The purpose of this bulletin is to provide information about CMU's academic programs available in the 2012-13 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.
# University Calendar
*(Tentative)*

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See [https://centrallink.cmich.edu/services/registrar_office](https://centrallink.cmich.edu/services/registrar_office) and click on Calendars.
Administration

Board of Trustees

Mr. Brian W. Fannon, Novi 2014
Dr. Marilyn French Hubbard, Bloomfield Township 2012
Mr. John D. Hurd, Ann Arbor 2016
Mr. William R. Kanine, Petoskey 2018
Dr. Sam R. Kottamasu, Saginaw 2012
Dr. Patricia A. Maryland, Bloomfield Hills 2018
Ms. Sarah R. Opperman, Midland 2016
Mr. Robert F. Wardrop II, Grand Rapids 2014

Administration 2012

George E. Ross (2002)* President; B.A., M.B.A., Michigan State University; Ph.D., University of Alabama
David A. Burdette (2008) Vice President for Finance and Administrative Services; B.A.A., University of South Florida; M.B.A., State University of New York at Buffalo
Raymond L. Christie (1998) Vice Provost/Academic Administration; B.A., Saginaw Valley State University; M.B.A., Central Michigan University; Ph.D., Georgia State University
Roger L. Coles (1973) Interim Dean, College of Graduate Studies; 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) Interim Vice Provost for Academic Affairs; B.S., M.A.T., Indiana University; Ph.D., Purdue 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
Salma I. Ghanem (2009) Dean, College of Communication and Fine Arts; B.A., The University of Texas—Pan American; M.A., Ph.D., The University of Texas at Austin
Merodie A. Hancock (2007) Vice President and Executive Director, Global Campus; B.A., Scripps College; M.B.A., Claremont Graduate University; Ph.D., Old Dominion University
Christopher D. Ingersoll (2009) Dean, The Herbert H. and Grace A. Dow College of Health Professions; B.S., Marietta College; M.A., Indiana State University; Ph.D., University of Toledo
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
John McGrath (2012) Vice President, Research and Sponsored Programs; B.S., Stanford University; M.S., Ph.D., Massachusetts Institute of Technology
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
E. Gary Shapiro (1978) Executive Vice President/Provost; A.B., Wayne State University; A.M., Ph.D., University of Michigan
Anthony Voisin (1985) Interim Assistant 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
Ernest L. Yoder (2010) Founding Dean, College of Medicine; B.S., Alma College; M.D., Ph.D., Wayne State University

*The year in parentheses indicates the date first employed by the university.
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From the President…

Welcome to Central Michigan University, which this year proudly celebrates its 120th anniversary!

Founded in 1892, CMU today is among the 100 largest in the nation and is Michigan’s fourth largest public university. CMU offers you a superior learning environment with opportunities for hands-on learning, applied research and other enrichment experiences that will prepare you for meaningful involvement and professional accomplishment in today’s knowledge-based and global society.

For more than 12 decades, CMU has remained steadfast in its mission of academic, personal and professional success for our students. You can choose from an impressive breadth of academic programs, including many that are nationally recognized. CMU also has established a College of Medicine, with the inaugural class anticipated to begin in the summer of 2013.

No matter which program you choose, you will learn from accomplished professors dedicated to teaching and committed to engaging you directly in opportunities for active learning and real-world experiences.

To support your professional and educational experiences beyond the classroom, our faculty, staff and advisors form partnerships to provide you with internship or professional development opportunities, guide your academic choices and much more. As you continue your educational program, you soon will join the proud community of more than 210,000 CMU alumni worldwide.

Education has the power to transform lives, communities, nations and the world. On behalf of the entire university community, we welcome you and encourage you to actively engage in your academic career at CMU.

Sincerely,

George E. Ross
President
From the Dean...

Each year, we are pleased to welcome both new and returning students to Central Michigan University to pursue your graduate studies. We are particularly pleased that you chose CMU for your studies. Graduate education is essential to maintaining our country's leadership in research innovation. Your studies here ensure that as knowledge creators and innovators of tomorrow, you will have the cultural awareness, skills, and expertise to compete effectively in a knowledge-based global economy. You are now embarking on a new journey.

Our system of higher education is arguably the best in the world, and graduate education is its bedrock. Attracting top domestic and international students to our nation's graduate programs is imperative. President Obama made the connection between a robust educational system and American economic strength and security, and he stressed the need to increase access and affordability of high quality education at all levels. Education must play a key role in our national strategy to enhance our competitiveness in the global economy.

The Bureau of Labor Statistics estimates that by 2018, more jobs will require people with advanced degrees, specifically an 18% increase in jobs requiring a MA and a 17% increase in those requiring a Doctoral degree.

Graduate education is meant to be different from undergraduate education. If you enjoy reading, problem-solving, discovering new facts and exploring new ideas then graduate education maybe right for you, but to be successful you must be self-directed, intellectually curious, hard-working, flexible, and committed. You will have a closer relationship with faculty than you had as an undergraduate, and you will rely on your fellow students for ideas, criticism, and stimulation. Graduate education is essential to maintaining our country's leadership in research and innovation. At the graduate level, the field of study is narrow, the expectations for both teacher and learner are great, and, in many cases, there is an opportunity to do in-depth research and work independently. These aspects of graduate education make it a challenge for many.

Make the most of your graduate experience by utilizing the many resources available to you. There are many opportunities, on- and off-campus, to get involved in meaningful activities outside the classroom. Funding is available to assist you with research and creative projects and for travel. The Graduate College will be offering an enrichment series to help meet some of your needs that are not directly connected to your academic pursuits. Oftentimes, departments and programs have special activities to broaden your experience in your area of study. Do not limit yourselves to the classroom or the lab.

We are here to assist you and the graduate dean continually advocates for excellence regarding every aspect of the graduate enterprise. If you need to speak with us regarding aspects of graduate education such as your graduate assistantship, plan of study, or thesis or dissertation, please do not hesitate to make an appointment. Also, you can find a great deal of information and any form related to CMU graduate education you might need on our website: www.grad.cmich.edu. And finally, let us know if CMU is not meeting your needs as a graduate student. We are always willing to consider new offerings to our graduate students; we just need to know what you need! The highly skilled creative workforce of tomorrow is developed through your graduate programs.

Again, we are most pleased that you have chosen CMU for your graduate studies. We believe you will find your graduate work here at CMU challenging and rewarding.

Interim Dean, College of Graduate Studies
The College of Graduate Studies

The College of Graduate Studies is the primary administrative unit for graduate students enrolled at CMU. On a daily basis, the College of Graduate Studies handles all types of issues affecting graduate students, from admission through the awarding of graduate certificates and degrees. The dean of the college has a variety of duties including: continually advocating for excellence regarding every aspect of the graduate enterprise, reviewing existing programs, encouraging the development of new programs, promoting and supporting graduate student research and creative endeavors, increasing support for graduate programs and graduate students, building and maintaining the institutional infrastructure for graduate education, and enforcing university policies regarding graduate education.

The staff of the College of Graduate Studies is available to answer questions or help current and prospective graduate students with any problems they may have. In addition, if you have general questions concerning graduate studies at CMU, the Office of the Dean or the Graduate Student Services staff are happy to be of assistance.

Contact information:
College of Graduate Studies
Central Michigan University
Mount Pleasant, Michigan 48859
https://centrallink.cmich.edu/academics/grad_studies
grad@cmich.edu

College of Graduate Studies
Mission Statement

The mission of the College of Graduate Studies is to support and advance high-quality graduate education. Toward this end, the College

• promotes quality in all aspects of graduate education; encourages the development of new programs and the improvement of existing ones;
• provides administrative support for graduate programs;
• promotes the recruitment and retention of a well qualified and diverse student body;
• develops graduate policies for consideration by the larger CMU community;
• enforces approved policies that relate to graduate programs and graduate students;
• advocates for financial and non-financial support for graduate students.

In accomplishing its mission, the College of Graduate Studies responds promptly and professionally to all of its constituents, including current and prospective students, alumni, graduate faculty, academic departments and programs, and employers.
College of Graduate Studies Administration

The Graduate Committee represents the graduate faculty and is charged with making recommendations to the Academic Senate concerning degrees, programs, standards, and policies of the College of Graduate Studies. The Dean of the College of Graduate Studies is the agent of the graduate faculty for the implementation and enforcement of college policies for both main campus and Global Campus graduate programs.

The Graduate Committee is a committee of the Academic Senate, charged to serve as the advisory and policy-making body for the College of Graduate Studies. The Council is concerned with the development and evaluation of all programs and policies pertaining to the operation of the College of Graduate Studies and the quality of graduate education on CMU’s main campus and through Global Campus. The Graduate Committee makes recommendations to the Academic Senate in the following areas: new programs, program additions, modifications, consolidations, and deletions; minimum graduation requirements and approved department requirements for graduate programs; College of Graduate Studies’ admission and dismissal policies and approved departmental policies; and policies and regulations for the College of Graduate Studies. Among its responsibilities, the Graduate Committee is expected to: establish the guidelines for advising graduate students, establish guidelines for the Graduate Research Fellowship Program; and evaluate courses numbered 500 and above.

Faculty serving on the Graduate Committee must be members of the Graduate Faculty. Nominations for the Graduate Committee are forwarded to the Academic Senate from the Committee on Committees. The Council includes one faculty from each of the following: the College of Business Administration, the College of Education and Human Services, the College of Communication & Fine Arts, The Herbert H. and Grace A. Dow College of Health Professions, the College of Humanities and Social & Behavioral Sciences, and the College of Science and Technology. There are also five graduate faculty at large and two graduate students on the Graduate Committee. Faculty members serve three-year staggered terms, and graduate students serve one-year terms. A representative of Global Campus serves as an ex-officio member without vote. The Dean of the College of Graduate Studies is an ex officio member of the Graduate Committee. Information regarding the current membership of the Graduate Committee and the names of its officers is available from the College of Graduate Studies (989-774-4890) or the Academic Senate Office (989-774-3350).

Campus Visits

The College of Graduate Studies welcomes visits from prospective students and their families to Mount Pleasant and the CMU community. The College of Graduate Studies can provide campus maps and information. Students are encouraged to call departments before their visit and set up appointments to meet with department chairs or graduate coordinators.

If you arrive by car, stop first at CMU Parking Services located in the CMU Police office in the Combined Services Building on East Campus Drive (between Broomfield and Preston streets), for assistance with visitor parking.

