contributions of women producers, directors, playwrights, actors, designers, and critics to the development of the contemporary American theatre. Prerequisites: 6 hours of TAI coursework.

TAI 584 Field Course in Theatre 1-4(Spec)
A travel course to metropolitan theatrical productions and institutions. Required are a pre-travel reading program and final reaction/evaluation paper.

TAI 585 Creative Dramatics 3(2-2)
Techniques of guiding children through original dramatizations. Primarily for the classroom teacher.

TAI 586 Playwriting 3(3-0)
Theory and practice in writing original plays; discussion and critical evaluation of student plays. Prerequisites: ENG 201; ENG 294 or one course in history of drama and theatre.

TAI 587 Irish Theatre and Drama 3(3-0)
Development of theatre and drama in Ireland. Course requires travel to Ireland during Winter Break. Prerequisites: Permission of Instructor.

TAI 588 Contemporary Theatre 3(3-0)
Development of drama and theatre in Western Culture from 1945 to the present. Prerequisites: 6 hours of TAI coursework.

TAI 589 Theatre Workshop 2-6(Spec)
Theoretical and practical work in productions of the University Theatre. Prerequisite: minimum of one course in theatre.

TAI 590 Summer Repertory Theatre 3(3-0)
Intensive practical theatre experience in the repertory situation under professional direction and guidance. Prerequisite: applicant admitted to course only through audition.

For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

TAI 602 Modern Performance Theory 3(3-0)

TAI 619 Continuing Registration for Final Research Project 1(1-0)

TAI 790 Advanced Independent Study 1-4(Spec)

TEC - Technology
See the School of Engineering and Technology for more information.

TEC 222 Introduction to Computer-Aided Technology for Vehicle Design 3(2-2)
Introduction to computer-aided technology specific to designing vehicles in a global market. Emphasis on part design as applied to surface and solid part modeling. Prerequisite: IET 154.

TEC 297 Special Topics 1-6(Spec)
Variable credit, variable content courses with credit and specific topics identified in Course Search and Registration. Prerequisites: permission of instructor.

TEC 320 Vehicle Systems and Design Terminology 3(3-0)
A comprehensive review of automotive systems and components for the student who is interested in vehicle design. Focus is on terminology and system and component interdependence. Prerequisites: minimum of two years vehicle design work experience or minimum of 6 semester hours of drafting and descriptive geometry plus 6 semester hours of computer-aided design credit.

TEC 321 Technical Creativity 3(3-0)
A study of individual and group creative processes related to the design of new products and the application of new technologies. Prerequisite: TEC 320.

TEC 322 Intermediate Computer-Aided Technology for Vehicle Design 3(2-2)
Intermediate computer-aided technology specific to advance part design as applied to surface and solid part modeling in designing vehicles in a global market. Prerequisite: TEC 222.

TEC 323 Materials and Applications in Vehicle Design 3(3-0)
The study of various vehicle design applications and mechanical properties of steel, aluminum, composites, and plastics used in vehicle manufacturing. Prerequisites: IET 154, IET 226, TEC 320.

TEC 324 Finite Element Modeling and Analysis 3(2-2)
CAD solutions and strategies utilizing solid and surface modeling meshing for advanced automotive design applications, setting of loads and restraints. Prerequisites: IET 379, TEC 322.

TEC 325 Design for Manufacturing and Assembly 3(3-0)
A study of relationships between vehicle design, manufacturing, and assembly. Design constraints imposed by manufacturing processes and design's impact on product quality and cost. Prerequisite: TEC 323.

TEC 326 Vehicle Systems and Design Requirements 3(3-0)
Automotive systems with focus on interdependence of components and assembly systems with concern for manufacturing quality, maintenance, and ergonomic good design/bad design. Prerequisites: TEC 324.

TEC 327 Design Creativity and Value Methodology 3(3-0)
Creative processes utilizing team approaches during initial design as well as product improvement. Emphasis is on product value and customer satisfaction. Prerequisites: TEC 326.

TEC 328 Materials and Applications in Vehicle Design 3(3-0)
Physical properties of ferrous and non-ferrous metals as well as polymers and composites. Various forming, molding, and fabrication techniques are included. Prerequisites: TEC 226, IET 379.

TEC 350 Vehicle Packaging 3(3-0)
Vehicle designs for occupant packaging, seating arrangements, vision requirements, luggage storage, ground to bumper requirements, component dimensions, and legal/government design criteria, standards, and regulations. Prerequisite: TEC 320.

TEC 376 Metal Forming 3(3-0)
Design techniques and applications related to cutting, forming, and maintaining design tolerances related to forming processes. Prerequisite: TEC 322.

TEC 377 Vehicle Related Metal Forming and Shaping 3(3-0)
Design and development functions related to tooling, fixtures, gages, and dies. Emphasis on vehicle manufacture and includes basic process planning, design tolerance, and process selection. Prerequisites: TEC 328.

TEC 378 Vehicle Manufacturing, Assembly and Process Planning 3(3-0)
Interface between vehicle design, manufacturing and assembly process planning. Design impact on manufacturing process, product quality and cost is included. Prerequisites: TEC 326.

TEC 397 Special Topics 1-6(Spec)
Variable credit, variable content courses with credit and specific topics identified in Course Search and Registration. Prerequisites: permission of instructor.

TEC 420 Value Methodology in Vehicle Design 3(3-0)
Methods for improving product value and enhancing customer satisfaction in industrial projects utilizing a team approach. Prerequisites: TEC 320, TEC 321, TEC 323.

TEC 441 Vehicle Interior Cockpit Design 3(3-0)
Vehicle cockpit design emphasizing occupant placement and location relationships with interior components together with the design integrations process. Prerequisites: TEC 320, TEC 321, TEC 323.

TEC 442 Vehicle Interior Trim Design 3(3-0)
A study of design processes and techniques associated with designing vehicle interior components including door trim, headliners, floor coverings, seats, and other interior systems. Prerequisites: TEC 320, TEC 321, TEC 323.

TEC 443 Ergonomics and Vehicle Design 3(3-0)
The study of ergonomic principles and their use in the design of vehicles with particular emphasis on operation, manufacturing, and maintenance characteristics. Prerequisites: TEC 320, TEC 321, TEC 323.

TEC 444 Vehicle Electrical Design 3(3-0)
Electrical wire harness design and electrical component packaging covering electrical system and subsystem requirements, functions, and component assembly. Prerequisites: TEC 320, TEC 321, TEC 323.

TEC 445 Vehicle Architecture Systems 3(3-0)
Packaging of occupants, seating and vision requirements, storage needs, bumper design requirements consistent with federal and international standards and regulations. Prerequisites: TEC 328.

TEC 446 Vehicle Body Systems Design 3(3-0)
Body design with an emphasis on structural strength, overall performance, together with occupant comfort and safety. Introduces chassis and suspension systems. Prerequisites: TEC 328.

TEC 447 Vehicle Interior Systems Design 3(3-0)
Interior trim and instrument panel design concepts related to component selection. Emphasis is on component location, relationships and the overall design integration process. Prerequisites: TEC 328.
TEC 448 Vehicle Chassis and Suspension Systems 3(3-0)
Control systems operation including steering, braking, and suspension as they relate to the design of vehicle chassis configurations and packaging. Prerequisites: TEC 328.

TEC 449 Vehicle Power Train Propulsion Systems 3(3-0)
Operational characteristics of reciprocating, rotary, electric, and hybrid systems. Various fuel types are introduced. Includes drive train assemblies and components packaging. Prerequisites: TEC 328.

TEC 450 Vehicle Electrical and Lighting Systems 3(3-0)
Electrical, lighting, and subsystem requirements to include wiring harness design, component packaging, exterior and interior lighting and signaling requirements, and component assemblies. Prerequisites: TEC 328.

TEC 451 Vehicle HVAC Systems 3(3-0)
Automotive HVAC systems and their subsystem requirements. Current OEM automotive systems, design criteria, components, occupant comfort, controls interface, duct design, manufacturing, environmental and regulatory requirements. Prerequisites: TEC 328.

TEC 452 Vehicle Body Structure Design 3(3-0)
Basic automobile body design from a structural perspective relative to strength, vehicle performance, passenger comfort, and safety. Prerequisites: TEC 320, TEC 321, TEC 323.

TEC 454 Vehicle Instrument Panel Design 3(3-0)
Instrument panel design emphasizing occupant placement and location relationships with instrument panel components, together with the design integration process. Prerequisites: TEC 320, TEC 321, TEC 323.

TEC 456 Vehicle Lighting Systems Design 3(3-0)
Design and engineering principles applied to exterior, interior, and signaling lighting systems. Prerequisites: TEC 320, TEC 321, TEC 323.

TEC 457 Vehicle Bumper System Design 3(3-0)
Design and packaging of automotive bumper systems, including energy management, federal and international regulations, molding of parts, and assembly of bumper systems. Prerequisites: TEC 320, TEC 321, TEC 323.

TEC 459 Vehicle Design Analysis and Integration 3(3-0)
A capstone course which requires a vehicle design project showing the interface with affected departments, time constraints, and manufacturing/assembly implementation. Prerequisites: ENG 303, TEC 324 and Permission of Director. Graduating seniors only.

TEC 497 Special Topics 1-6(Spec)
Variable credit, variable content courses with credit and specific topics identified in Course Search and Registration. Prerequisite: permission of instructor.
For graduate level course descriptions above 600, consult the current College of Graduate Studies Bulletin.

UNV - Prior Learning
Contact Global Campus for more information.

UNV 297 Prior Learning 1-60(Spec)
UNV 497 Prior Learning 1-60(Spec)

UNV 697 Prior Learning 1-10(Spec)

WST - Women's Studies
See the Interdisciplinary Women's Studies Major and Minor for more information, or contact the Women's Study Office.

WST 100 How Gender Affects Our Lives 3(3-0)
An interdisciplinary course on the creation of gender inequalities. Students will delve into the complexities of gender identity from historical, contemporary, intercultural, and international perspectives. CR/NCR (University Program Group III-B: Studies in Social Structures).

WST 207 Women in Religion 3(3-0)
Roles and images of women in major religious traditions; emphasis on religious roles, creation of alternative institutions, new concepts of spirituality. Identical to REL 207. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas)

WST 213 Introduction to Human Sexuality 3(3-0)
Human sexual development throughout the human life cycle. Emphasis on understanding and acceptance of self as a sexually functioning person. Identical to HDF 213. Credit may not be earned in more than one of these courses.

WST 214 Sociology of Sexuality 3(3-0)
Sociological examination of human sexuality, sexual identity and community. Identical to SOC 214. Credit may not be earned in more than one of these courses. Prerequisite: SOC 100.

WST 230 Women in the Economy 3(3-0)
A study of the past and present role of women in the economy, as workers, both inside and outside the labor market. Identical to ECO 230. Credit may not be earned in more than one of these courses.

WST 297 Special Topics in Women's Studies 3-6(Spec)
Course covers special topics of interest to Women's Studies not covered in existing courses. Course title will be listed on student's transcript.