Using this Bulletin

Take time to carefully read the general and academic information sections of this 2012-2013 Graduate Bulletin. These explain university policies and procedures that govern your academic degree and you are expected to know. This section also describes services and programs available to you. To find the department in your area of interest, consult the Index of this Bulletin. Each departmental description begins with the chairperson’s office address and telephone number.
The University Setting

CMU’s home is Mount Pleasant, home to 26,000 people and growing. Our students come from every county in Michigan and many other states and countries. Our park-like campus is a relaxing place to study, meet up with friends over a cup of coffee, or enjoy the serene beauty of nature.

Campus life includes events like plays, concerts, Division I sporting events, lectures, art exhibits, and more.

CMU Today

Celebrating its 120th anniversary this year, Central Michigan University is one of the nation’s 100 largest public universities and the fourth largest in Michigan, with more than 21,000 students on its Mount Pleasant campus and more than 7,000 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. CMU also has established a College of Medicine, anticipated to welcome its inaugural class starting in the summer of 2013.

With accomplished professors, opportunities for students to engage in applied research and 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 new academic minor in leadership, the first one to be offered by a Michigan university.
- The award-winning Honors Program, which this year is celebrating its 50th year, administers the prestigious Centralis Scholarship Program and oversees approximately 200 faculty-mentored honors undergraduate research projects annually.
- The Mary Ellen Brandell Volunteer Center maintains a database of more than 5,000 students who take advantage of numerous opportunities to help others, locally, nationally and around the world through the Alternative Break program.
- Four CMU professors have been named Carnegie Foundation for the Advancement of Teaching Michigan Professor of the Year, tied for the most of any university in the state.
- CMU is the nation’s foremost university authorizer of charter schools with 56 schools educating more than 28,000 students in grades K-12.
- CMU’s academic residential halls enhance learning and community in business, education and human services, health professions, science and technology, music, honors, and leadership and public service.
- Ten new academic, athletic and residential buildings have been built on CMU’s campus in the last 10 years, including the LEED-certified Education and Human Services Building, which opened in fall of 2009, and the CMU Events Center, which opened in December 2010.

Cutting-edge Student Research

Students have helped conduct cutting-edge research in Parkinson’s and Alzheimer’s diseases, create biofuels and longer-lasting batteries and develop improved methods of water purification. In addition, through the university’s Institute for Great Lakes Research, CMU biology researchers are taking the lead on a $10 million grant designed to protect and preserve coastal wetlands along the Great Lakes - 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. Visitors, friends, family members, siblings and others are always welcome to visit 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 more. With more than 94,000 square feet of available space, the CMU Events Center, which opened in December 2010, also 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. CMU competes in seven men’s and nine women’s sports and CMU’s NCAA Division I student-athletes are accomplished both on the field and in the classroom. CMU has won more than 75 MAC Championships in 14 different sports, and the Chippewas are regular contenders for the MAC Institutional Academic Achievement Award for the highest GPA. The Chippewas’ soccer program has had unprecedented success in the classroom, posting the nation’s highest GPA among all NCAA Division I soccer programs for seven consecutive years. CMU won the league’s inaugural Cartwright Award for overall program excellence in 2009. CMU’s summer sports camps also are recognized among the best in Michigan.

Charles V. Park Library. Central Michigan University this year continues celebrating the 10th anniversary of Park Library’s expansion and renovation - a project that converted the library from a storehouse for printed academic materials to a comprehensive, highly technological information center. CMU’s library houses more than 1 million print volumes on 33 miles of electronically movable shelving, but it doesn’t take a personal visit to acquire resources. The library’s Global Campus Library Services is a well-established model of extended electronic access for higher education, and 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 Statement
CMU will be a nationally prominent university known for integrity, academic excellence, research and creative activity, and public service
Adopted by the Board of Trustees, March 3, 2005

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.

University Goals
As the university strives to achieve its mission and realize its values, these six overarching goals are guiding CMU this academic year:

Goal 1: Strategic Direction for Central Michigan University
Central Michigan University is a distinguished university, with an uncompromising commitment to providing a preeminent student-centered learning experience to its students and to actively participating in the communities we are privileged to serve.

Goal 2: Student Success
The success of our students is dependent upon creating an environment that raises expectations of students, faculty and staff, both inside and outside of the classroom. We must provide superior learning experiences for students, built on strong academic programs and strong co-curricular activities that prepare our students for meaningful careers and professions, lifelong learning and civic responsibility within our global society.

Goal 3: Diversity and Global
Foster equitable access and prepare students for productive lives within today’s multi-cultural society and international global community by providing them opportunities to be exposed to and to cultivate an appreciation for perspectives, customs and beliefs different from their own.

Goal 4: Scholarship, Research and Creative Activity
Create and disseminate knowledge through theoretical and applied research, creative activities and artistic expression and interdisciplinary collaboration that will contribute to the intellectual, economic, cultural, and social well-being of our state, region and global communities.

Goal 5: Partnership and Public Engagement
Establish, enhance, strengthen and nurture partnerships that provide direct interaction, leadership and resources for the intellectual and economic development of the communities we are privileged to serve and other external constituencies.

Goal 6: Resources, Infrastructure and Culture
Provide the appropriate financial, human and physical resources to achieve the mission of CMU. The university personnel and physical infrastructure should be enhanced to move it towards national prominence. The resources and infrastructure must be built upon a solid foundation of core values that serve as the moral compass for governance and decision-making.
Adopted by the Board of Trustees, May 24, 2010

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.”
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. This process causes faculty to carefully articulate program goals and to focus classroom experiences and assignments on preparing students to achieve those goals.

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 in the area of liberal studies as presented through General Education. We ask alumni their views about programs and their careers since graduation and employers what qualities they need and expect in university graduates and how well CMU’s programs prepare students to meet their needs.

These efforts all combine to improve program quality and serve as a basis for our culture of continuous improvement in support of CMU’s commitment to excellence.

Accreditations
Regional accreditation has been granted to more than 2500 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 NCA evaluation took place in 2005-2006, at which time CMU was accredited for 10 years. The current accrediting body is now known as NCA’s Higher Learning Commission and is located at 230 North LaSalle Street, Suite 7-500, Chicago, IL 60604-1413.

A number of CMU programs have also 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. Other programs hold national accreditation by one or more of the following organizations: Accreditation Board for Engineering and Technology; Association of Technology, Management and Applied Engineering; Association of University Program in Health Administration; American Psychological Association; American Speech, Language and Hearing Association; Accreditation Commission for Audiology Education; American Chemical Society; the Commission on Accreditation of Athletic Training Education; Commission on Accreditation for Dietetics Education (American Dietetic Association); Accreditation Review Commission on Education for the Physician Assistant, Inc.; Accrediting Council of Education in Journalism and Mass Communication; Commission on Accreditation in Physical Therapy Education of American Physical Therapy Association; Council on Academic Accreditation in Audiology and Speech-Language Pathology; Council for Interior Design Accreditation; Council on Social Work Education; Liaison Committee on Medical Education, National Association for the Education of Young Children; National Association of Schools of Art and Design; National Association of School Psychologists; National Association of Schools of Music, National Association of Schools of Public Affairs and Administration; National Council on Family Relations; and National Recreation and Parks Association.

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 a not-for-profit organization consisting of more than 1,200 educational organizations and corporations. Headquartered in Tampa, FL., USA, AACSB International is the premier accrediting agency and service organization for business schools.

‘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: apaacccred@apa.org
Web: www.apa.org/ed/accreditation

CMU is also on the approved list of the American Association of University Women of Michigan. The National Association for the Education of Young Children (NAEYC) accredits CMU’s Human Growth and Development Pre-School lab.

Individuals who wish to review the accreditation documents should contact Academic Affairs. Further information regarding specific program accreditation status is located at: https://centrallink.cmich.edu/administration/provosts_office/academi-caffairs/accreditation

Civil Rights and Institutional Equity
CMU, an AA/EO institution, strongly and actively strives to increase diversity and provide equal opportunity within its community. CMU does not discriminate in employment against persons based on age, color, disability, gender, gender identity/gender expression, genetic information, familial status, height, marital status, national origin, political persuasion, race, religion, sex, sexual orientation, veteran status, or weight (see http://www.cmich.edu/aaeo/).

Affirmative action is a set of specific and results-oriented measures taken to bring about equal opportunity. At CMU, the Office of Civil Rights and Institutional Equity coordinates and monitors the university’s affirmative action/equal opportunity efforts and programs to assure compliance with the Americans with Disabilities Act, Title VII of the 1964 Civil Rights Act, Executive Order 11246 and other relevant state and federal statutes.

The office supervises the maintenance of related reports and records, provides and develops related educational materials, offers guidance and advice to all community members on the University’s nondiscrimination and affirmative action policies and procedures, assists departments with recruitment and retention activities, and receives and resolves complaints of discrimination from students, employees and others.

To view the Board of Trustees Nondiscrimination Policy, see https://centrallink.cmich.edu/about/Diversity_Programs_Initia-tives/OCRIE/Pages/Nondiscrimination_Policy.aspx.

For more information, contact the Office of Civil Rights and Institutional Equity, Park 428, Central Michigan University, Mount Pleasant, MI 48859, 989-774-3253, https://centrallink.cmich.edu/about/diversity_programs_initiatives/OCRIE
Office for Institutional Diversity

Warriner 319; 989.774.3700; https://centrallink.cmich.edu/about/diversity_programs_initiatives/InstitutionalDiversity

The Office for Institutional Diversity (OID) serves a leading role in promoting an institutional culture that values and supports diversity and inclusion. The OID recognizes preparing students for productive lives within today’s multicultural society and global community necessitates providing ALL students opportunities to experience and cultivate an appreciation for perspectives, customs, and beliefs different from their own. Its mission is to support this endeavor. 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. Also, the OID monitors progress of CMU’s 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 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. Some specific programs and initiatives offered through the office include cultural celebrations, Supplemental Instruction, and 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 functions 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 Cultural Competency opportunities for undergraduate students. ODE also sponsors speakers, art exhibits and other events. In collaboration with other offices on campus, staff coordinate and develop diversity workshops and assist faculty with making their courses more inclusive. Contact information: Bovee University Center 110C; 989-774-7318

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 110B; 989-774-2508.

Lesbian Gay Bisexual Transgender Queer Services

The purpose of Lesbian Gay Bisexual Transgender Queer Services is to coordinate programs, to participate in educational forums to raise awareness of lesbian, gay, bisexual, transgender and queer (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 GEARUP 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.