WST 303 Goddesses 3(3-0)
An interdisciplinary study of stature and role of goddesses in selected cultures, ancient and modern. Examination of issues raised when contemporary groups employ reinvented goddess concepts. Identical to REL 303. Credit may not be earned in more than one of these courses.

WST 317 Sociology of Sex and Gender 3(3-0)
Analysis of the role of gender in institutions such as the economy, the family and the schools, Gender inequality and factors that promote its reproduction. Identical to SOC 317. Credit may not be earned in more than one of these courses. Prerequisite: SOC 100 or 201 or 221.

WST 319 Women and Sport 2(2-0)
An investigation of the motivational and social implications of women's participation in sport. Identical to PES 319. Credit may not be earned in more than one of these courses.

WST 326 Women and Politics 3(3-0)
This course will look primarily at empirical studies of women's role in politics in the U.S. but also in other contexts. Identical to PSC 326. Credit may not be earned in more than one of these courses.

WST 327 Women Writers 3(3-0)
Readings in fiction, poetry, and autobiography by women writers of the nineteenth and twentieth centuries, approached through contemporary feminist views. Identical to ENG 327. Credit may not be earned in more than one of these courses.

WST 328 Women in America 3(3-0)
Study of the traditional position of women in American society as documented in historical, literary, and biographical sources. Identical to HST 326. Credit may not be earned in more than one of these courses. May be offered as Writing Intensive. (University Program Group I-A: Human Events and Ideas.)

WST 334 Psychology of Women 3(3-0)
Explores psychological issues pertaining specifically to women in the following areas: affective and cognitive functioning, personality theories, adult role behaviors, sexuality and physical and mental health. This course is approved for offering in a distance learning format. Identical to PSY 334. Credit may not be earned in more than one of these courses.

WST 354 Women in European History 3(3-0)
Surveys and analyzes the traditional and nontraditional roles of women in European history, using new historical research. Identical to HST 354. Credit may not be earned in more than one of these courses.

WST 362 Gender Communication 3(3-0)
Focuses on the role of communication in the creation and perpetuation of gender stereo types. Emphasis on personal growth and awareness in a variety of contexts. Identical to COM 362. Credit may not be earned in more than one of these courses.

WST 382 Gender and Art 3(3-0)
Examines how gender identity has played a role in art. Examines artists, patrons, viewers, and subjects of representations as gendered and historically specific entities. Identical to ART 382. Credit cannot be earned in more than one of these courses. Prerequisite: Completion of 26 credit hours.

WST 410 Women, Crime and Deviance 3(3-0)
Exploring the theories, concepts, and social constructions fundamental to conceptualization of women as victims, offenders, and workers in the criminal justice system. Identical to SOC 410. Credit may not be earned in more than one of these courses. Prerequisites: SOC 301, 350.

WST 426 Feminist Theory 3(3-0)
Examines the way women have been described by the Western philosophical tradition from its beginnings to the present and offers alternative analyses to this tradition. Identical to PSC 426 and HPL 426. Credit may not be earned in more than one of these courses. Prerequisites: permission of instructor, or at least junior standing and either one course in philosophy or one of the following courses: PSC 275, PSC 326, PSC 371, PSC 373, or PSC 378.

WST 430 Women and Aging 3(3-0)
Multiple theoretical perspectives examine the status of older women, individual psychological, social and physical development, roles in family and society, and policy implications. Identical to GRN 430. Credit may not be earned in more than one of these courses. Prerequisite: GRN 247 or PSY 325 or HCS 390.

WST 496 Capstone Seminar in Women's Studies 3(3-0)
An interdisciplinary capstone seminar in Women's Studies integrating feminist theory, research and practice with particular attention to analysis of global movements, cultural institutions and science. Prerequisites: WST 328/ HST 326, WST/HPL/PSC 426, and six additional hours in Women's Studies.

WST 497 Special Topics in Women's Studies 3-6(Spec)
Course covers special topics of interest to Women's Studies not covered in existing courses. Course title will be listed on student's transcript.

WST 590 Gender, Culture, and Society 3(3-0)
Analysis of gender roles in various cultures; theoretical approaches to explaining gender role variation. Identical to ANT 590 and SOC 590. Credit may not be earned in more than one of these courses. Prerequisites: 6 hours of anthropology and/or sociology and/or women's studies.
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This publication presents the Code of Student Rights, Responsibilities and Disciplinary Procedures at Central Michigan University. It establishes the procedures followed and outlines the possible consequences for students found in violation of the “Code of Conduct.” The disciplinary procedures outlined in this document do not replace or substitute for filing charges through law enforcement agencies if it is determined that such action is appropriate.

This document originally was formally adopted by the Board of Trustees for Central Michigan University on December 16, 1972. Since that time, it has been periodically reviewed and revised as needs changed. This revision was approved by the President and the Board of Trustees on June 24, 2014 and amended by the President on December 12, 2014 and March 16, 2015.

The President is responsible for promulgating rules and regulations pertaining to student rights and responsibilities, including regulations governing student organizations, in keeping with the policies and goals established by the Board of Trustees. In fulfilling this responsibility, the President is obligated to assure the right of due process for students.

The President has designated the Associate Vice President for Student Affairs as the person charged with the administration of student discipline. The Associate Vice President for Student Affairs appoints Conduct Proceedings Officers to answer questions concerning the rights and responsibilities of students, to receive complaints as they are reported, and to follow through with discipline cases to their resolution.

Student Affairs Office
March 16, 2015

1. Preamble

The students, faculty, and staff of Central Michigan University constitute an academic community that is committed to the preservation, communication, and discovery of knowledge, and to the active pursuit of truth. Consistent with this purpose, the university recognizes its obligation to afford each student the opportunity to develop his or her educational potential while retaining free exercise of rights and freedoms as a citizen. Such opportunity should be limited only by the necessity of insuring equality of opportunity to all students, and by the corollary requirement of orderly operation of the educational processes. Each member of the Central Michigan University community assumes an obligation regarding self-conduct to act in a manner consistent with a respect for the rights of others and with the university’s function as an educational institution. As guides for individual and group actions within this community, the university affirms the following general principles of conduct. These principles serve as the basis for regulations concerning student conduct.

1.1 The community requires a system of order supportive of the educational process that is the purpose of the university. Primary responsibility for preserving the system of order rests upon the individuals making up the community. Each individual must accept responsibility for his or her own actions and values and for recognizing that such actions and values affect the whole community. Implicit in the community’s recognition of the rights of the individual is an obligation on the part of the individual to accept responsibilities toward the community.

1.2 Even though there is a diversity of opinion regarding many ethical and moral standards, each person should endeavor to maintain self-conduct in a manner consistent with respect for others and thoughtful consideration for the needs of society. In social relationships generally, including relations involving the civil, property, and personal rights of others, each individual has an obligation to act in a manner consistent with these fundamental values.

1.3 The educational function depends upon honesty, integrity, and respect for truth. Any action not consistent with these principles is unacceptable.

1.4 As part of the democratic tradition, members of the community should be free to study and act upon social issues, including issues affecting the university. Each person ought to learn and practice the art of thoughtfully examining controversial issues, expressing views individually and as a group member responsibly, and in a manner that is consistent with the educational purpose of the university.

1.5 The university community recognizes the need for the development of personal ethics and philosophies. The members of this community should be committed to broad personal growth and development in society, realizing that each individual has both the freedom and obligation to make ethical choices and to accept the attendant responsibilities.

2. Student Rights

Free inquiry and free expression are essential attributes of a community of scholars. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus generally, and in the community at large. The responsibility to secure and respect general conditions conducive to the freedom to learn is shared by all members of the university community. Students should strive to develop the capacity for critical judgment and the ability to engage in a sustained and independent search for truth, while endeavoring to exercise their freedom with maturity and responsibility. As students undertake to fulfill the obligations and duties outlined in this document, the university community of which they are a part undertakes to respect the basic freedoms of students.
2.1 Rights of Students

In recognition of students’ rights and dignity as members of the university community, Central Michigan University is committed to supporting the following principles and to protecting those rights guaranteed by the Constitution, the laws of the United States and the State of Michigan, local ordinances, and the policies adopted by the Board of Trustees.

2.1.1 Students have the right to free inquiry, expression and association.

2.1.2 Students have the right to editorial freedom in student publications and other student media, e.g. CM Life, Framework, WMHW, and MHTV.

2.1.3 Students have the right to representation on the appropriate, designated bodies.

2.1.4 Students accused of misconduct or of violating university policy have the right to have a determination of their violation or non-violation in accordance with university procedures.

2.1.5 Students have the right to protection against improper disclosure of their student records.

2.1.6 Students have the right of access to their personal educational records.

2.1.7 Students have the right to access all policies, rules and decisions concerning their continued enrollment, and to the required course materials and facilities necessary to pursue their studies.

2.1.8 Students have the right to educational programs that meet the objectives of the master syllabus, to teaching consistent with those objectives, and to a learning environment that encourages the students’ engagement with their education.

2.1.9 Students have the right to be informed by the faculty near the beginning of each course about course requirements, evaluation procedures, and evaluation criteria to be used, and the right to expect that those criteria be employed. Faculty members have the authority to change a course syllabus after the beginning of the semester and are expected to inform students of these changes in a timely manner.

2.1.10 Students have the right to take reasoned exception to the data or views offered in any course of study; they are, however, responsible for learning the content of any course of study for which they are enrolled.

2.1.11 Students have the right to be evaluated solely on relevant academic criteria and to have protection against arbitrary or capricious academic evaluation as described in the “Grade Grievance Policy” in the University Bulletin.

2.1.12 Students have the right to request and receive timely assessment of their academic work by the instructor, or in the case of graduate students by their thesis/dissertation/Plan B committee chairperson and committee members.

2.1.13 Students have the right to request and receive a reasonable and timely review of their grades by the instructor.

2.1.14 Students have the right of complaint about academic matters if they believe their rights have been violated. When not covered by another policy, a complaint is properly filed by presenting the issue first to the faculty member or thesis, doctoral research project or dissertation committee chairperson. If not resolved, the student may take the issue to the department chairperson. If not resolved at this level, the student may take the complaint to the office of the dean of the academic college or the Dean of the College of Graduate Studies.

2.2 Relationships with the University

2.2.1 As citizens, students have the same duties and obligations as do other citizens and enjoy the same freedoms of speech, press, religion, peaceful assembly, and petition that other citizens enjoy. In all of its dealings with students, the university will respect the rights guaranteed to them by the Constitutions and laws of the United States, the State of Michigan, and local ordinances.

2.2.2 All registered student organizations are open to all students without respect to race, religion, creed, sexual orientation, gender, disability, or national origin except that certain organizations (e.g. social fraternities and sororities) are restricted as to gender, as allowed under Title IX of the Education Amendments of 1972.

2.2.3 Students individually and collectively are free to examine and to discuss all questions of interest to them, including questions relating to university policies, and to express opinions publicly and privately. They are free to support causes by any orderly means that do not disrupt the operation of the university.