(Continued)
**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 260 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.

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**Office of Study Abroad**

**Dianne De Salvo, Director**
Ronan Hall 330; 989-774-4308; www.studyabroad.cmich.edu

CMU’s Office of Study Abroad (OSA) offers a variety of study opportunities abroad for graduate students. Study abroad provides students with opportunities to expand their view of the world and prepares 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.

CMU is offering a growing number of faculty-led short-term programs around the world. Other short-term programs around the world are also available in summer. Semester and academic year options are also available. 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 for studying abroad; students may take courses taught in English around the world. Course credit approval may be obtained in advance from the academic department. For the full list of options, please visit the Study Abroad website.

Studying abroad does not have to be expensive. 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. OSA offers a large number of study abroad scholarships each year. In addition, there are scholarships available through main 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 through the Office of Scholarships and 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.

Meet with a Study Abroad Advisor in OSA, Ronan 330, to discuss the opportunities available to study abroad through CMU.
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.
Academic Overview

Graduate Degrees and Certificates

Doctoral Degrees
- Audiology
- Education: Educational Leadership*
- Health Administration*
- History
- Mathematics: Teaching College Mathematics
- Medicine
- Neuroscience
- Physical Therapy
- Psychology, Applied Experimental
- Psychology, Clinical
- Psychology, Industrial/Organizational
- Psychology, School
- Science of Advanced Materials

Specialist's Degrees
- General Educational Administration*
- Psychological Services (School Psychology)

Master's Degrees
- Administration*
- Apparel Product Development and Merchandising Technology
- Biology
- Broadcast and Cinematic Arts
- Business Administration*
- Chemistry
- Chemistry, Teaching
- Communication
- Computer Science
- Counseling, School*
- Counseling, Professional*
- Economics
- Education*
- Educational Technology*
- Elementary Education
- English Language and Literature
- English Language and Literature: Children's/Young Adult Literature
- English Language and Literature: Creative Writing
- English: Composition and Communication
- Geographic Information Sciences
- Higher Education
- History
- History, Joint
- Human Development & Family Studies
- Humanities*
- Industrial Management and Technology
- Information Systems
- Integrated Science
- Mathematics
- Music
- Neuroscience
- Nutrition & Dietetics*
- Physical Education
- Physician Assistant
- Physics
- Political Science
- Psychology, Experimental/Applied Experimental
- Psychology, Industrial/Organizational
- Public Administration*
- Reading and Literacy (K-12)*
- Recreation and Park Administration
- Secondary Education
- School Principalship*
- Spanish
- Speech-Language Pathology
- Special Education: The Master Teacher
- Sport Administration*
- Teacher Leadership*
- Teaching English to Speakers of Other Languages (TESOL)
- Therapeutic Recreation

Accelerated Degrees (Bachelor's and Master's)
See page 27 for more information.

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

Certificates
- Acquisitions Administration*
- Administration, General
- Autism
- College Teaching
- Data Mining
- Educational Technology
- Enterprise Systems*
- European History
- General Administration*
- Gerontology
- Health Services Administration*
- Human Resources Administration*
- Information Resource Management*
- International Administration*
- International Health Leadership*
- Logistics Management*
- Modern History
- Nutrition and Dietetics*
- Professional Development in Public Administration
- Public Administration*
- Research Administration
- United States History
- Vehicle Design and Manufacturing*

*Programs also offered through Global Campus (https://www.cmich.edu/globalcampus)
University Libraries

The University Library in the Park Library building houses a collection of over 1,025,000 volumes of books, periodicals, and documents and maintains approximately 3,570 periodical and newspaper subscriptions and offers online access to hundreds of full-text databases. The University Library also has a significant microform collection of 1,320,000 items which includes long periodical and newspaper runs, as well as large sets of education research reports, early English and American books, presidential papers, and other scholarly materials. The Library is a selective depository for U.S. and Michigan government documents and maps. Items not available on site can be obtained from other sources around the world through the Library’s Interlibrary Loan office.

More than just a collection of books and periodicals, the University Library provides a large array of library services and study areas which are open nearly 100 hours/week. An extended hours study room offers additional hours of study space.

CENTRA, the Library’s online catalog helps users find books, periodicals, music scores, maps, and audio-visual materials.

Within the library building, over 300 workstations are equipped with high-speed Ethernet connections to the Internet. Wireless Internet access is also available in the building, and students can check out a laptop computer for use in the building.

The University Library has licensed access to hundreds of thousands of magazine and journal articles in arts and humanities; social and behavioral sciences; health, physical, and life sciences; business; and education. They are available to students and University employees through the Libraries’ home page at https://centrallink.cmich.edu under Services.

Reference librarians are available every day of the week to assist students and faculty with reference questions and research projects. In addition to offering personal assistance from the reference desk, librarians also respond to inquiries via telephone, and e-mail. They also offer library instruction to classes and teach LIB 197, a one-credit course in basic library research skills. The University Library holds a wide variety of general and subject-specific indexes, abstracts, and other research materials, some in print and some in electronic format. Reference librarians and staff will be glad to assist users in selecting and effectively accessing all of these resources.

Photocopy machines, including those for microforms and printers are available throughout the library for the convenience of patrons. Visually impaired patrons may use equipment and materials located in Student Disabilities Services on the first floor. Individual study rooms are also available.

Hours of service are posted in the library and at the entrances, but patrons may call 989-774-3294 for current library hours or 989-774-1100 for more information.

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-Americana. 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.

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.

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 new facility.

Information Technology at CMU

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 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 providing 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. 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.

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 and accessing My Account and going to “My Profile.”

Cellular Phone Services: OIT offers Altel, Verizon, AT&T, Nextel, and Sprint cellular phone service and equipment through the Telecom Service Center. Competitive rates, up to 15% off rental for monthly service and up to 25% off retail for phones/equipment, are available to all students, faculty, and staff. For additional information, contact the Telecom Service Center at 989-774-3091, or visit https://centrallink.cmich.edu, and access Information Technology under Services > Business and Facility Services.

Media Services: A large collection of instructional videos and Mediated Equipment are 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. For more information, visit https://centrallink.cmich.edu, and access Information Technology under Services > Business and Facility Services.

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 visit https://centrallink.cmich.edu, and access Information Technology under Services > Business and Facility Services.

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 web site (visit https://centrallink.cmich.edu, and access Information Technology under Services > Business and Facility Services). The policies are intended to supplement other existing university and external policies, regulations and laws.

For more information about OIT services, or if you have questions, please call the OIT Help Desk at 989-774-3662 or visit the OIT Web site on https://centrallink.cmich.edu/services/business_facilityservices/information_tech.

Office of Student Life

Students connect with many aspects of university life through the Office of Student Life. Students may contact the Office of Student Life for assistance with policies and procedures, such as absence from class due to illness lasting a week or more.

Student Activities and Organizations

Central Michigan University provides students with opportunities to become involved in hundreds of 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 that 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 the student body or are interested in serving on university committees may contact SGA for information. 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 Organization Center (SOC), located on the lower level of the Bovee University Center, houses about thirty student organization offices. Among the major groups with offices in and near the SOC are: Student Government Association, International Club, Organization for Black Unity (OBU), Hispanic Student Organization (HSO), Residence Hall Assembly (RHA), Mortar Board, and the Interfraternity Council, Panhellenic Council, and National Panhellenic Council, which govern fraternities and sororities.

Students interested in participating in campus activities should contact the Office of Student Life. Assistance will be given to students who are interested in starting a new group. The office is located in the Bovee University Center. See http://cmich.orgsync.com/home for more information.

Program Board

Program Board is a student committee which reports to the Office of Student Life. It is a learning experience for students interested in all aspects of the entertainment field, such as contact 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.

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 Rights and Responsibilities, 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 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 Life, the CMU Police Department, a counselor in the Counseling Center, or SAPA. (Sexual Aggression Peer Advocate). For more information, go to https://centrallink.cmich.edu/services/student_services/career_services > Office of Student Affairs > SAPA

Sexual Harassment Policy. University policy and the Michigan Civil Rights Act prohibit sexual harassment of any person. The university is committed to maintaining an educational and working environment free of conduct which degrades or subjugates individuals, including conduct which constitutes sexual harassment. Students who have questions or concerns about sexual harassment on the campus should contact the Office of Student Life.

Student Ombuds Office

The Student Ombuds Office is part of the President’s Office and is a place for student voices to be heard. Sometimes when students are dealing with an issue on campus that does not appear to have a simple solution, they are being bounced from person to person without receiving help, or they are not sure who to contact. This is where the Student Ombuds Officer can help. The Ombuds Officer will listen to your situation and take one or several courses of action. The Student Ombuds Officer may: 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. To contact the office, please call 989-774-3010 or stop by the office located in 121 Warriner Hall. See: https://centrallink.cmich.edu/administration/presidents_office/OMBUDS/Pages/default.aspx

Student Disability Services

Central Michigan University is committed to providing equal opportunities 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 encouraged to register with Student Disability Services. For more information about facilities and services for students with disabilities, contact Student Disability Services, 120 Park, 774-3018.

Career Services

Career Services (https://centrallink.cmich.edu/services/student_services/career_services) is located in Ronan 240 and can be reached at 989-774-3068 or careers@cmich.edu. Career Services works with students and graduates on career advising and job search strategies. The office helps students who are seeking advice on their career path along with helping to develop job-seeking skills, writing resumes, and interviewing techniques. An extensive career website is provided for use by all main campus students and alumni. The website contains general career information, tips for seeking jobs, vacancy listings from a variety of sources, and information about potential employers in business, government, and education.

The center also coordinates recruiting on CMU’s main campus by businesses, government agencies, and educational institutions and serves as a clearinghouse for employment opportunities through eRecruiting.

Computer-based Testing Center

The Computer-based Testing Center provides testing services for students. This includes graduate entrance examinations, such as the Graduate Record Examination (GRE), Miller’s Analogies Test, and Graduate Management Admissions Test (GMAT). Call 989-774-1092 for additional information or visit the website at https://centrallink.cmich.edu/Pages/default.aspx and search on CBTC.

Child Care Options

The Child Development and Learning Laboratory, through the Department of Human Environmental Studies, offers several options. For more information please call (989) 774-3760 or visit www.cmich.edu and search for Child Development and Learning.

The Student Employment Office (989-774-3881) assists in finding qualified students for at-home child care.