2.3 Responsibilities of Students and Faculty

Students should conscientiously strive to complete course requirements as stated, and accept responsibility to contribute positively to the learning environment established by faculty. Proper evaluation of students in a course is based solely on performance in meeting appropriate standards established and communicated by the instructor for that course. Each course has a master syllabus approved through university curricular processes, which includes a description of the scope of the course and a list of the goals and objectives of the learning experience. Faculty members assigned to teach a course develop a course outline, based on the master syllabus, to provide students with greater specificity about how the course will be conducted in order to accomplish the intended goals and objectives. Proper evaluation of student progress is on the basis of attainment of objectives established by the chair of the student’s committee according to written departmental guidelines.

2.4 Relationships with Law Enforcement Agencies

In addition to filing complaints under these regulations, victims are encouraged to report crimes to the appropriate law enforcement agency. The CMU Police Department is the designated law enforcement agency for crimes committed on campus. As members of the local community, students are expected to cooperate with all law enforcement agencies.

2.5 Confidentiality of Information

All information about students’ views, beliefs, and political associations that members of the university acquire in the course of their work as teachers, administrators, advisers, and counselors is confidential. Improper disclosure of confidential information is a serious violation of the obligations of a member of this university community. Judgments of a student’s ability and character, however, may be provided under appropriate circumstances.

2.6 Student Associations

Students are free to form and join associations that advance the common interest of their members. Activities of such organizations must be conducted in accordance with university regulations and public law.

3. Responsibilities of Students

3.1 General Regulations Concerning Student Conduct

3.1.1 The Board of Trustees is responsible for promulgating policies regarding student conduct at Central Michigan University. The President, as its executive officer, is the final authority in all discipline cases. The Vice President for Enrollment and Student Services is the designated officer responsible to the president for conducting discretionary review of a decision of the Appeals Board to suspend a student for more than one week or to dismiss a student. The Associate Vice President for Student Affairs is the designated officer responsible to the President for the administration of student conduct policies, with the exception of research misconduct or violation of academic integrity by a graduate student, which are delegated to the Dean of the College of Graduate Studies. All misconduct of students, except that governed by the Dean of the College of Graduate Studies, is reported to the Associate Vice President for Student Affairs or to the persons designated by the AVP for Student Affairs to receive such reports.
3.1.2 The university shall take disciplinary action in cases concerning a student’s actions or offenses occurring within or affecting people on property within the physical boundaries of Central Michigan University, on or affecting university owned or controlled property, or when the student is in attendance at a university sponsored event, or when the interests of the university as a community, are clearly involved. Only where the health and safety of members of this community, are clearly involved shall the special authority of the university be asserted in other cases.

Students subject to the provisions of this Code are defined as all persons who have enrolled at the university, either full-time or part-time, pursuing undergraduate, graduate, or non-degree studies. Persons who have been enrolled at the university, and who have not withdrawn, are students even when they are not enrolled for a particular term. Students also include persons who have been admitted to the university and who, before their first attendance, participate in activities intended only for prospective students (e.g., orientation, leadership, band, or other camp, athletic training and practices).

3.2 Specific Regulations Concerning Student Conduct

3.2.1 Academic Dishonesty. Written or other work that a student submits in a course shall be the product of his/her own efforts. Plagiarism, cheating, and all other forms of academic dishonesty are prohibited. Students are expected to adhere to the ethical and professional standards associated with their programs and academic courses. Alleged violations of this section shall be adjudicated in accordance with CMU’s Policy on Academic Integrity. Copies of the Policy on Academic Integrity may be accessed via the Office of Student Conduct website (https://www.cmich.edu/ess/studentaffairs/StudentConductOffice/Pages/default.aspx).

3.2.2 False Information. A student shall not furnish, or attempt to furnish, false or misleading information to university officials or on official university records. Furthermore, a student shall not forge, alter, or misuse the university name, the name of any university employee, documents, records of identification, or attempt to do the same.

3.2.3 Disruption of Learning. A student shall not obstruct, disrupt or interfere, or attempt to obstruct, disrupt or interfere with another student’s right to study, learn or complete academic requirements. This includes acts to destroy or prevent or limit access to information or records used by other students in connection with their university responsibilities.

3.2.4 Disruptive Behavior During Class. A student shall not obstruct, disrupt or interfere, or attempt to disrupt or interfere with another student’s right to study, learn, participate, or a teacher’s right to teach during a class. Whether in the classroom or online, this includes but is not limited to such behaviors as talking at inappropriate times, drawing unwarranted attention to him or herself, engaging in loud or distracting behaviors, or refusing to leave a classroom when ordered to do so.

3.2.5 Disruption of University Authorized and Scheduled Events. A student, group of students, or registered student organization shall not obstruct or disrupt, or attempt to obstruct or disrupt, teaching, research, administration, disciplinary procedures, or other university activities. This includes, but is not limited to: acts to destroy or prevent or limit access to information or records used by other students in connection with their university responsibilities or impeding classes, the carrying forward of the university’s business, or the arrangements for properly authorized and scheduled events. A person attempts to disrupt when, with the intent to disrupt, that person does any act that constitutes a material step toward disruption.

3.2.6 Access to Facilities. A student shall not enter, or attempt to enter, closed university facilities or facilities clearly under the authorized control of another individual, e.g., student vehicles, rooms or apartments; disrupt or attempt to disrupt, the scheduled use of university facilities; block, or attempt to block, access to or from university facilities; or remain within, or attempt to remain within, university facilities after their closing unless authorized to do so by the President, or the President’s designated representative, or the student authorized to and in control of said facility or facilities.

3.2.7 Threat/Endangerment/Assault. A student shall take no action that threatens or endangers the safety, health, or life, or impairs the freedom of any person, nor shall a student make any verbal threat of such action. This includes actions commonly understood to constitute assault or battery.

3.2.7.1 Sexual Assault. A student shall adhere to the university’s Sexual Misconduct Policy (#3-39) and the policies contained therein. Copies of the Policy on Sexual Misconduct may be accessed via the Office of Student Conduct website (https://www.cmich.edu/ess/studentaffairs/StudentConductOffice/Pages/default.aspx).

3.2.8 Disruptive Self-Injurious Behavior. A student shall not engage or threaten to engage in self-injurious behavior that negatively impacts or is disruptive to the learning/living environment of others.

3.2.9 Property Damage. A student shall take no action that damages or tends to damage property not the student’s own.

3.2.10 Theft. A student shall not possess, use, manufacture, produce, or distribute, or aid in the use, manufacture, production, or distribution of, any controlled substance except as expressly permitted by law and university policy. Violation of the Residence Life Alcohol and Controlled Substances Policy is a violation of this section. Controlled substances are defined in the Controlled Substances Act of 1971, as amended.

The use or abuse of prescription drugs or over-the-counter substances, such as inhalants or herbals, in any way other than the intended or appropriate use, may be interpreted as a violation under this policy.

3.2.11 Disorderly Conduct. A student shall not act as a disorderly person or engage in disorderly conduct or disturb the peace, as defined by state statute or local ordinance. This includes acts of indecent exposure or lewd conduct.

3.2.12 Controlled Substances. A student shall not possess, use, manufacture, produce, or distribute, or aid in the use, manufacture, production, or distribution of, any controlled substance except as expressly permitted by law and university policy. Violation of the Residence Life Alcohol and Controlled Substances Policy is a violation of this section. Controlled substances are defined in the Controlled Substances Act of 1971, as amended.

3.2.13 Violation of Alcohol Policy. A student shall not possess, consume or furnish, or aid in the consumption or furnishing of, alcoholic beverages except as permitted by law and university policy. Violation of the Residence Life Alcohol and Controlled Substances Policy is a violation of this section.

3.2.14 Firearms/Explosives/Weapons. A student shall not possess or use firearms; explosives (including, but not limited to, fireworks and black powder); dangerous chemicals; weapons; knives with a blade longer than three inches, hunting knives, fixed blade knives, switchblade knives, throwing knives, daggers, razors, other cutting instruments the blade of which is exposed; or items that forcibly eject projectiles (including BB, CO2-powered, pellet and air soft guns); and any other device that may be injurious to others, except as part of an approved university activity and under the supervision of a university official. Firearms (including BB, CO2-powered, pellet and air soft guns) may not be stored in university residences. Any replica of any of the foregoing weapons is also prohibited. Firearms used for hunting must be properly registered with the CMU Police Department and stored in compliance with university regulations.

The state of Michigan has enacted a concealed carry law that prohibits carrying a concealed pistol into a dormitory (residence hall) or classroom of a university.

3.2.15 Complying with University Agents. A student shall comply with the directions of university agents acting in the performance of their regular or delegated duties and must identify him self or her self to these agents upon request.

3.2.16 Payment of Fines/Restitution. A student shall pay fines or restitution levied by a proper hearing body or university authority by the deadline established.
3.2.17 Misuse of Buildings/Facilities/Services. A student must observe rules and regulations concerning the use of campus buildings and other university owned or operated facilities, vehicles, equipment and services.

3.2.18 Computer Abuse. A student shall not abuse university computer time or equipment, including but not limited to: CMU-hosted Blackboard, online chat rooms, Skype meetings and other social media technologies, when such resources are accessed or utilized using CMU’s computers, networks, servers, or other CMU-provided technologies. Abuse includes but is not limited to: unauthorized entry or transfer of a file, unauthorized downloading or uploading of copyrighted information, unauthorized use of another individual’s identification and password; use of computing facilities to interfere with the work of a student, faculty members or university officials; or use of computing facilities to interfere with normal operation of the university; or improper use of the learning management system (LMS) and digital environments. A student shall adhere to the rules and practices promulgated by the university Office of Information Technology (www.oit.cmich.edu) and the policies contained therein, including but not limited to the Copyright Infringement Responsible Use of Computing and Data Stewardship Policies.

3.2.19 Bullying/Hazing/Harassment. A student shall not bully, haze or harass any person or group of persons. Telephone harassment, texting, email, computer or online social media harassment, are included under this policy, as are all other forms of bullying and harassment.

3.2.20 Civil Disorder. A student shall not participate in a riot or civil disorder, which is defined as five or more persons, acting in concert, who intentionally or recklessly cause or create a serious risk of causing public terror or alarm.

3.2.21 Aiding Civil Disorder. A student shall not, intending to cause or aid or abet the institution or maintenance of a riot or civil disorder, act or engage in conduct which urges other persons to commit acts of unlawful force or violence or the unlawful burning or destroying of property or the unlawful interference with a police officer, peace officer, fireman or member of the Michigan National Guard or any unit of the armed services officially assigned to civil disorder duty in the lawful performance of his/her duty.

3.2.22 Participation in Riot. A student shall not assemble or act in concert with four or more persons for the purpose of engaging in conduct which creates a serious risk of a riot or civil disorder or be present at an assembly that either has or develops such a purpose and remain there after an order has been given to disperse.

3.2.23 Violation of Injunction. A student shall not violate the terms of any injunction regulating conduct in Isabella County or the terms of the Mt. Pleasant Nuisance Party Ordinance during and as part of a riot or civil disorder.