There are a variety of home and center-based child care options in the community. For information concerning child care in Clare, Gladwin, Gratiot, and Isabella Counties, see http://greatstartforkids.org/connect/.

Health and Wellness

University Health Services

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

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 medical care, disease prevention and health promotion services tailored to their dynamic needs.

Eligibility: All regularly enrolled CMU students, 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: Located 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 designated in Lot 29 on the east end of Foust Hall. More parking is available in Lot 33 on the south side of Foust and metered parking is 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 Cobb 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. Please visit our website at https://centrallink.cmich.edu/services/health_wellness/university_health_services for current hours of operation.

Clinical Services Available: Our staff consists of board-certified physicians, physician assistants and nurse practitioners who are fully qualified to provide primary care services. Our medical staff is here to provide 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

(continued)
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: University Health Services does not provide 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; or dental care. Referrals to area 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. 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.

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. Having health insurance is important for several reasons:

• Uninsured people receive less medical care and less timely care.
• The uninsured typically have worse health outcomes.
• To minimize the financial burden of an unforeseen illness.

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. Anational health insurance provider offers 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 the student’s health status. At age eighteen, students are legally adult. 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 the student’s health status. 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 the student’s health status.

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.

Additional Information: For additional information about University Health Services visit the UHS website at https://centrallink.cmich.edu/services/health_wellness/university_health_services.

Counseling Center

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 for students 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; however there may be a modest fee to cover the costs associated with test administration.

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 at the:

• East Area Student Success Center (989-774-1879)
• North Area Student Success Center (989-774-4928)
• 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.
Human Development Clinic

The Human Development Clinic provides counseling and assessment services for community residents and schools and CMU students. Advanced graduate students in counseling ordinarily perform these services under the supervision of the counselor education faculty members. Some 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 Human Development Clinic provides counseling and consultative services during the summer months. The Human Development Clinic is administered by the Department of Counseling and Special Education and may be reached at 774-3532; 326 EHS Building.

Psychological Training and 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, including the Violence Reduction Treatment Program, Parent-Child Interaction Therapy, Trauma and Anxiety Disorders Clinic, Neuropsychological Assessment Clinic, the Childhood ADHD Clinic, and the Learning Acceleration Program. For further information about any PTCC program, or to request services, call 989-774-3904.

Speech, Language, and Hearing Clinics

The Speech, Language and Hearing Clinics are operated by the Department of Communication Disorders at CMU and at facilities in the Central Michigan area. These clinics are part of the Carls Center for Clinical Care and Education and 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, a five-week coeducational specialty program is offered 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 clinic has served thousands of children. Enrollment in this clinic is approximately 75 children each summer. The staff includes 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, otalaryngologists’ 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.

Student Enrichment

Brooks Astronomical Observatory

The Brooks Astronomical Observatory, located atop Brooks Hall, is administered by the Department of Physics. The dome has a modern 16-inch telescope and there is an open air observation platform for naked eye or small telescope observing. The observation platform also offers an excellent view of the campus. The observatory facilities are open to the student body and the public one evening each month during the academic year. Weather permitting, visitors can view celestial objects with the telescope. Contact the Department of Physics for open night schedules or to arrange special tours and viewing sessions for groups. Further information about the observatory and the open nights can be found at: http://www.cmich.edu/academics/sci_tech/physics/BAO/Pages/default.aspx.

The Museum of Cultural & Natural History

The Museum of Cultural & Natural History, located 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 university faculty, staff and students to enhance classroom learning and are loaned to school groups within the region.

Faculty in anthropology, art, biology, geology and history regularly make use of collections, exhibits and learning laboratories. In addition, the museum schedules programs for university and community groups in the Gerald L. Poore 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 Neith cutter Woodland as well as the main exhibit hall and temporary exhibit gallery in Rowe Hall.

The museum also serves as the home for the undergraduate minor program in Museum Studies. For information about the museum or the minor, visit the museum offices in 103 Rowe Hall or https://www.cmich.edu/academics/humanities_social_behavioral_sciences/chsbmuseumofculturalandnaturalhistory or call 989-774-3829.

University Art Gallery

The mission of the University Art Gallery is to provide an opportunity for the CMU and mid-Michigan communities to view exhibitions of contemporary art. UAG generates, travels, 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 an opportunity for them to have exhibitions, hosting a juried student exhibition, and providing internships. CMU 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 visit https://centrallink.cmich.edu/academics/comm_finearts/ccfaartgallery.

University Theatre

Each year the University Theatre presents a season of major productions offering a wide range of periods and styles. Open auditions for each production are held for every area of the production. Audiences enjoy discounts on multiple ticket purchases, and there are special student rates for performances. For ticket information, call the CMU Box Office at (989) 774-3000.
Student Media

Student Media Board of Directors

The Student Media Board of Directors, composed of students and professional journalists, appoints editors, formulates policies and provides direction for the two publications, Central Michigan Life and The Central Review. For additional information write or visit Room 436, Moore Hall, or call 989-774-3493.

- **Central Michigan Life** is the official university student newspaper published three times a week while the university is in session. It is student-written and provides practical experience for journalism students. It covers campus events and major city, state, and national news. The online version is on www.cm-life.com.
- **The Central Review** is the official university literary magazine. It is published once each semester.

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 97. MHTV offers practical experience in all phases of television programming, including News Central, 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. Modern Rock 91.5 provides multiple counties with cutting edge music and extensive sports coverage. Mountain 101 offers the greater Mt. Pleasant area an Adult Alternative format. Both stations are streamed worldwide at www.wmhw.org and provide student broadcasters with intensive immersion in every aspect of programming and managing a dual station cluster.

University Recreation (UREc)

University Recreation conducts recreation and fitness programs for the campus community largely occurring in the Student Activity Center (SAC). The SAC is a 175,000 square foot facility, which is fully accessible to those with disabilities. The SAC is a state-of-the-art, holistic activity center focusing on fitness, wellness, and leisure pursuits for all members of the university community.

Facilities are provided for aquatics, weight training, fitness, jogging, bowling, billiards, aerobics, racquetball, archery, golf hitting, table tennis, basketball, volleyball, badminton, tennis, floor hockey, indoor soccer, dances, movies, and other various kinds of leisure activities. These activities are directed by a highly qualified university recreation staff in conjunction with a large student staff.

Programs are designed to help students, faculty, and staff maintain a high-quality lifestyle and to provide choices for active use of leisure time. Activities are offered within the program areas of aquatics, open recreation, intramurals, fitness, social activities, and special events. The department also advises sport clubs and facilitates club sports.

- **Open recreation** is a “self-service” program, available on a drop-in basis to persons who show a current CMU ID card validated for building use. Swimming, jogging, golf hitting, table tennis, pick-up basketball and volleyball, fitness, weight training, and other activities, plus reservations for racquetball, tennis, wallabyball and fall within this program.
- **The Intramural Sports Program** consists of meets and leagues in more than 30 sports. The program includes a wide range of individual, dual, team, outdoor, combative, and racquet sports.

With few exceptions, all activities are offered in three divisions: men, women, and co-recreational.

- **Fitness activities** revolve around student staff who are trained to lead others in group fitness, weight fitness circuits and exercises, jogging, personal training, and other activities. A fitness assessment center is staffed with qualified and supervised students who conduct fitness profiles, counsel on exercise and nutrition, and assist users in developing personal fitness programs.
- **Special events** include road races, sports tournaments, and functions associated with Homecoming, Leadership Safari, Siblings Weekend, National Recreation Sports and Fitness Week, Finals Focus, Tailgate Central and charitable projects.
- **Social events** include dances, bowling, billiards, pool parties, card tournaments, TV viewing, movies, and other programs.
- **Club Sports** are special interest units which require memberships, normally for a fee. Groups participate among themselves; some compete against other colleges. Club Sports include: Soccer, Rugby, Lacrosse, Basketball, Hockey, Golf, Water Polo, Volleyball, Baseball, Softball, Martial Arts, and more.

For more information about URec programs and facilities, contact the URec office at (989) 774-3686.

Auxiliary Services

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 Center, the Campus ID Office, the Office of Student Life, 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, a full-service 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, Big Apple Bagels, and Starbucks Coffee.

Printing Services

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 the website at https://centrallink.cmich.edu/services/business_facilityservices/printing.
Development and External Relations
Kathleen M. Wilbur, Vice President
Carlin Alumni House; 989-774-2382

Development
Development in addition to serving as the administrative home of the CMU Alumni Association, generates private gift revenues from individuals, corporations, and foundations in order to accomplish the purposes and objectives of Central Michigan University. In pursuit of its mission, Development provides fund-raising leadership to complement, encourage, and support university-wide efforts to achieve comprehensive objectives for resource acquisition. At the same time, Development seeks to ensure the continuity of the fund-raising 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. Avenues to involve graduates and current students with CMU in a productive and positive manner are continually developed. 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 Student 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 publishes Centraight, 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 200,000 graduates.

For further information, please contact the Executive Director of Alumni Relations, located in the Carlin Alumni House; telephone 989-774-3312 or toll free 800-358-6903.

Governmental Relations
The office of government relations 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 Office of Governmental Relations 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 WCMZ-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; WCMW-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
University Communications serves as the official voice of Central Michigan University and promotes the university through strategic messaging using digital, print, 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.

The Office of Research and Sponsored Programs
The Office of Research and Sponsored Programs (ORSP) 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. ORSP 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 Sponsored Programs at 989-774-ORSP or visit https://www.cmich.edu/libraries_research/orsp.
This section describes the university's policies and procedures that affect graduate students and graduate programs. It is important to remember that these are the general policies; individual programs may have more rigorous standards for admission, program completion, or graduation. It is also important to remember that policies are not static. They are reviewed periodically, and sometimes, following appropriate university procedures, they are changed. When changed, they are printed annually in this Graduate Bulletin, and made immediately in the online version when necessary. The University recognizes that individual circumstances may create a situation in which it is appropriate to grant an exception to a policy given in this Bulletin. Students seeking policy exceptions should consult the College of Graduate Studies, Office of the Dean.

Admission

College of Medicine Admission

Admission applications to the College of Medicine are completed through the American Medical College Application Service (AMCAS) at www.aamc.org/students/amcas. Additional information about the College of Medicine application requirements is available on the College of Medicine website www.cmich.edu/med. The admission office email address is cmedadmit@cmich.edu.