3.2.24 Discrimination. Violation of the CMU Nondiscrimination Policy or the Equal Opportunity and Affirmative Action protocol shall be treated as an offense under these regulations.

3.2.25 Violations by Registered Student Organizations. Violation by Registered Student Organizations of these regulations, and other rules pertaining to Registered Student Organizations as outlined in the Student Organization Operational Guide shall be treated as an offense under these regulations.

3.2.26 Violation of Residence Hall Rules. Violation of “Residence Hall Rules” shall be treated as an offense under these regulations.

3.2.27 Collusion. A student who shall with any one or more persons enter into a combination or agreement, expressed or implied, to commit a violation of any of these regulations, is in violation of the regulation. Students are responsible for the actions of their guests while present on CMU property or at university sponsored activities.

3.2.28 Aiding/Abetting. A student implicated in the violation of any regulation in this document, whether he or she directly commits the act constituting the violation or procedures in connection with it, or aids or abets in its commission, may be treated under the regulations as if he or she had directly committed such violation.

3.2.29 Violation of Federal/State/Local Law. Violation of federal, state or local law in a manner that affects the university shall be treated as an offense under these regulations.

3.2.30 Retaliation. A student, group of students, or registered student organization shall not retaliate against any student who files a complaint or grievance; requests an administrative hearing; participates in an investigation; appears as a witness in an administrative hearing; or opposes an unlawful act, discriminatory practice, or policy.

3.2.31 Violation of University Regulations. Violation of other university regulations, policies or established procedures shall be treated as an offense under these regulations.

3.2.32 Unauthorized Fires. No student shall start or allow to be started a fire with the intent to destroy property including their own and/or rubbish.

3.2.33 Arson. A person who uses, arranges, places, devises, or distributes an inflammable, combustible, or explosive material, liquid, or substance or any device in or near a building, structure, other real property, or personal property with the intent to commit arson or who aids, counsels, induces, persuades, or procures another to do so is in violation of arson.

4. Official University Sanctions

4.1 Sanctions. Sanctions that may be imposed for violation of university regulations include the following:

4.1.1 Reprimand: A written reprimand, including the possibility of more severe disciplinary sanctions in the event of the finding of a subsequent violation of university regulations within a stated period of time.

4.1.2 Restitution: Reimbursement for defacement, damage to, or misappropriation of property. The person or body imposing this sanction may impose another allowed sanction as an alternative if restitution is not made within the time specified.

4.1.3 Fines: Fines may be levied. In no circumstance shall the fine levied exceed $1,000. Failure to pay a fine in the time limit prescribed shall result in further disciplinary action.

4.1.4 Removal from University Housing: Cancellation of contract and requirement to vacate university housing within a specified period of time. If housing is not vacated within the prescribed time, additional sanctions shall be imposed.

4.1.5 Campus Restrictions: Limitations on the times and/or places where a student may be present on campus. If said restrictions are not observed, additional sanctions shall be imposed.

4.1.6 Educational Programs: Participation in educational programs, i.e., workshops, seminars, or other educational activities may be required. The person or body imposing this sanction shall impose another sanction as an alternative if the specified program is not completed within the time stipulated and may impose additional sanctions.

4.1.7 Revocation of the Privilege of being a Registered Student Organization

4.1.8 Disciplinary Probation: Subjection to a period of critical examination and evaluation of behavior. In addition to any of the sanctions set forth above, the student or organization may be placed on probation for a stated period. Placement on probation may include additional restrictions or requirements, including but not limited to the following:

a) Withdrawal of the privilege of campus registration of a motor vehicle,

b) Withdrawal of the privilege of membership in a campus organization,

c) Withdrawal of the privilege of holding office in a campus organization,

d) Withdrawal of the privilege of representing the university in any inter-university event
e) Requirement to complete a specified number of credit hours with a specific grade point average during the current or subsequent academic session.

f) Requirement to complete coursework related to the violation.

g) Withdrawal of the privilege of using computing resources.

h) Completion of work or other service to be provided to the university or other organization within a specified time. The person or body imposing this sanction may impose another allowed sanction as an alternative if the specified service is not completed within the time stipulated, and may impose additional sanctions.

A condition of probation may be that automatic suspension or dismissal of a student or organization shall occur upon a determination (under the procedures set forth in Article 5 herein) that a violation of a condition of probation or any other violation has occurred.

4.1.9 Suspension/Dismissal from an Academic Program: Exclusion from an academic program as set forth for a definite or indefinite period of time.

4.1.10 Suspension: Exclusion from classes and other privileges or activities as set forth for a definite period of time. Suspension may include exclusion from the campus and property belonging to the university for a stated period of time and may require an independent evaluation supporting the student or organization’s return, with which CMU concurs.

4.1.11 Dismissal: Permanent termination of student status.

4.2 Additional Sanctions

Sanctions in addition to those listed in Article 4.1 may be established by the university.

4.3 Temporary Suspension

The university reserves the right to suspend a student, summarily and without notice, if in the judgment of the President of the university or the President’s representative a student’s presence would constitute a continuing danger to the person himself/herself, other persons or property, or that the operation of the university would be seriously impaired. In the case of temporary suspension, the student will be given written notice of the charges against him or her following the conclusion of any related investigations and a hearing before a Hearing Officer will be held as soon as possible considering the complexities of the matter and the status of any related criminal proceedings.

4.4 Automatic Sanctions for Grave Offenses

Certain grave offenses require that the sanctions be stipulated in advance and imposed automatically. The following shall be breaches of the student conduct regulations for which the minimum sanction of suspension is mandatory:

4.4.1 Bomb threat or knowingly false bomb warning.

4.4.2 Willful destruction of property worth more than $1,000.

4.4.3 Willful disruption of scheduled university activities.

4.4.4 Violence against persons that results in bodily injury requiring substantial medical treatment or death.

4.4.5 Administering or causing to be administered to any person unknowingly or against the person’s will any “Controlled Substance” as defined in the Controlled Substances Act of 1971, as amended.

4.4.6 Sale or distribution of, or aiding or assisting in the sale or distribution of, any “Controlled Substance” as defined in the Controlled Substances Act of 1971, as amended.

4.4.7 Possession of a firearm or any other dangerous weapon as described in Section 3.2.14.

4.4.8 Participation in a riot or civil disorder as described in Section 3.2.20 or 3.2.22.

4.4.9 Urging other persons to commit unlawful acts during a riot or civil disorder, as described in 3.2.21.

4.4.10 Being present at a riot or civil disorder after an order has been given to disperse.

4.4.11 Violations of Sections 3.2.7 (Threat/Endangerment/Assault), or 3.2.9 (Property Damage) during a riot or civil disorder.

4.4.12 Violation of the terms of any injunction regulating conduct in Isabella County or the terms of the Mt. Pleasant Nuisance Party Ordinance during and as a part of a riot or civil disorder.

4.4.13 Violation of section 3.2.33 (Arson).

5. Student Hearing Procedures for Charged Violation of Student Conduct Regulations

5.1 Intake Conduct Proceedings Officer

5.1.1 A charge may be made to the Conduct Proceedings Officer by any member of the university community or may be brought by the Conduct Proceedings Officer on one’s own initiative stating that a student has violated the Specific Regulations Concerning Student Conduct (3.2). Students subject to the provisions of this Code are defined as all persons who have enrolled at the university, either full-time or part-time, pursuing undergraduate, graduate, or non-degree studies. Persons who have been enrolled at the university, and who have not withdrawn (or been academically dismissed), are students even when they are not enrolled for a particular term. Students also include persons who have been admitted to the university and who, before their first attendance, participate in activities intended only for prospective students (e.g., orientation, leadership, band, or other camp, athletic training and practices).

5.1.2 One or more Conduct Proceedings Officers shall be appointed by the President or the President’s designated representative. The Conduct Proceedings Officer will make, or cause to be made, an investigation of the charge.

5.1.3 If, from the investigation, the Conduct Proceedings Officer determines the matter may be reason for discipline under the student conduct regulations, the Conduct Proceedings Officer will notify the student that a charge has been made and will offer the student an opportunity to discuss the matter.

If notified by either United States mail or by university email, the notice will be mailed to the last address for the student on file with the university Office of the Registrar. The notice will be deemed received two (2) business days following the date the notice is posted at facilities of the United States Post Office (for U.S. Postal mail) or immediately upon delivery for electronic mail. In the absence of mailing, personal delivery to the student cited, or delivery to the last address on file in the Office of the Registrar constitutes proper notice. If personal delivery to the student or delivery to the last address is used, the date notice is so delivered shall be deemed the date the notice is received.

The student will have two (2) business days from the date of receipt (through any of the mediums listed above) in which to respond to the notice. If the student has not responded at the end of this two-day period, the Conduct Proceedings Officer will set up a hearing.

5.1.4 The student may bring an advisor of the student’s choice to the discussion with the Conduct Proceedings Officer. If the student’s advisor is an attorney, the student must notify the Conduct Proceedings Officer of this at least three (3) business days in advance of the discussion. The advisor’s role is limited to providing advice to the student. The advisor is not permitted to ask or answer questions or make oral arguments. Any case presented must be made by the student.

5.1.5 If the student chooses to discuss the matter, the Conduct Proceedings Officer will at the discussion inform the student of the charge(s) and the regulation(s) which are alleged to have been violated and will explain to the student the process outlined in this document.

5.1.6 If the charge is against a graduate student for a violation of the Policy on Academic Integrity, then the matter will be handled under Section 6.
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5.1.7 Student Admits Violation

5.1.7.1 If the student admits to the violation, the Conduct Proceedings Officer may:
   a) Issue a sanction
   b) Order that the sanction be set by a university Hearing Officer, or
   c) Enter into a written, mutually acceptable, behavioral contract with the student and/or
   d) Refer the student for counseling.

5.1.7.2 The student charged or the person or group who first brought the charge, or the university, may appeal the sanction (except the terms of a behavioral contract), by a letter delivered to the Office of the Conduct Proceedings Officer or university Hearing Officer within five (5) business days after the Conduct Proceedings Officer has set the sanction. Since admission of the violation by the student is a prerequisite to the Conduct Proceedings Officer acting under this section, such an appeal will only be as to the appropriateness of the sanction and not the fact of whether the violation occurred.

Once a student admits a violation for which there is an automatic sanction, the sanction is automatically imposed and only the terms of a suspension may be appealed. The appeal is to the Appeals Board.

5.1.8 Student Does Not Admit Violation

After discussion with the student, the Conduct Proceedings Officer may determine that the matter requires no further action. The Conduct Proceedings Officer will refer the matter for hearing if:

5.1.8.1 The student denies the charge and the Conduct Proceedings Officer determines the matter may be reason for discipline.

5.1.8.2 The student chooses not to discuss the matter at the discussion offered by the Conduct Proceedings Officer. The student will be notified of the date and time of the hearing.

5.1.9 Alternative Resolution

5.1.9.1 Mutual Settlement. In lieu of referral to a hearing or prior to a student’s admission of a violation of the Code, the Conduct Proceedings Officer may offer or accept mutual settlements of any charged violations under this code. Settlements shall be in writing and shall state the conditions of the agreement and any sanctions imposed. Mutual settlements may not be appealed. Cases not settled in a timely manner shall proceed to a hearing.

5.1.9.2 Counseling. In lieu of, or in addition to, a sanction or referral to a hearing the Conduct Proceedings Officer may refer the student for psychological counseling.

5.1.9.3 Behavioral Contract. In lieu of, or in addition to, a sanction or referral to a hearing, the Conduct Proceedings Officer may arrange a behavioral contract with the student. A behavioral contract is a mutually acceptable agreement between the university and a student that specifies certain behavior with which the student must comply, and specifies automatic sanctions that will be imposed if the contract is broken. If the contract is broken, as determined by a finding of fact under procedures set forth in Article 5 herein, the student may be suspended from the university as determined by the Conduct Proceedings Officer. In cases where suspension is automatic under the terms of a behavioral contract, a hearing to determine if the contract has been broken will be on fact only.

5.1.9.4 Referral to Behavioral Evaluation Team. In lieu of referral to a hearing, the Conduct Proceedings Officer and the student may agree to a referral to a process provided by the Care Team, Care Team Coordinator, or Behavioral Evaluation Team. This option is available in situations where the alleged conduct of the student appears to be related to a mental health concern(s) or emotional issue(s).

5.2 Hearings

There are two hearing forums: The university Hearing Officer and the university Hearing Body. The Conduct Proceedings Officer will assign a case to one of these forums, except that in cases where there is potential for a sanction of suspension or dismissal, the student may choose which hearing forum will hear the case. The student will have two (2) business days from the date of the meeting with the Conduct Proceedings Officer to make a final choice in writing to the Conduct Proceedings Officer. If no such timely choice is made, the Conduct Proceedings Officer will designate whether the case will be heard by a Hearing Officer or Hearing Body. The student will be notified of the time and date of the hearing.

5.2.1 University Hearing Officer

5.2.1.1 One or more university Hearing Officers will be appointed by the President or the President’s designee and must participate in the appropriate training sessions regarding the Code of Student Rights, Responsibilities and Disciplinary Proceedings.

5.2.1.2 The university Hearing Officer will be assigned by the Associate Vice President for Student Affairs, or the Director of the Office of Student Conduct, as the designee of the Associate Vice President for Student Affairs, to hear the case.

5.2.1.3 The university Hearing Officer, based on the information presented at the hearing, determines whether the student charged violated the student conduct regulations, and sets the sanction, when applicable. Failure to complete the terms of the sanction may result in suspension from the university as determined by the Conduct Proceedings Officer. Certain violations have automatic sanctions imposed according to Section 4.4. In such cases, the university Hearing Officer will decide if a violation has occurred and, if so, the terms of a mandatory sanction.

5.2.2 University Hearing Body

5.2.2.1 The university Hearing Body consists of one university Hearing Officer and two students.

5.2.2.2 The students will be selected from a pool of students who are approved by the Vice President for Enrollment and Student Services or his/her designee in consultation with the Student Government Association and must participate in the appropriate training sessions regarding the Code of Student Rights, Responsibilities and Disciplinary Proceedings.

5.2.2.3 The university Hearing Body, based upon the information presented at the hearing, determines whether the student charged violated student conduct regulations, and sets the sanction, when applicable. Failure to complete the terms of the sanction may result in suspension from the university as determined by the Conduct Proceedings Officer. Certain violations have automatic sanctions imposed according to Section 4.4. In such cases, the university Hearing Body will decide if a violation has occurred and, if so, the terms of a mandatory sanction.

5.2.3 Hearing Procedures

5.2.3.1 In all disciplinary hearings, the burden of proof rests with the Conduct Proceedings Officer, who must prove by a preponderance of evidence that a violation has occurred.

5.2.3.2 The student charged may have an advisor of the student’s choice present at the hearing. If the student’s advisor is an attorney, the student must notify the Conduct Proceedings Officer of this at least three (3) business days in advance of the hearing. The advisor’s role is limited to providing advice to the student. The advisor is not permitted to ask or answer questions or make oral arguments. Any case presented must be made by the student.

5.2.3.3 A record of the hearing, made by an audio recording device, will be kept by the Conduct Proceedings Officer at least until the appeal time is exhausted. The Conduct Proceedings Officer, on behalf of the university, will maintain all copies of these recordings.

5.2.3.4 A university Hearing Officer presides at all hearings.

5.2.3.5 Hearing notifications and procedures will be communicated to the charged student at least twenty-four (24) hours before the hearing.
5.2.3.6 The Hearing Officer or Hearing Body will issue a written decision within ten (10) business days to the Conduct Proceedings Officer stating if a violation has been found, what facts support this finding, and the sanction(s) to be imposed.

5.2.3.7 A decision letter will be emailed to the student within three (3) business days from the date the decision is received by the Conduct Proceedings Officer.

5.2.3.8 The student charged has the right to cross-examine the complainant and any witnesses in the case against him or her. The Hearing Officer, however, has the right to determine the method the cross-examination will take (direct confrontation, submission of written questions, or any other method that, in the Hearing Officer’s opinion, will elicit the desired testimony).

5.3 Complainant’s Rights

Central Michigan University recognizes that complainants have rights that need to be protected as well as those of the person who is cited.

5.3.1 The complainant has the right to have a person of his or her choice accompany him or her throughout the disciplinary hearing.

5.3.2 The complainant has the right to remain present during any disciplinary or appeal hearings.

5.3.3 The complainant has the right to submit an “impact statement” and to suggest an appropriate sanction if the person cited is found in violation of the Code of Student Rights, Responsibilities and Disciplinary Procedures.

5.3.4 The complainant has the right to be informed in a timely manner of the outcome of the hearing regarding the findings and the sanction.

5.3.5 The complainant has the right to appeal either the findings or the sanction.

5.3.6 In cases involving sexual assault, the complainant has the right not to have his or her irrelevant past sexual history discussed during the hearing.

5.3.7 The complainant has the right to cross-examine the student charged and any “defense” witnesses in the case. The Hearing Officer, however, has the right to determine the method the cross-examination will take (direct confrontation, submission of written questions, or any other method that, in the Hearing Officer’s opinion, will elicit the desired testimony).

5.4 Appeals

5.4.1 The following matters may be appealed to the Appeals Board:

5.4.1.1 The decision of a university Hearing Body or a university Hearing Officer as provided in Section 5.2. The appeal may be as to the facts found or the sanction set or both. If the sanction is automatic, then the appeal may only be made as to the findings, or the terms of a suspension. The appeals board may not reduce the sanction below the minimum imposed by Section 4.4 or by the terms of behavioral contracts or other disciplinary actions in which automatic sanctions are specified.

5.4.1.2 The sanction set by the Conduct Proceedings Officer after admission of violation by the student. Imposition of any automatic sanction after such an admission may not be appealed; however, the terms or conditions of the sanction may be appealed. See Section 5.1.7.2 for more information regarding this type of appeal.

5.4.2 The Appeals Board consists of the Student Government Association President or designee, the Chairperson of the Academic Senate or designee, and the Associate Vice President for Student Affairs or designee and must participate in the appropriate training sessions regarding the Code of Student Rights, Responsibilities and Disciplinary Procedures.

5.4.3 An appeal to the Appeals Board may be made by the student involved, by the person or group who first brought the charge, or by the university.

5.4.4 An appeal is timely only if taken within five (5) business days of the decision appealed. An appeal not made within the time limit will not be heard unless the President or the President’s designee makes an exception.

5.4.5 An appeal is made by submitting a written statement of appeal to the Conduct Proceedings Officer within the time limit. The written statement of appeal must state: the name of the person appealing, the basis of the appeal, the person or group making the decision from which the appeal is made, whether a decision as to fact or sanction or both is appealed, and the remedy that the person appealing is requesting from the Appeals Board.

5.4.6 The student charged may have an advisor of the student’s choice present at the hearing of the appeal. If the student’s advisor is an attorney, the student must notify the Proceedings Officer of this at least three (3) business days in advance of the hearing. The advisor’s role is limited to providing advice to the student. The advisor is not permitted to ask or answer questions or make oral arguments. Any case presented must be made by the student.

5.4.7 The Conduct Proceedings Officer is responsible for notifying members of the Appeals Board of the appeal and for setting a time and place for holding a meeting of the Appeals Board. The Conduct Proceedings Officer will provide notice of time and place of the meeting of the Appeals Board to the student(s) charged, the charging party, and other university persons deemed appropriate by the Conduct Proceedings Officer.

5.4.8 The Conduct Proceedings Officer will assemble the documentary evidence introduced at the hearing, the record made of the hearing, and the administrative contact history made in connection with the matter and will make these materials available to the Appeals Board.

5.4.9 The Appeals Board may establish its own procedure for conducting any appeal appropriate to the circumstances designed to achieve fairness to the student charged as well as the interests protected by the Central Michigan University Code of Student Rights, Responsibilities and Disciplinary Procedures.

5.4.10 The Appeals Board makes its determination based solely on the record of the student’s hearing, facts that are presented to the Appeals Board, and arguments before the Appeals Board. No additional witnesses, witness statements, or other materials may be introduced during the Appeal.

5.4.11 The purpose of the Appeals Board is to decide if the findings and/or the sanction of the Hearing Body were so incorrect that the decision should be changed. It is not the purpose of the Appeals Board to substitute its judgment for that of the Hearing Officer or Body. It is not the function of the Appeals Board to rehash the charges against the student; it is an appeal of the findings and/or the sanction of the Conduct Proceedings Officer, Hearing Officer or Body only as requested by the person or persons making the appeal. The Appeals Board may:

a) Find that there are not sufficient facts presented to warrant the findings of fact made at the original hearing and may set aside the finding or determine the facts differently.

b) Order that a new hearing be held.

c) Change the sanction.

d) Provide such further and additional relief or changes as dictated by fairness to the student and to the interests protected by the Central Michigan University Code of Student Rights, Responsibilities and Disciplinary Procedures.

5.4.12 The Appeals Board must hear the appeal within fifteen (15) business days from the date the appeal is made in writing and delivered to the Conduct Proceedings Officer.
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5.4.13 A decision of the Appeals Board is final except that a decision to suspend for more than one week or to dismiss a student is subject to discretionary review by the Vice President for Enrollment and Student Services or the President (see 5.4.14). Any student responding to a charge under these procedures, any person bringing charges under these procedures, or the Administration, may make a written application to the Vice President for Enrollment and Student Services to review such a decision made by the Appeals Board. The application must be received in the Office of the Vice President for Enrollment and Student Services within five (5) days after the date of the Appeals Board decision. Failure to make application for review within the time limit ends the right to make application for review unless the time limit is extended by the Vice President for Enrollment and Student Services. The application for review must contain the following information:

a) Name of the student(s) charged in the proceeding in which the Appeals Board has rendered a decision.
b) Name, address, and telephone number of the person making application for review.
c) A copy of the Appeals Board decision involved.
d) A statement as to what portion(s) of the Appeals Board decision the applicant wishes reviewed, and the reason(s) why the person making application for review considers the decision to be capricious, or the procedures followed to be fundamentally unfair.
e) A statement of the relief requested from the Vice President for Enrollment and Student Services by the person making application for review.