Application for Admission to Graduate Study

The College of Graduate Studies welcomes your application to CMU for graduate study. This is the procedure to follow:

1. Complete the Application for Admission form in the front of this Bulletin and return it to the Graduate Student Services office of the College of Graduate Studies with a check or money order to cover the application fee ($35 for U.S. citizens and resident aliens; $45 for international applicants). Additional application forms can be obtained from the Graduate Student Services office.

NOTE: If you have received a graduate degree and are applying to another graduate program, you must submit an application fee. If you have been denied admission to a graduate program and are reapplying or applying to a different graduate program, you must submit an application fee.

Note: the DHA degree is only offered through Global Campus.

2. Some departments require additional application materials. When this Bulletin went to press, the following programs required application materials in addition to the College of Graduate Study's application form: Audiology, Counseling, Educational Leadership, Physical Therapy, Physician Assistant, Mathematics (doctorate), History (doctorate), MBA, Psychology (all programs), Special Education, and Speech-Language Pathology. Contact the department directly for information on required supplementary materials. Because other programs may also require supplementary materials, you are encouraged to consult the department in which you plan to pursue your graduate studies prior to submitting your application.

3. Request the Registrar of each college or university you have attended to send one copy of your official transcript of credits directly to the College of Graduate Studies. If you completed all of your undergraduate work at Central Michigan University and received your degree here, you may omit this step in the procedure. The College of Graduate Studies will obtain your CMU transcripts, but you are responsible for providing all other transcripts. All transcripts and other documents received by the university become the property of the university and will not be released. Copies will not be made for other than university use.

4. Take any standardized tests required by the department for the specific curriculum you are pursuing and request that a copy of the test results be sent to the College of Graduate Studies or to the appropriate department. Check with the department for information regarding required standardized tests.

NOTE: Even when a department does not require a standardized test, such as the Graduate Record Examination, you will want to take the test and report your scores to CMU if you are applying for a fellowship.

Application Deadlines and Processing Time

For most degree or certificate programs, domestic students should begin the admission process at least 6 weeks before registration for the semester they plan to enroll. International students should begin the process 6-12 months before they intend to begin their graduate studies. There is no delay for admission as a non-degree student.

For most degree or certificate programs, domestic students should begin the admission process at least 6 weeks before registration for the semester they plan to enroll. International students should begin the process 6-12 months before they intend to begin their graduate studies. There is no delay for admission as a non-degree student.

The student is normally notified of an admission decision six weeks after the completed application and supporting documents are received. This period is usually sufficient for receipt of transcripts and test results, and for departmental review of the application. If transcripts or test results are delayed, the process will take longer. Students who have not received notification of an admission decision six weeks after their admission file is complete should contact the College of Graduate Studies, unless they have applied to a program where all applications are considered after a specific date. Questions regarding admissions should be directed to the admissions specialist in the College of Graduate Studies, Office of the Dean (989-774-GRAD). While these deadlines apply to most programs, some departments consider all graduate applications on a specific date. The following programs currently have specific application deadlines:

<table>
<thead>
<tr>
<th>Program</th>
<th>Application Deadline</th>
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<tbody>
<tr>
<td>Audiology</td>
<td>February 1</td>
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<tr>
<td>Communication</td>
<td>October 15 for spring semester; March 15 for fall semester</td>
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<tr>
<td>Counseling</td>
<td>September 1 for spring semester; February 1 for summer or fall</td>
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<tr>
<td>Educational Leadership</td>
<td>March 1, or until full</td>
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<tr>
<td>Health Administration (DHA)</td>
<td>April 1 (Global Campus only)</td>
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<tr>
<td>History</td>
<td>Joint M.A./Ph.D.: January 3; Traditional M.A.: July 15 for fall; November 1 for spring semester</td>
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<tr>
<td>Neuroscience</td>
<td>March 1</td>
</tr>
<tr>
<td>Physical Educ. &amp; Sport</td>
<td>April 1, Feb. 1, Aug. 1</td>
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<tr>
<td>Physical Therapy</td>
<td>November 1</td>
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within one calendar year of the effective admission date. Admitted students who do not register for classes within one year after being admitted will be considered to have non-degree/certificate status and not to have met all entry requirements for regular admission. A non-degree student who applies for regular or conditional admission is considered to be regularly admitted to a specific curriculum only after he or she has:

- Fulfilled all the prerequisites for admission to the curriculum.
- Requested and been granted regular admission status through a petition for reclassification process. A student who is not sure of his/her status may request clarification from the advisor or the College of Graduate Studies.
- Submitted an Authorization of Degree Program - Graduate or Certificate Program form approved and signed by the curriculum advisor.

2. CONDITIONAL ADMISSION. Conditional admission to graduate study, even when accompanied by assignment to an academic advisor, does not constitute final admission. You are considered to be admitted only when regular admission status has been granted. The university may grant conditional admission to a degree or certificate program to an applicant who holds a baccalaureate degree or its equivalent from a college or university of recognized standing (recognized at the time the student attended) but who does not meet all the requirements for regular admission, or whose personal competencies a department may wish to assess prior to recommending regular admission. For a student who may have insufficient hours of credit in the proposed area of concentration or a slightly deficient grade point average, whether cumulative or in the area of concentration, the department concerned may recommend that the student be admitted with the understanding that he or she makes up the deficiencies and maintains an acceptable level of scholarship in the first graduate coursework. Courses taken to make up admission deficiencies in preparation for regular admission may not be counted toward graduate degree or certificate requirements.

Conditional admission to graduate study, even when accompanied by assignment to an advisor on a specific curriculum, does not constitute final admission to that curriculum. A student cannot be granted a degree or certificate while having conditional admission status.

Astudent who was initially granted conditional admission, is considered to be regularly admitted to a specific curriculum only after he or she has:

- Fulfilled all the prerequisites for admission to the curriculum.
- Requested and been granted regular admission status through a petition for reclassification process. A student who is not sure of his/her status may request clarification from the advisor or the College of Graduate Studies.
- Submitted an Authorization of Degree Program - Graduate or Certificate Program form approved and signed by the curriculum advisor.

3. NON-DEGREE ADMISSION. If you are: 1) undecided as to curriculum choice, or 2) do not wish to earn a degree or certificate, or 3) do not meet the requirements for regular or conditional admission, you may apply for non-degree admission. As a non-degree matriculant, you may register for courses for which you meet the prerequisites. NOTE: Some courses are not open to non-degree students. Enrolling in graduate coursework as a non-degree student in a degree program does not guarantee admittance. A non-degree student who applies for regular or conditional admission will be evaluated just as all applicants are evaluated, and the admission decision will be communicated to the student by the College of Graduate Studies. You can apply for regular or conditional admission depends on the reason for the non-degree admission. If you are admitted to non-degree status because of failure to meet the requirements for regular or conditional admission to a degree or certificate program, you may submit an application for admission to that or another program once you have met the requirements to the satisfaction of the College of Graduate Studies and the department which offers the program. Consult the department chairperson or a graduate advisor.
in the proposed field of study for assistance in selecting courses to make up deficiencies.

The "undecided" student who otherwise has met admission requirements may apply for admission to a degree or certificate program at any time. Non-degree students may take an unlimited number of courses while having non-degree status, provided that they maintain an acceptable GPA (see section on Academic and Retention Standards). However, credits earned during non-degree status may not be counted toward a degree or certificate if they were used to make up deficiencies in preparation. A maximum of nine credits earned during non-degree status may be applied toward a degree. A maximum of six credits earned during non-degree status may be applied toward a certificate. A department may provide a lower or higher limit (see the individual program description). The advisor will determine which previously earned credits will be counted toward the graduate program.

Only in unusual circumstances, international students holding an F-1 (student) visa have non-degree status. International students holding a J-1 (exchange) visa may be allowed non-degree status.

Changing from non-degree to either regular or conditional status requires that the student complete an Application for Admission, which is the regular application for the College of Graduate Studies. No fee is required, if the student already paid when applying for non-degree status.

4. PROVISIONAL ADMISSION

Frequently students apply to the College of Graduate Studies during their senior year, with the understanding that they will complete the baccalaureate prior to beginning graduate studies. When these students are accepted into graduate school -- be it regular, conditional, or non-degree admission -- they are granted provisional admission, contingent upon providing the College of Graduate Studies with a final transcript showing completion of the baccalaureate degree. It is the student's responsibility to notify the College of Graduate Studies when he or she has completed the undergraduate degree requirements and to request that the registrar at the college or university issuing the diploma send an official copy of the final transcript showing the degree earned. The transcript must be sent from the registrar directly to the College of Graduate Studies. A final decision relative to the applicant's admission will be made and the student will be notified of the decision following receipt of the foregoing materials by the College of Graduate Studies.

In some departments, a student who presents an unofficial transcript or unofficial test scores may be granted provisional admission pending receipt of official documents. It is the student's responsibility to arrange for the official documents to be sent to the College of Graduate Studies. A student with provisional admission may register for classes for one semester while we await the necessary documents. If the student fails to produce the required documents - proof of degree, official transcripts, and official test scores - the admission will be converted to a denial and the student may be removed from classes.

5. CONCURRENT AS A GRADUATING SENIOR. An undergraduate student may be permitted to register concurrently for graduate credit for the semester or session in which requirements will be completed for a baccalaureate degree, provided that the following conditions are met: 1) the student will be taking no more than 12 undergraduate credits during the semester of concurrent registration; 2) during the semester of concurrent registration, the student enrolls in all remaining courses required for graduation; 3) the student's total credit load (graduate and undergraduate courses) will not exceed 15 credits during the semester of concurrent registration; 4) the student has an undergraduate grade point average of at least 2.7 or, optionally, 3.0 in the most recently completed sixty semester hours of graded coursework toward the bachelor's degree; and 5) the student is admitted to the College of Graduate Studies, either conditionally or with non-degree status; (see sections on each type of admission for an explanation of the conditions associated with each). Students who do not comply with the conditions of concurrent admission may be dropped from their graduate classes. Students who fail to graduate at the end of the concurrently-enrolled semester or session will not be permitted to continue in the College of Graduate Studies until all requirements for the undergraduate degree have been met. Exceptions to this policy can be granted under any of the following circumstances:

a. students who have completed all requirements for the bachelor's degree EXCEPT student teaching may be granted concurrent status prior to student teaching if they meet conditions 4-5 above;

b. students admitted to an accelerated master's degree program at CMU may be granted concurrent status if they have completed at least 86 undergraduate credits and satisfy condition 4 above;

c. students may appeal to the Dean of the College of Graduate Studies for a policy exception to grant admission as concurrent students.