If the Vice President for Enrollment and Student Services elects to review a decision of the Appeals Board, either in part or entirely, the Vice President for Enrollment and Student Services may establish whatever procedures are deemed appropriate and consistent with fairness to govern the review.

5.4.14 The university reserves the right for the President or the President's designee to impose a different sanction after a determination of violation, than the sanction imposed by the Conduct Proceedings Officer, Hearing Officer, Hearing Body, Appeals Board, or others under these procedures.

5.5 Charges Involving Student Organizations

All notices referred to in this document, when involving a Registered Student Organization, shall be sent to the president of the organization, at his or her last address on file with the Office of the Registrar, unless another representative of the organization is designated by the organization to receive such notices. When a Registered Student Organization is charged with a violation, the president of the organization shall represent the organization in the process described in Section 5, unless the Registered Student Organization designates some other representative. The representative of the student organization must be a registered student at Central Michigan, and must be a regular member of that organization.

5.6 Changes in Procedures

5.6.1 The procedures set forth herein shall apply throughout the calendar year. A university Hearing Officer may be appointed by the Conduct Proceedings Officer to hear a case at times when a university Hearing Body cannot be readily assembled such as when students are not in attendance at regular sessions, during exam week, summer sessions. These procedures are subject to change by the President of the university or designee. If any change is deemed necessary, any new procedures shall guarantee a fair hearing with due process.

5.7 Clarifying Processes

Clarifying processes that are consistent with the Hearing Procedures in this document may be proposed by the Office of Student Rights and Responsibilities.

6. Student Hearing Procedures for Graduate Students Charged with Violating the Policy on Academic Integrity

If the charge is against a graduate student for violation of the Policy on Academic Integrity, then the matter will be handled under this section and not under section 5. If the charge is against an undergraduate student for a violation of the Policy on Academic Integrity, the procedures in the Policy on Academic Integrity shall be followed.

6.1 Intake Conduct Proceedings Officer

6.1.1 A charge may be made to the Dean of the College of Graduate Studies by any member of the university community stating that a student has violated Section 3.2.1 of Specific Regulations Concerning Student Conduct.

6.1.2 One or more Conduct Proceedings Officers shall be appointed by the Dean of the College of Graduate Studies and must participate in the appropriate training sessions regarding the Code of Conduct. The Conduct Proceedings Officer will make, or cause to be made, an investigation of the charge.

6.1.3 If, from the investigation, the Conduct Proceedings Officer determines the matter may be subject to discipline under the policy on academic integrity, the Conduct Proceedings Officer will notify the student that a charge has been made and will offer the student an opportunity to discuss the matter.

If notified by either United States mail or by university email, the notice will be mailed to the last address for the student on file with the university Office of the Registrar. The notice will be deemed received two (2) business days following the date the notice is posted at facilities of the United States Post Office (for U.S. Postal mail) or immediately upon delivery for electronic mail. In the absence of mailing, personal delivery to the student cited, or delivery to the last address on file in the Office of the Registrar constitutes proper notice. If personal delivery to the student or delivery to the last address is used, the date notice is so delivered shall be deemed the date the notice is received.

The student will have two (2) business days from the date of receipt (through any of the mediums listed above) in which to respond to the notice. If the student has not responded at the end of this two-day period, the Dean of the College of Graduate Studies or designee will set up a hearing.

6.1.4 The student may bring an advisor of the student’s choice to the discussion with the Conduct Proceedings Officer.

6.1.5 If the student chooses to discuss the matter, the Conduct Proceedings Officer will at the discussion inform the student of the charge(s) and the regulation(s) which are alleged to have been violated and will explain to the student the process outlined in this document.

6.1.6 Student Admits Violation

6.1.6.1 If the student admits to the violation, the Conduct Proceedings Officer may:

a) Issue a sanction or,
b) Order that the sanction be set by a university Hearing Officer or,
c) Refer the student for Academic Integrity counseling and contract

6.1.6.2 The student charged or the person or group who first brought the charge, or the university, may appeal the sanction, by a letter delivered to the Dean of the College of Graduate Studies within five (5) business days after the Dean has set the sanction. Since admission of the violation by the student is a prerequisite to the Dean acting under this section, such an appeal will only be as to the appropriateness of the sanction and not the fact of whether the violation occurred.

6.1.7 Student Does Not Admit Violation

After discussion with the student, the Conduct Proceedings Officer may determine that the matter requires no further action. The Conduct Proceedings Officer will refer the matter for hearing if:
6.1.7.1 The student denies the charge and the Conduct Proceedings Officer determines the matter may be subject to discipline.

6.1.7.2 The student chooses not to discuss the matter at the discussion offered by the Conduct Proceedings Officer. The student will be notified of the date and time of the hearing.

6.1.8 Alternative Resolution

6.1.8.1 Mutual Settlement. In lieu of referral to a hearing, the Conduct Proceedings Officer may offer or accept mutual settlements of any charged violations under this code. Settlements shall be in writing stating the conditions of the agreement and any sanctions imposed. Mutual settlements may not be appealed.

Cases not settled in a timely manner shall proceed to a hearing.

6.2 Hearings

There are two hearing forums: The Graduate Studies Hearing Officer and the Graduate Studies Hearing Body. In cases where there is potential for a sanction of suspension or dismissal, the student may choose which hearing forum will hear the case. The student will have two (2) business days from the date of the meeting with the Conduct Proceedings Officer to make a final choice in writing to the Conduct Proceedings Officer. If no such timely choice is made, the Conduct Proceedings Officer will designate whether a Graduate Studies Hearing Officer or Graduate Studies Hearing Body will hear the case. The student will be notified of the time and date of the hearing.

6.2.1 Graduate Studies Hearing Officer

6.2.1.1 One or more Graduate Studies Hearing Officers will be appointed by the Dean of the College of Graduate Studies to hear the case.

6.2.1.2 The Graduate Studies Hearing Officer, based on the evidence presented at the hearing, determines whether the student charged violated the policy on academic integrity and sets the sanction, when applicable.

6.2.2 Graduate Studies Hearing Body

6.2.2.1 The Graduate Studies Hearing Body consists of one Graduate Studies Hearing Officer, one graduate faculty member and one graduate student.

6.2.2.2 The graduate faculty member and the graduate student will be selected by the Dean of the College of Graduate Studies.

6.2.2.3 The Graduate Studies Hearing Body, based on the evidence presented at the hearing, determines whether the student charged violated student conduct regulations, and sets the sanction, when applicable.

6.2.3 Hearing Procedures

6.2.3.1 In all disciplinary hearings, the burden of proof rests with the Conduct Proceedings Officer, who must prove by a preponderance of evidence that a violation has occurred.

6.2.3.2 The student charged may have an advisor of the student’s choice present at the hearing. If the student’s advisor is an attorney, the student must notify the Conduct Proceedings Officer of this at least three (3) business days in advance of the hearing. The advisor’s role is limited to providing advice to the student. The advisor is not permitted to ask or answer questions or make oral arguments. Any case presented must be made by the student.

6.2.3.3 A record of the hearing, made by tape recorder, will be kept by the Conduct Proceedings Officer, at least until the appeal time is exhausted. The Conduct Proceedings Officer, on behalf of the university, will maintain all copies of these recordings.

6.2.3.4 A Graduate Studies Hearing Officer presides at all hearings.

6.2.3.5 Hearing notification and procedures will be communicated to the student charged at least twenty-four (24) hours before the hearing.

6.2.3.6 The Graduate Studies Hearing Officer or Graduate Studies Hearing Body will issue a written decision within ten (10) business days to the Conduct Proceedings Officer stating if a violation has been found, what facts support this finding, and the sanction(s) to be imposed.

6.2.3.7 A decision letter will be emailed to the student within three (3) business days from the date the decision is received by the Conduct Proceedings Officer.

6.3 Complainant’s Rights

Central Michigan recognizes that instructors have rights that need to be protected as well as those of the person who is cited.

6.3.1 The complainant has the right to have a person of his or her choice accompany him or her throughout the disciplinary hearing.

6.3.2 The complainant has the right to remain present during the entire proceeding.

6.3.3 The complainant has the right to make an “impact statement” and to suggest an appropriate sanction if the person cited is found in violation.

6.3.4 The complainant has the right to be informed in a timely manner of the outcome of the hearing regarding the findings and the sanction.

6.3.5 The complainant has the right to appeal either the findings or the sanction.

6.4 Appeals

6.4.1 The following matters may be appealed to the Graduate Studies Appeals Board:

6.4.1.1 The decision of a Graduate Studies Hearing Body or a Graduate Studies Hearing Officer as provided in Section 6.2.

The appeal may be as to the facts found or the sanction set or both. The appeals board may not reduce the sanction below the minimum imposed by Section 4.4.

6.4.1.2 The sanction set by the Conduct Proceedings Officer after admission of violation by the student. See Section 6.1.6 for more information regarding this type of appeal.

6.4.2 The Graduate Studies Appeals Board consists of a graduate student appointed by the Chair of the Graduate Council, the Chairperson of the Academic Senate or designee, and the Dean of the College of Graduate Studies or designee.

6.4.3 An appeal to the Graduate Studies Appeals Board may be made by the student involved, by the person or group who first brought the charge, or by the university.

6.4.4 An appeal is timely only if taken within five (5) business days of the decision appealed. An appeal not made within the time limit will not be heard unless the President or the President’s designee makes an exception.

6.4.5 An appeal is made by submitting a written statement of appeal to the Conduct Proceedings Officer within the time limit. The written statement of appeal must state: the name of the person appealing, the basis of the appeal, the person or group making the decision from which the appeal is made, whether a decision as to fact or sanction or both is appealed, and the remedy which the person appealing is requesting from the Graduate Studies Appeals Board.

6.4.6 The student charged may have an advisor of the student’s choice present at the hearing of the appeal. If the student’s advisor is an attorney, the student must notify the Conduct Proceedings Officer of this at least three (3) business days in advance of the hearing. The advisor’s role is limited to providing advice to the student. The advisor is not permitted to ask or answer questions or make oral arguments. Any case presented must be made by the student.

6.4.7 The Dean of the College of Graduate Studies or designee is responsible for notifying members of the Graduate Studies Appeals Board of the appeal and for setting a time and place for holding a meeting of the Graduate Studies Appeals Board. The Conduct Proceedings Officer will provide notice of time and place of the meeting of the Graduate Studies Appeals Board to the student(s) charged, the charging party, and other university persons deemed appropriate by the Conduct Proceedings Officer.
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6.4.8 The Conduct Proceedings Officer will assemble the documentary evidence introduced at the hearing, the record made of the hearing, and the file made in connection with the matter and will make these materials available to the Graduate Studies Appeals Board.