Special Admission Considerations

International Student Admission

International applications for admission require longer processing time than other applications. Prospective students should be certain to allow ample time for documents to be sent to the College of Graduate Studies and should recognize that notice of admission may take longer than expected to reach them. Also, certain programs have application deadlines, usually early in the year, and this should be taken into consideration when applying for admission.

Guidelines for International Applicants

1. At least six months before the beginning of the semester in which they wish to begin study, an applicant who is a citizen of a country other than the United States must submit an International Graduate Student Application for Admission along with the required application fee. (U.S. citizens and international applicants who are permanent residents of the U.S. need not use the International Student Application, but should submit a Domestic Application for Admission instead.) At that same time, the applicant must submit directly to the College of Graduate Studies one official copy of all diplomas and transcripts, as well as the corresponding official English translations of any non-English documents, from all postsecondary institutions attended.

2. The cost for one academic year (nine months) of graduate study in 2009-10 was approximately $25,900 for master's/ specialist's level students and $27,412 for doctoral level students. These figures do not include initial travel expenses or any summer expenses, including tuition, fees, or living expenses. Applicants must show proof of sufficient funding for at least their first academic year of study. Proof of funding consists of a completed Financial Support Form and an original copy of a current bank statement. Most international students can be considered for graduate assistantships, as well as some fellowships, but both of these are very limited. The university has no other funding for international students and assumes no financial responsibility for them at any time. For more information on financial aid opportunities, see the Financial Aid Section of this Bulletin.

3. Students must submit a complete Central Michigan University medical information form when they arrive on campus.
All international students are required to have an approved health and accident insurance policy for the duration of their study. If a student already has a health insurance policy, he or she should check the University Health Services website (www.healthservices.cmich.edu) to see if that policy meets CMU’s requirements.

All prospective students who are not citizens of a TOEFL-exempt country (see grad.cmich.edu/toefl for a list of those countries) must submit a satisfactory score on the Test of English as a Foreign Language (TOEFL), which is administered in the U.S. and other countries by the Educational Testing Service (ETS), Princeton, NJ, 08541-615, or the International English Language Testing System (IELTS). Score requirements are explained later in this section. Requests to substitute another test will be evaluated individually with minimum scores to be established by the College of Graduate Studies when necessary.

TOEFL or IELTS Scores. Applicants with TOEFL scores of 79 iBT or 550 PBT and above, or IELTS scores of 6.5 and above may be granted regular admission. Some programs, however, require higher TOEFL scores and others require all admitted international students to take an English proficiency test after arriving on campus.

Applicants with TOEFL scores from 61-78 iBT or 500 to 549 PBT or IELTS scores of 6.0 or 5.5 may be granted conditional admission. Upon arrival at the university, they will be required to take an English proficiency test administered by CMU’s English Language Institute (ELI). The results of the test will be used to determine the number of courses they will be required to take through the ELI. Such conditionally admitted students will be allowed to take a restricted number of courses in their academic disciplines concurrently with the ELI courses and must complete all required ELI courses by the end of their first year at CMU.

Once satisfactory proficiency in English has been demonstrated, as determined by ELI policies, these restrictions will be removed. Please note that students are required to pay tuition for ELI courses just as they would for any other CMU course.

Applicants with TOEFL scores below 60 iBT or 500 PBT or IELTS scores below 5.5 may be granted admission to CMU’s English Language Institute (ELI) only. To do so, a separate application must be submitted directly to the ELI. If requested, however, the College of Graduate Studies will have their academic credentials evaluated and they will be told of the likelihood of their future admission to their academic program pending improvement of their English skills. Upon arrival at the university, they will be required to take an English proficiency test to determine which ELI courses they must take. Once satisfactory proficiency in English has been demonstrated, as determined by ELI policies, and once the applicant satisfies department, college, and university requirements, these students may be granted either regular or conditional admission to the College of Graduate Studies and the academic program.

Admission of CMU Faculty and Staff

A faculty member or administrator (PA) at CMU may not be admitted to a graduate degree or certificate program or earn a graduate degree or certificate in a program in his or her own department. A faculty member or administrator (PA) at CMU may be admitted to a graduate degree or certificate program and earn a graduate degree or certificate in a program in his/her own college, provided that he/she has written permission from the dean of his/her college. The written permission will be retained in the student’s file in the College of Graduate Studies. Faculty members and administrators may be admitted to degree or certificate programs that are outside their own college.

A faculty member or administrator in Global Campus may pursue a graduate degree or certificate through Global Campus provided that he/she has permission from the Dean of the College of Graduate Studies.

Admission with Baccalaureate from Schools without Recognized Standing

An applicant who holds a baccalaureate or equivalent degree from an institution which does not have recognized academic standing may be granted regular or conditional admission to a degree program on the recommendation of the chairperson of the academic department concerned and the concurrence of the Dean of the College of Graduate Studies or, optionally, non-degree admission at the discretion of the dean. Such an admissions decision will be based on a careful evaluation of the applicant’s qualifications, acceptable evidence of the institution’s competence in the student’s principal areas of preparation, and other relevant factors. If granted conditional or non-degree admission, the student may be required to complete a number of hours of graduate or upper-level undergraduate qualifying coursework at CMU in the proposed field of study with a grade point average of 3.0 (B) or higher to become eligible to apply for regular admission to a degree or certificate program. An applicant admitted with such a stipulation is advised to consult the chairperson of the department in which he or she wishes to study for help in selecting appropriate qualifying courses. No department, however, is obligated to accept the applicant upon the completion of qualifying coursework if, in its judgment, the applicant is still not appropriately prepared for degree or certificate work. Qualifying coursework clearly stipulated as preparatory to normal degree or certificate requirements may not thereafter be counted toward any graduate degree or certificate program.

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 Accelerated Master’s Degree Program; a master’s degree granting program must be approved through the curricular process, to offer an Accelerated Master’s Degree. Accelerated Master Degree programs currently available at CMU include: Apparel Product Development and Merchandising Technology; Business Administration (MBA): Accounting Concentration; Computer Science; Economics; Geographic Information Science; History; Human Development and Family Studies; Mathematics; Political Science; Experimental Psychology; and Spanish.

Admission Procedures. Each program will determine admission criteria, which will be at least as rigorous as admission requirements for admission to the master’s program, and procedures for its Accelerated Master’s Degree. Generally, students will apply during their junior year for admission into the Accelerated Master’s Degree Program to begin fall semester of their senior year. In most cases, the baccalaureate degree will be awarded within one year after admission into the Accelerated Master’s Degree Program. Prior to earning the baccalaureate degree, students must earn at least an “B” in each course which applies to the graduate degree; if students do not earn a “B” in each course which applies to graduate degree the student will be dematriculated from the ADMP. If the student wishes to obtain a graduate degree he/she must apply for readmission into the regular master’s program.

Military Service Commission

A commission in the United States Army may be obtained while enrolled in graduate school. Interested individuals should contact the chairperson of the Military Science Department, telephone (989) 774-3049.
Global Campus Enrollment

Students who have been admitted to the College of Graduate Studies may enroll in graduate courses scheduled through Global Campus. Non-degree admission is available for students who wish to take continuing education courses without pursuing a degree or certificate. Courses taken through Global Campus may count toward the satisfaction of requirements in appropriate authorized graduate degree or certificate programs. It is the student’s responsibility to consult his or her advisor to determine which courses will apply in specific programs.

Note: International students who are issued an I-20 to pursue graduate studies at CMU are restricted to taking classes on the Mount Pleasant campus unless there is a compelling and legitimate academic objective that will be achieved by taking the class through Global Campus. The department chair or graduate program coordinator of the student’s graduate program must approve any coursework done through Global Campus.

Duration of Admission Status: Time for Completion of Degree

After admission to a graduate program of study, students are expected to complete degree or certificate requirements in a responsible and timely manner. For full-time students, two calendar years should be adequate for the completion of most master’s degree programs; five calendar years should be adequate for the completion of most doctoral programs. Part-time students may need a somewhat longer period to meet these requirements, but in all instances, coursework and other requirements must be completed within the following time limitations:

1. Graduate Certificate: within seven years;
2. Master’s or Specialist’s degrees: within seven years;
3. Doctoral Degrees: within eight years if the student had a relevant graduate degree when beginning the program OR within ten years if the student began doctoral study without a relevant prior graduate degree.

Continuous Registration. Any main campus student who has completed all academic course work except the final project (Plan B project or internship, thesis, doctoral project, dissertation) must be enrolled in at least one CMU graduate credit hour each fall and spring semester until graduation (summer sessions as well if summer course work is normally required in the program). The Continuous Registration for Final Research Project (course 619) within the student’s home department can fulfill this one credit hour requirement.

If, after all academic course work except the final project is completed, a student does not enroll each fall and spring semester (and summer, where appropriate) until graduation, the student must enroll retroactively for each missed semester (including summer, where appropriate) once s/he returns to complete the project. A student can request a leave of absence by submitting a Leave of Absence Request form to the Dean of the College of Graduate Studies; if approved, continuous registration will be waived during the approved leave period. Regardless of whether the student has a leave of absence, the student must still complete the degree within the time-to-degree limitations set forth under the degree requirements.

Thesis/Doctoral/Dissertation:

Students must successfully defend his/her thesis/doctoral project/dissertation before the beginning of the semester (defined by the first day of class) in order to avoid paying for the 619 continuous enrollment credit.

If a student successfully defends his/her thesis/doctoral project/dissertation before the beginning of the semester, he/she will receive “exempt” status for one semester. If the student does not complete the thesis/doctoral project/dissertation project outline by the College of Graduate Studies within that semester, the student will be charged for the 619 continuous enrollment credit each semester until they graduate.

Internships

Students completing internships will be given one academic year beyond their internship course to complete their internship and graduate. After that year, the student will be charged for the 619 continuous enrollment credit each semester until they graduate.

Comprehensive Examinations

Students will be given one semester after their comprehensive examination course to take their examination. If the student does not take the comprehensive examination the next semester or fails, they must register for 619 continuous enrollment credit until they graduate or do not pass the exam.

Extension of Time Requests. Extension of time requests are serious and approval by the advisor and department do not guarantee approval by the College of Graduate Studies. Extension of time to complete a degree or certificate are rarely granted and only considered if there are clearly extenuating circumstances. Typically “life” events (employment changes, responsibilities, or promotions, marriage and births) do not count as extenuating circumstances. Students must demonstrate the following for their requests to be considered by the College of Graduate Studies: compelling extenuating circumstances, current knowledge in the subject matter they wish to extend, and steady progress toward the certificate or degree. Students that have not been enrolled at CMU for more than two years are not making steady progress. Transfer credit is not eligible for extension consideration. Extension requests are limited to a one time request of twelve to eighteen months. If an extension is granted, a second extension is highly unlikely and students should plan accordingly.