6.4.9 The Graduate Studies Appeals Board may establish its own procedure for conducting any appeal appropriate to the circumstances designed to achieve fairness to the student charged as well as the interests protected by the Central Michigan University Code of Student Rights, Responsibilities and Disciplinary Procedures.

6.4.10 The Graduate Studies Appeals Board makes its determination based solely on the record of the student’s hearing, facts that are presented to the Graduate Studies Appeals Board, and arguments before the Graduate Studies Appeals Board. No additional witnesses, witness statements, or other materials may be introduced during the Appeal.

6.4.11 The purpose of the Graduate Studies Appeals Board is to decide if the findings and/or the sanction of the Graduate Studies Hearing Body were so incorrect that the decision should be changed. It is not the purpose of the Graduate Studies Appeals Board to substitute its judgment for that of the Graduate Studies Hearing Officer or Graduate Studies Hearing Body. It is not the purpose of the Graduate Studies Appeals Board to decide if it would have reached the same decision had it been the Graduate Studies Hearing Officer or Graduate Studies Hearing Body. It is not the function of the Graduate Studies Appeals Board to rehear the charges against the student; it is an appeal of the findings and/or the sanction of the Graduate Studies Hearing Officer or Graduate Studies Hearing Body. The Graduate Studies Appeals Board may:

a) Find that there are not sufficient facts presented to warrant the findings of fact made at the original hearing and may set aside the finding or determine the facts differently.

b) Order that a new hearing be held.

c) Change the sanction.

d) Provide such further and additional relief or changes as dictated by fairness to the student and to the interests protected by the Central Michigan University Code of Student Rights, Responsibilities and Disciplinary Procedures.

6.4.12 The Graduate Studies Appeals Board must hear the appeal within fifteen (15) business days from the date the appeal is made in writing and delivered to the Conduct Proceedings Officer.

6.4.13 A decision of the Graduate Studies Appeals Board is final except that a decision to suspend for more than one week or to dismiss a student is subject to discretionary review by the Dean of the College of Graduate Studies. Any student responding to a charge under these procedures, any person bringing charges under these procedures, or the university, may make a written application to the Dean of the College of Graduate Studies to a decision made by the Appeals Board. The application must be received in the Office of the Dean of the College of Graduate Studies within five (5) business days after the date of the Appeals Board decision. Failure to make application for review within the time limit ends the right to make application for review unless the time limit is extended by the Dean of the College of Graduate Studies. The application for review must contain the following information:

a) Name of the student(s) charged in the proceeding in which the Graduate Studies Appeals Board has rendered a decision.

b) Name, address, and telephone number of the person making application for review.

c) A copy of the Graduate Studies Appeals Board decision involved.

d) A statement as to what portion(s) of the Graduate Studies Appeals Board decision the applicant wishes reviewed, and the reason(s) why the person making application for review considers the decision to be capricious, or the procedures followed to be fundamentally unfair.

e) A statement of the relief requested from the Dean of the College of Graduate Studies by the person making application for review. If the Dean of the College of Graduate Studies elects to review a decision of the Graduate Studies Appeals Board, either in part or entirely, the Dean of the College of Graduate Studies may establish whatever procedures are deemed appropriate and consistent with fairness to govern the review. The university also reserves the right for the President or the President’s designee to impose a different sanction after a determination of violation, than the sanction imposed by the Conduct Proceedings Officer, Graduate Studies Hearing Officer, Graduate Studies Hearing Body, Graduate Studies Appeals Board, or others under these procedures.

6.5 Changes in Procedures

6.5.1 The procedures set forth herein shall apply throughout the calendar year. A Graduate Studies Hearing Officer may be appointed by the Dean of the College of Graduate Studies to hear a case at times when a Graduate Studies Hearing Body cannot be readily assembled such as when students are not in attendance at regular sessions, during exam week, summer sessions.

6.5.2 These procedures are subject to change by the President of the university or designee. If any change is deemed necessary, any new procedures shall guarantee a fair hearing with due process.

6.6 Clarifying Processes

Clarifying processes that are consistent with the Hearing Procedures in this Section may be proposed by the College of Graduate Studies.
Policy on
Academic Integrity

This Policy applies to any and all student experiences in which academic credit is involved (e.g., courses, internships, practica, theses).

1. Academic Integrity
Because academic integrity is a cornerstone of the University's commitment to the principles of free inquiry, students are responsible for learning and upholding professional standards of research, writing, assessment, and ethics in their areas of study. In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. Written or other work which students submit must be the product of their own efforts and must be consistent with appropriate standards of professional ethics. Academic dishonesty, which includes cheating, plagiarism and other forms of dishonest or unethical behavior, is prohibited.

A breakdown of behaviors that constitute academic dishonesty is presented below. The definitions and clarifications are meant to provide additional information and examples of these behaviors. They are not intended to be all inclusive. Questions regarding this policy or requests for additional clarification can be directed to the Office of Student Life or the College of Graduate Studies.

2. Academic dishonesty includes:

A. Cheating on Examinations Definition
Cheating is using or attempting to use materials, information, notes, study aids, or other assistance in any type of examination or evaluation which have not been authorized by the instructor.

Clarification
1. Students completing any type of examination or evaluation are prohibited from looking at another student's materials and from using external aids of any sort (e.g., books, notes, calculators, and conversation with others) unless the instructor has indicated specifically in advance that this will be allowed.
2. Students may not take examinations or evaluations in the place of other persons. Students may not allow other persons to take examinations or evaluations in their places.
3. Students may not acquire unauthorized information about an examination or evaluation and may not use any such information improperly acquired by others.

B. Plagiarism Definition
Plagiarism is intentionally or carelessly presenting the work of another as one's own. It includes submitting an assignment purporting to be the student's original work which has wholly or in part been created by another person. It also includes the presentation of the work, ideas, representations, or words of another person without customary and proper acknowledgement of sources. Students must consult with their instructors for clarification in any situation in which the need for documentation is an issue, and will have plagiarized in any situation in which their work is not properly documented.

Clarification
1. Every direct quotation must be identified by quotation marks or appropriate indentation and must be properly acknowledged by parenthetical citation in the text or in a footnote or endnote.

2. When material from another source is paraphrased or summarized in whole or in part in one's own words, that source must be acknowledged in a footnote or endnote, or by parenthetical citation in the text.

3. Information gained in reading or research that is not common professional knowledge must be acknowledged in a parenthetical citation in the text or in a footnote or endnote.

4. This prohibition includes, but is not limited to, the use of papers, reports, projects, and other such materials prepared by someone else.

C. Fabrication, Forgery and Obstruction Definition
Fabrication is the use of invented, counterfeited, altered or forged information in assignments of any type including those activities done in conjunction with academic courses that require students to be involved in out of classroom experiences. Forgery is the imitating or counterfeiting of images, documents, signatures, and the like. Obstruction is any behavior that limits the academic opportunities of other students by improperly impeding their work or their access to educational resources.

Clarification
1. Fabricated or forged information may not be used in any laboratory experiment, report of research, or academic exercise. Invention for artistic purposes is legitimate under circumstances explicitly authorized by an instructor.
2. Students may not furnish to instructors fabricated or forged explanations of absences or of other aspects of their performance and behavior.
3. Students may not furnish, or attempt to furnish, fabricated, forged or misleading information to university officials on university records, or on records of agencies in which students are fulfilling academic assignments.
4. Students may not steal, change, or destroy another student's work. Students may not impede the work of others by the theft, defacement, or mutilation of resources so as to deprive others of their use.

D. Multiple Submission Definition
Multiple submission is the submission of the same or substantially the same work for credit in two or more courses.

Multiple submissions shall include the use of any prior academic effort previously submitted for academic credit at this or a different institution.

Multiple submissions shall not include those situations where the prior written approval by the instructor in the current course is given to the student to use a prior academic work or endeavor.

Clarification
1. Students may not normally submit any academic assignment, work, or endeavor in more than one course for academic credit of any sort. This will apply to submissions of the same or substantially the same work in the same semester or in different semesters.
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2. Students may not normally submit the same or substantially the same work in two different courses for academic credit even if the work is being graded on different bases in the separate courses (e.g., graded for research effort and content versus grammar and spelling).

3. Students may resubmit a prior academic endeavor if there is substantial new work, research, or other appropriate additional effort. The student shall disclose the use of the prior work to the instructor and receive the instructor’s permission to use it PRIOR to the submission of the current endeavor.

4. Students may submit the same or substantially the same work in two or more courses with the prior written permission of all faculty involved. Instructors will specify the expected academic effort applicable to their courses and the overall endeavor shall reflect the same or additional academic effort as if separate assignments were submitted in each course. Failure by the student to obtain the written permission of each instructor shall be considered a multiple submission.

E. Complicity Definition

Complicity is assisting or attempting to assist another person in any act of academic dishonesty.

Clarification

1. Students may not allow other students to copy from their papers during any type of examination.

2. Students may not assist other students in acts of academic dishonesty by providing material of any kind that one may have reason to believe will be misrepresented to an instructor or other university official.

3. Students may not provide substantive information about test questions or the material to be tested before a scheduled examination unless they have been specifically authorized to do so by the course instructor. This does not apply to examinations that have been administered and returned to students in previous semesters.

F. Misconduct in Research and Creative Endeavors Definition

Misconduct in research is serious deviation from the accepted professional practices within a discipline or from the policies of the university in carrying out, reporting, or exhibiting the results of research or in publishing, exhibiting, or performing creative endeavors. It includes the fabrication or falsification of data, plagiarism, and scientific or creative misrepresentation. It does not include honest error or honest disagreement about the interpretation of data.

Clarification

1. Students may not invent or counterfeit information.

2. Students may not report results dishonestly, whether by altering data, by improperly revising data, by selective reporting or analysis of data, or by being grossly negligent in the collecting or analysis of data.

3. Students may not represent another person’s ideas, writing or data as their own.

4. Students may not appropriate or release the ideas or data of others when such data have been shared in the expectation of confidentiality.

5. Students may not publish, exhibit, or perform work in circumstances that will mislead others. They may not misrepresent the nature of the material or its originality, and they may not add or delete the names of authors without permission.

6. Students must adhere to all federal, state, municipal, and university regulations for the protection of human and other animal subjects.

7. Students may not conceal or otherwise fail to report any misconduct involving research, professional conduct, or artistic performance of which they have knowledge.

8. Students must abide by the university’s Policy on Research Integrity where applicable, which can be found under Policies at the following web address: www.orsp.cmich.edu. Applicability of this policy for students is found under I. GENERAL PROVISIONS, A. Applicability, number 3.

G. Computer Misuse Definition

Misuse of computers is disruptive, unethical, or illegal use of the university’s computer resources, including any actions which violate the university’s Rules for Computing and Networking Resources. Misuse of computers also includes disruptive, unethical, or illegal use of the computers of another institution or agency in which students are performing part of their academic program.