Extension of time request forms are available on the College of Graduate Studies website: www.grad.cmich.edu

Admission to the College of Graduate Studies is valid for four to ten years (depending on the degree or certificate sought) after the date of first admission, except by cancellation for cause, or by one of the following provisions:

1. Degree or Certificate Recipients. The student’s admission to the College of Graduate Studies is terminated upon completion of all requirements for a degree or certificate. (This provision does not apply to students who earn a master’s degree while enrolled in a doctoral program, or to students who earn a certificate while enrolled in a master’s or doctoral program.) To resume graduate study thereafter on a second degree program or as a non-degree student, the student may apply for readmission by submitting an Application for Admission.

2. Termination of Admission. This policy is explained under the “Duration of Admission Status,” noted above.

3. Inactive Status. If a student does not register for the initial graduate work within one year after the date of admission to the College of Graduate Studies, or if in completing one or more courses the student earns no further graduate credit at this university for three consecutive years, the student is classified as inactive and the admission is terminated. If the student has completed one or more courses, the permanent record card is retained by the Registrar. The student may thereafter apply for readmission to resume graduate study at a later date by submitting an Application for Admission and supplying all other documents requested by the department concerned. Effective in 1991, the College of Graduate Studies retains original application materials for 7 years (unless the degree or certificate is awarded), so transcripts that were submitted with the original application do not need to be resubmitted. If a student became inactive prior to 1991, check with the College of Graduate Studies to determine whether transcripts must be submitted from other universities.
If a student does not earn graduate credit at CMU for seven consecutive years, the student’s original application, letters, transcripts from other universities, and other materials will be destroyed. If one wishes to apply for readmission after that length of time, all materials, including a new application, transcripts and other documents requested by the department will need to be submitted.

**Academic Load**

The College of Graduate Studies considers a normal load for full-time resident study to be 9-12 hours in the fall or spring semester and 4-6 hours in a six-week summer session. A graduate student may not enroll for more than 15 graduate credits in the fall or spring semester, nor may the student enroll for more than 15 credits in the two summer sessions combined. Exceptions to the limitation are automatic for programs (e.g., Physical Therapy; Physician’s Assistant) that require more credits in a given semester. Other exceptions to the limitation require approval of the graduate advisor and the Dean of the College of Graduate Studies. Credits for thesis or dissertation are not counted in this total.

To qualify for financial benefits as a full-time student under programs of the Veteran’s Administration, and/or to qualify for financial benefits as a full-time student under programs of the Social Security Administration and/or for certain loan agreements, students must carry a minimum of nine credit hours during the fall and/or spring semester. For shorter sessions, contact the financial aid office for information on minimum loads for full-time status.

Unless financial or immigration requirements necessitate defining a minimum number of hours for status as a full-time graduate student, there is no minimum load requirement for graduate studies. It is expected that students will assess need, ability, and other factors judiciously and register for a class load that permits them to maintain academic standards.

In order to use CMU resources (e.g., computers, laboratories, equipment, faculty) during the regular academic year, graduate students must be registered for a minimum of one credit hour.

See “Continuous Registration” in the Index for more information.

**Changing Degree Programs**

To change graduate programs, the student should send a completed Request for Change of Program form, along with a check for $35.00 to the College of Graduate Studies. The request will be forwarded to the new department for approval. Acceptance into one graduate program does not guarantee acceptance into another.

If the program change is approved, the student should meet with the new academic advisor and complete a new Authorization of Degree Program - Graduate form or Certificate Program form.

**Recomputing Grade Point Average**

Students who transfer from one graduate program to another may file a Recomputation of Grade Point Average Petition. If approved by the advisor, department chair, and Dean of the College of Graduate Studies all courses completed on the original graduate program will be disallowed on the second program plan, all grades on previous coursework will be disregarded, and the students will begin the new program with no cumulative grade point average. The Recomputation of Grade Point Average Petition must be filed within one calendar year of beginning the new program. **NOTE:** All courses will still remain on the student’s transcript although the grades will not contribute to the grade point average.

**Registration Information**

Students are eligible to enroll in graduate level courses after they receive their admission letter. The letter will show whether they are approved for Regular, Conditional, Provisional, Non-Degree, or Concurrent admission. Initial registration must occur within one calendar year of the admission date or the student will need to reapply.

The information you need regarding dates and procedures for Phase I registration (course selection), Phase II registration, and change of registration for a particular semester is published by the Registrar’s Office in the Class Schedule (www.cmich.edu/Registrars). Registration for fall semester takes place from March to July and again in August; for spring semester, it takes place from October to November and again in January; and registration for summer sessions takes place from February to March and again in May and June. Exact dates are listed in the Class Schedule or may be obtained from the Registrar’s Office, 299 Warriner Hall, (989) 774-3261. **NOTE:** The University reserves the right to cancel any class in which too few students enroll.

**Registration Procedure**

Graduate students may register any time during the registration period via https://centrallink.cmich.edu. It is recommended that they register during the special computer time reserved for graduate students. The procedures for registration are described in the Class Schedule. However, before registering for courses, students should verify that they meet the prerequisites. This is particularly true for internships, practica, independent studies, and thesis/dissertation credits. **CAUTION:** Students should always consult their advisors to determine which classes to take.

**NOTE:** Occasionally a student who is trying to register is told that there is a “hold” on his or her registration. Students who receive this message should contact the College of Graduate Studies at (989) 774-474 to determine the cause of the hold.

**Student Photo Identification Card**

Once you have initially registered for courses at Central Michigan University you will need to get a photo identification card, available from the Campus ID Card office in Bovee University Center Room 205. This campus ID card allows students to use the various student services described in this bulletin. Banking services using the CMIP ID card are also available. 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. 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. Contact the Campus ID Office for additional information at 989-774-3484.

**Internships, Practica, Independent Studies, Theses, Doctoral Projects, Dissertations**

Students registering for internships, practica, independent studies, theses, doctoral projects, or dissertations should be aware that these courses ordinarily require the permission of the instructor and/or department chairperson prior to registration. Specific registration requirements for each course will appear in the Bulletin description; these requirements must be observed.

In addition, students may NOT enroll for more than three thesis/doctoral project/dissertation credits until the Prospectus and committee composition have been approved at the department level and by the Dean of the College of Graduate Studies. This is to ensure that if the Prospectus is not approved by the Dean of the College of Graduate Studies that the student has not wasted valuable time, credits, and resources. Projects undertaken prior to the Dean of the College of Graduate Studies approving the Prospectus may be denied and the project deemed invalid.
Auditing Courses

If you do not wish to take a graduate course for credit you may register as an auditor, provided you obtain approval from the chairperson of the department prior to registration and are otherwise qualified. To qualify to audit a main campus or Global Campus graduate course, you must meet the usual admission requirements for courses at or above the 600 level. No credit or grade is granted for an audited course, but such credit as the course normally would carry is included as part of your total load. No change from regular registration to audit nor from audit to regular registration is permitted after the completion of the Drop and Add period. Your responsibility to the class being audited is determined by the instructor of the class. Auditors pay the same fees required of students taking the course for credit.

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 Phase I and Phase II registration. Refer to the appropriate Class Schedule for registration dates and procedures.

Withdrawing from a Class After the Drop/Add Period

The following procedures apply to students who desire to withdraw from a class after the official Drop/Add period listed in the Class Schedule.

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.

Withdrawals from All Courses

Students may withdraw from all courses through the tenth 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 tenth week and the Friday of the 14th week 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 and substantially impede the lawful activities of others.

In situations a. and b. above, the Assistant 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.

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 Ombudsperson. Final appeals will be resolved by the Provost.
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.

(continued)
Misconduct in research is serious deviation from the policies of the university in carrying out, accepted professional practices within a discipline or from the policies of the university in carrying out, accepted professional practices within a discipline.

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 course in each or in different semesters.

Students may not normally submit the same or substantially the same work in two different classes 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).

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.

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.

Complicity Definition
Complicity is assisting or attempting to assist another person in any act of academic dishonesty.

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.

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.

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 1. 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.

H. Misuse of Intellectual Property Definition
Misuse of intellectual property is the illegal use of copyright materials, trademarks, trade secrets or intellectual properties.

3. 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.

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
Nothing in this policy shall prohibit an instructor from informing a 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 alleged violation and to explain any suspected or alleged misconduct by presenting evidence, giving additional information relevant to the matter, explaining extenuating or mitigating circumstances, 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 (continued)
The student and the instructor are each permitted to appeal the instructor's decision that 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 academic consequences for the misconduct was arbitrary, capricious, or grossly unjust (e.g., a clear departure from the instructor's announced policies). 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/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 policies). The appeals committee may:

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.

Passed by Academic Senate 05/05/09

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**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 criminal prosecution.
FINANCIAL INFORMATION

All fees are established by the Board of Trustees and may be changed periodically.

Tuition Rates for Main Campus Credit Courses

<table>
<thead>
<tr>
<th>Level of Courses</th>
<th>Michigan Non-Michigan Residents</th>
<th>Michigan Non-Michigan Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$476.00</td>
<td>$766.00</td>
</tr>
<tr>
<td>Master's/Specialist</td>
<td>$548.00</td>
<td>$850.00</td>
</tr>
</tbody>
</table>

Special Course Fees: Some courses may have a Special Course Fee. Set fees will appear in the Special Fees column in the Class Schedule opposite the course listing. Variable fees are identified in the department and/or course notes.

NOTE: Students who audit courses are assessed tuition at the regular rates. Students who enroll for credit by examination are assessed $40/credit hour.

Graduate Studies Fees

- Application for Admission Fee (non-refundable)
  - U.S. Citizens or Resident Aliens $35.00
  - International Applicants $45.00
- Change of Program Fee $35.00
- Application for Graduation Fee $50.00
- Reapplication for Graduation Fee $25.00

Paying Tuition and Fees

Tuition and fees for registration must be paid in full when billed. Tuition and fees for Phase II Registration, as well as fee adjustments made necessary by changes during the Drop and Add period, will result in later refunds or billings. Any past due financial obligations must be paid prior to the time of registration. Registration will not be accepted 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 visit the Steps to Success Website https://go.cmich.edu/financial_information/billing_and_payment_information/steps_to_success.