Clarification

1. Students may not use the university computer system in support of any act of plagiarism.

2. Students may not monitor or tamper with another person’s electronic communications.

3. Students may not use university computer resources to engage in illegal activity, including but not limited to the following: illegally accessing other computer systems, exchanging stolen information, and violating copyright agreements which involve software or any other protected material.

H. Misuse of Intellectual Property Definition

Misuse of intellectual property is the illegal use of copyright materials, trademarks, trade secrets or intellectual properties.

Clarification

Students may not violate the university policy concerning the fair use of copies. This can be found under Policies at the following web address: www.orsp.cmich.edu.

3. Ethical and Professional Behavior

Students are expected to adhere to the ethical and professional standards associated with their programs and academic courses. Such standards are generally communicated to students by instructors and are available through publications produced by professional organizations. Unethical or unprofessional behavior will be treated in the same manner as academic dishonesty.

4. Discretion of Instructors

Since the circumstances in which allegations of academic misconduct arise are many and varied, no single process will be appropriate to every situation. The procedures offered below are meant to cover the majority of situations. However, reasonable deviations from these procedures may be appropriate, so long as they are consistent with the following guiding principles:

- Students must be informed about the nature of and basis for any allegations of academic misconduct and the consequences that may be imposed.
- Students have a right to contest any allegations of academic misconduct, and to provide their side of the story to the instructor.
- Once the instructor has considered the evidence and considered anything that the student may say on his or her own behalf, the instructor has the right to exercise her or his professional judgment in determining whether the student has engaged in academic misconduct, and to determine the consequences of such misconduct on the student’s grade for the assignment and/or the course.
- A student accused of academic misconduct has a right to appeal the instructor’s decision once s/he has discussed the matter with the instructor.
- All parties should act in a reasonably prompt manner, given the circumstances.
5. Academic Consequences of Violations of the Policy on Academic Integrity

A student is not permitted to withdraw from a course in which an instructor has imposed academic consequences (such as a reduction in grade) for academic misconduct. The instructor shall exercise his or her professional judgment in determining the appropriate academic consequences of the violation. Academic consequences may include a warning or reprimand, a requirement to resubmit work (with or without an additional reduction in grade for the assignment), a lowering of the grade for the assignment (including withholding of any credit for the assignment), or a lowering of the grade for the entire course (including failing the course).

In addition, instructors are encouraged to report serious incidents of academic misconduct to the Office of Student Life or the College of Graduate Studies for formal proceedings seeking disciplinary sanctions under the Code of Student Rights, Responsibilities and Disciplinary Procedures.

6. Procedures for Handling Alleged Violations of this Policy

A. Initial Notification

If an instructor believes that a student has committed a violation of the Policy on Academic Integrity, the instructor will attempt to contact the student within a reasonable period of time (normally ten (10) university business days) to notify the student of the suspected violation of the Policy on Academic Integrity. This contact may be in written form (including e-mail), by phone, or in person. In any case, the instructor should convey to the student the following information:

- A description of the nature of the alleged violation (e.g., plagiarism on a term paper; looking at another student’s work on an exam, etc.);
- The basis for believing that the student has violated the Policy (e.g., a Turnitin originality report, a description of a report made by someone who observed the academic misconduct, etc.);
- The academic consequences that the instructor may impose if s/he concludes that there is sufficient evidence that academic misconduct has occurred;
- An offer to discuss the matter further and to respond to the allegations. Depending on the circumstances, this further discussion may occur at a separate time, or it may be continuous with the initial notification. The discussion may take place in person, via email, or by phone. If the student declines to discuss the matter with the instructor, then s/he forfeits the right to appeal the instructor’s decision.

The instructor is encouraged to keep a record of this contact.

B. Discussion between Instructor and Student

The instructor will offer the student an opportunity to discuss the allegation of academic misconduct, and to present any evidence or other information on his or her behalf. This discussion may be continuous with the initial contact, or it may occur at a later time. It may take place by phone, email, or in person.

The instructor will determine the most appropriate format for this discussion, taking into account the details of the situation and the student’s availability and preferences about how the discussion is to be conducted.

If this discussion occurs during a face-to-face meeting, either the instructor or the student may request that a representative of the Ombuds office or a mutually agreeable third party attend to serve as a neutral facilitator or observer. However, neither the instructor nor the student may be represented or accompanied by an attorney or any other advisor.

Regardless of the format of this discussion, the student will be provided the opportunity to respond to the allegation and to explain any suspected or alleged misconduct by presenting evidence, giving additional information relevant to the matter, explaining extenuating or mitigating circumstance, or acknowledging a violation.

C. Determination of Academic Consequences of Violation

After either (1) the instructor and student have discussed the alleged violation of the Academic Integrity Policy, or (2) the student has admitted that s/he violated the Academic Integrity Policy, or (3) the student has declined to discuss the violation, then the instructor will exercise his or her professional judgment in determining whether a violation has occurred, and, if so, what academic consequences are appropriate and what grade is appropriate for the assignment and course. Once this decision has been made, the instructor should communicate his/her decision to the student in writing. This may be done through regular mail, campus mail, email, or hand delivery to the student. The instructor should retain a copy of this communication. Instructors are encouraged to report serious violations of the Policy on Academic Integrity to the Office of Student Life or the College of Graduate Studies, and to include a copy of this communication in the report.

If the student wishes to discuss the allegations but it is not possible to have this discussion before grades are due, or if the instructor is unable to contact the student before grades are due, the instructor shall determine whether to (1) forgo submitting a grade for the student or (2) submit a grade which has been lowered to reflect the consequences of academic misconduct. If the instructor decides not to submit a grade until the matter is resolved, the system will assign a grade of “N,” which the instructor will remove once the discussion with the student has occurred. If the instructor submits a grade before a discussion with the student occurs, the instructor should notify the student of this decision and offer to discuss the matter. If, as a result of the discussion, the instructor determines that the evidence of the violation was faulty or insufficient to warrant a determination of academic misconduct, or if s/he determines that mitigating factors presented by the student warrant a less serious academic consequence than was reflected in the grade submitted, then s/he will file a change of grade request. In such a case, the instructor should communicate this decision to the student.

D. Appeal of an Instructor’s Decision

A student may appeal the instructor’s decision that a violation of the Policy has occurred, and/or the academic consequences imposed by the instructor. However, if a student has refused to discuss the matter with the instructor, s/he forfeits the right to such an appeal.

The appeal must be submitted in writing to the instructor and to the dean (or his/her designated representative, e.g., an associate dean) of the college in which the violation occurred no later than ten (10) university business days after the instructor notifies the student of her/his final decision, or ten (10) university business days after the final course grades.
have been posted, whichever is earlier. However, if a discussion between the student and instructor has been scheduled to be held after grades are submitted, then the student shall have ten (10) university business days after the student has been notified of the instructor’s decision. An appeal not made within the time limit will not be heard unless an exception is made by the dean of the college. The written statement of appeal must state: the name of the person appealing, the basis of the appeal, the instructor making the decision from which the appeal is made, and the remedy which the person appealing is requesting from the dean.

As soon as practical, the dean will convene a committee composed of faculty and students to hear the appeal and to make a recommendation to the dean. The dean will designate one member of the committee as the Proceedings Officer. The role of the committee is to advise the dean.

The student and the instructor are each permitted to have an advisor of his or her choice present at the hearing of the appeal. If either party’s advisor is an attorney, that party must notify the Proceedings Officer of this at least three (3) business days in advance of the hearing. The advisor’s role is limited to providing advice to the student or instructor. The advisor is not permitted to ask or answer questions or make oral arguments.

The Proceedings Officer is responsible for notifying members of the appeals committee of the appeal and for setting a time and place for holding a meeting of the appeals committee. The Proceedings Officer will provide notice of time and place of the meeting of the appeals committee to the student, instructor, and other University persons deemed appropriate by the Proceedings Officer.

The Proceedings Officer will retain the documentary evidence introduced at the hearing, as well as the record made of the hearing; these materials will be available to the appeals committee during its deliberations, and will be forwarded to the Dean with the committee’s recommendation.

The appeals committee has the discretion to establish hearing procedures which are appropriate to the circumstances, fair to all parties involved, and respectful of the values of academic integrity. Normally, the participants in the appeals hearing will appear in person; however, in unusual cases, the appeals committee may allow participation by telephone.

The purpose of the appeals committee is to determine whether the instructor abused his or her professional discretion in finding that academic misconduct occurred and/or in the choice of academic consequences for such misconduct. It is not the purpose of the appeals committee to substitute its judgment for that of the instructor. It is not the purpose of the appeals committee to decide whether it would have reached the same decision had it been the instructor. It is not the function of the appeals committee to hear the charges against the student. The burden of proof shall be upon the student to show that there was insufficient basis for a reasonable instructor to find that academic misconduct occurred, and/or that the instructor’s selection of academic consequences for the misconduct was arbitrary, capricious, or grossly unjust (e.g., a clear departure from the instructor’s announced polices). The appeals committee may:

- Uphold the instructor’s decision.
- Find that the facts of the situation could not provide a reasonable instructor with sufficient basis for finding that academic misconduct occurred, and recommend that the dean of the college set aside the finding or determine the facts differently.
- Find that the instructor’s selection of academic consequences for the violation was arbitrary, capricious, or grossly unjust, and recommend that the dean of the college set aside the academic consequences or impose a different academic consequence.

After receiving this recommendation the dean will either sustain or deny the appeal. The dean’s decision will be in writing. The dean’s decision will be final.

If it is necessary pending the resolution of an appeal, the student will be assigned a deferred grade.

E. Formal Proceedings in the Office of Student Life or the College of Graduate Studies

If the instructor believes that a student has violated the Policy on Academic Integrity and that the violation is sufficiently serious, the instructor may refer the case to the Office of Student Life or the College of Graduate Studies for the consideration of additional sanctions. The following procedures will be followed:

1. The instructor will inform the student that formal proceedings in the Office of Student Life or the College of Graduate Studies are being requested.
2. The instructor will forward all documentation supporting the allegation of violation to the Office of Student Life or the College of Graduate Studies with a cover letter describing the situation. Examples of documentation include the course syllabus, quiz or exam, assignment, source of plagiarism.
3. The “Code of Student Rights, Responsibilities and Disciplinary Procedures” will govern the sanctions which can be imposed, and the appeal process.
4. The Office of Student Life or the College of Graduate Studies will determine a sanction and will notify the instructor of its determination.
5. This sanction will be recorded on the student’s permanent disciplinary record, subject to release only under the terms of the Family Educational Rights and Privacy Act.

F. Proceedings With a Department or Program

1. Departmental or Program Action
   a. In cases where an instructor judges a student to have violated the Policy on Academic Integrity, that person is encouraged to report the incident to the chair of the department or unit in which the student’s program is housed.
   b. Departments and programs will follow their internal procedures for deciding whether the student’s status in the academic program should be reviewed because of the violation of the Policy on Academic Integrity and, if so, what review process will take place.

2. Appeal of Departmental or Program Action
   A record of the department, program and / or college decision and appeal (if any) will be part of the file on the violation of Policy on Academic Integrity maintained by the Office of Student Life or the College of Graduate Studies.

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