Late Registration Fee

A 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 of Tuition Charge

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

Billing Procedure and Delinquent Account Policy

Central Michigan University sends monthly billing statement notifications electronically to CMU global e-mail addresses. Students are responsible for accessing these monthly statements in the QuikPAY Billing System via CentralLink to view their account balances and payment due dates. The monthly statements may include tuition, main campus housing, bookstore, health services, telecom, and other miscellaneous charges.

Students may incur late fees if the monthly balance is not paid by the scheduled due date. Monthly late fees will be assessed to the account as follows:

- Past Due Amount | Late Charge
- $0.01-$9.99     | No late fee
- $10.00-$59.99   | $1.00 per month
- $60.00 and above| $30 per month

Past due accounts may be referred to a collection agency, and, if referred, the fees assessed to the University by the collection agency will be added to the student’s account. Once the account is referred to a collection agency, the past due account will be reported to the Credit Bureau. Students are encouraged to visit the Student Service Court on the lower level of the Bovee University Center to receive advice regarding financial options which could possibly prevent collection referral. Please be advised that CMU reserves the right to suspend campus ID privileges at anytime due to a past due balance greater than $100 including, but not limited to, meal plan, computer lab, library, bookstore, SAC, telecom, and flex privileges.

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.

Returned Check Fee

A $25.00 handling fee is charged for checks, including electronic check payments, 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.

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 file a properly 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 II.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 person either serving in the US military who has no previous history of living in Michigan but is on active duty in Michigan or has formerly served in the US military and has been honorably discharged may be classified as a Michigan resident for tuition purposes.
   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. Continues 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 determinate 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.

(continued)
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.

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.

C. All Students Requesting a Change in Resident Status:
   1. An 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.
   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.

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 Assistant 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. If the decision of the Committee is appealed, 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 three 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.

Michigan residence is claimed by means of self-certification by the student, giving names of employer, date of employment, and location.

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. Bicycles are also registered free at the CMU Police Department.

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.

Vehicle Registration Fee

<table>
<thead>
<tr>
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<th>Fee</th>
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<tbody>
<tr>
<td>Student Commuter</td>
<td>$175 / year</td>
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<tr>
<td>Student Resident, Single Lot</td>
<td>$150 / year</td>
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</tbody>
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For Spring Semester, the charge is one-half the annual fee. For Summer Semester, the charge is one-fifth the annual fee.

Vehicle Registration Refund

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.

Residence Life and Campus Dining

Graduate students may live in housing of their own choice. CMU does offer a variety of housing accommodations with or without meal plans for single students or students with families.

University-owned apartment housing is available on CMU’s main campus for graduate students: single or married, with or without children. Residence Life staff will identify a roommate for those who wish to share an apartment but do not have a particular person in mind. In order to create a community of graduate students, the Office of Residence Life, when possible, places graduate students residing in university-owned apartments in close proximity to one another. Rates for the 2011-12 academic year may be found at https://centrallink.cmich.edu/services/student_services/residence_life or by contacting Residence Life at 989-774-3111.

One, two, and three-bedroom university family apartments are assigned according to date of application for apartment housing. Most units are furnished.

Graduate students may also live in residence halls. Residence halls provide several lifestyle options, as well as many amenities including fitness areas, Student Success Centers, study lounges, and computer labs.

Room and board rates vary depending on the meal plan chosen. See the website at http://www.campusdish.com/en-US/CSMW/CMU/for more information concerning meal plans. All students residing on- or off-campus are eligible for residence hall meal options. Several areas in the Bovee University Center serve meals on a daily basis.

Application for all university housing should be made well in advance. Questions concerning available housing and board arrangements should be addressed to the Office of Residence Life, Ronan Hall, Room 270, Central Michigan University, Mt. Pleasant, MI, 48859-0001; 989-774-3111; reslife@cmich.edu (or see the website).
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 who makes arrangements for access and notifies 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 is 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 specifying 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 procedures 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 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 address
   b. state of residence
   c. age, and 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
Scholarships and Financial Aid

Note: While the information regarding financial aid is current at the time of this Bulletin’s publication, financial aid requirements and opportunities change frequently. For current information, contact the office indicated for each of the programs listed below.

Central Michigan University, in conjunction with the federal and state governments and private and civic organizations, offers a variety of fellowships, assistantships, grants, loans, and employment opportunities to assist graduate students in financing their education.

Financial Aid Categories

Financial aid for graduate students falls under two general categories: need based and non-need based. Each kind of aid has certain advantages and limitations, and each is subject to varying standards of eligibility, application procedures, and regulations. Work study employment is the only need-based financial aid program for graduate students. Non-need based financial aid includes graduate fellowships and scholarships, graduate assistantships, internships, non-work study campus employment, and loans.

Financial Aid Information

Students interested in any type of financial aid offered at CMU should contact the appropriate office for current information. Questions about graduate fellowships and scholarships should be directed to the College of Graduate Studies. Questions concerning graduate assistantships should be directed to the academic department offering the assistantship. Questions regarding financial aid applications, loans, and university student employment should be directed to the CMU Office of Scholarships and Financial Aid, Student Service Court; Mount Pleasant, MI 48859. Telephone (989) 774-3674, FAX: (989) 774-3634, e-mail: CMUOSFA@CMICH.EDU.

Financial Aid Application

To apply for federal and state financial assistance programs at Central Michigan University, students must complete the Free Application for Federal Student Aid (FAFSA). The application is available online at www.fafsa.gov.

CMU financial aid awards are made for a maximum of one academic year. Re-application must be made each year.

Verification

Under the Federal Audit Quality Assurance program, CMU evaluates the accuracy of information submitted by financial aid applicants. The OSFA is required to collect documents to verify information on the FAFSA. These documents include, but are not limited to, federal tax returns 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 agency for their further disposition.

Out-of-State Tuition Awards

CMU offers two out-of-state tuition award programs. The Graduate Out-of-State Tuition Merit Award program grants resident tuition to out-of-state students who: 1) achieve a 560 GRE Verbal score and a 660 GRE quantitative score or a 600 GMAT score or a 55 MAT score; and 2) have a cumulative undergraduate grade point average of at least 3.0 on a 4.0 scale; and 3) have a internet-based TOEFL score of at least 100 if not from a TOEFL-exempt country.

The Neighboring Regions Tuition Award program grants resident tuition to students from Indiana, Ohio, Illinois, and Wisconsin who have at least a 3.3 overall undergraduate grade point average and to students from Ontario, Canada, who have at least a 3.0 overall undergraduate grade point average.

Both awards are valid for the entire duration of the recipient’s graduate program provided he or she maintains good academic status. Students must be admitted to a CMU graduate degree program in order to qualify for either award.

Non-Resident Graduate Award

• Scholarship of $750 per semester ($1500 total) for two consecutive semesters
• Available to new non-resident graduate students with no other financial assistance
• Non-stackable and non-renewable
• Completion of form required
• Some restrictions apply. See www.grad.cmich.edu/nrnga for form and information.

Scholarship Option for Early Graduates

CMU merit scholarship students whose undergraduate degrees are awarded in advance of the maximum allowable semesters of eligibility of their scholarships, and who are admitted to a graduate degree program and maintain continuous full-time enrollment in that program, may upon written request and with the approval of the Office of Scholarships and Financial Aid, utilize the remaining maximum value of their scholarship.

Fellowships and Scholarships

A variety of fellowships and scholarships are awarded to CMU graduate students. These forms of financial aid are particularly valuable to students, because there are generally no concurrent service obligations associated with these awards. Because new fellowship and scholarship opportunities may become available, graduate students are advised to check with their department office and with the College of Graduate Studies.

College of Graduate Studies Fellowships

College of Graduate Studies Fellowships are awarded on a competitive basis to students with outstanding academic records who are interested in completing theses or other major works of scholarship. Students who will be enrolled full-time in a master’s or specialist’s degree program at Central Michigan (Continued)
University may apply for the award, which provides a stipend, a tuition scholarship for up to 24 credit hours, and special library privileges which allow them to check books out for six months at a time. This fellowship is intended for graduate students who support the advancement of diversity in higher education. For 2012-13 stipend amounts, contact the College of Graduate Studies. The 24-hour tuition scholarship may be spread out across the academic year for courses on the student’s graduate degree program or courses approved by the graduate advisor, beginning with fall semester and continuing through the following summer sessions. College of Graduate Studies Fellowships pay graduate tuition at the main campus tuition rate but will not pay for undergraduate coursework unless it is approved for graduate credit. All master's and specialist's level fellows are classified as Michigan residents only during the academic year of the award (including the subsequent summer). Central Michigan University generally awards 13 fellowships. Each recipient of a fellowship may act as a research fellow under the tutelage of a designated faculty member.

Eligibility. Students who will be enrolled full-time in a master's or specialist's degree program are eligible to apply. Students in a doctoral program are not eligible for College of Graduate Studies Fellowships; they should apply for the Doctoral Research Fellowships.

Recipients of College of Graduate Studies Fellowships must register for and complete at least nine graduate semester credit hours with a GPA of 3.0 or better each semester, in order to remain eligible for the award.

Application Procedure.

Applicants must submit the following:
1. a completed College of Graduate Studies Fellowship application;
2. official GRE general test or GMAT scores;
3. a statement of qualifications for the fellowship and goals for graduate study; and
4. three letters of recommendation from academic and professional people; at least two must be from professors under whom the applicant studied in his or her proposed field of graduate study, either as an undergraduate or graduate student.

Letters of recommendation will be used by both the appropriate department and the Diversity Fellowship Committee, so students do not need to request duplicate letters. Prospective students must also apply to the College of Graduate Studies by submitting an Application for Admission to the College of Graduate Studies, including two transcripts of all previous college coursework, except that completed at CMU.

To ensure that test scores arrive on time, the GMAT must be taken no later than October and the GRE must be taken no later than December. Students electing computerized versions of the GRE may have more flexibility on test-taking dates, but it is essential that scores arrive by February 6. GRE and GMAT information bulletins are available on most college campuses. At CMU, the bulletins are available in the College of Graduate Studies. The bulletins are also available by writing to Educational Testing Service, P.O. Box 6004, Princeton, NJ 08541.

Application Deadline. Applications and all supporting materials must be submitted by February 6. Applicants will be notified of the committee’s decision by late March.

Application Forms and Information. Application materials are available on the college website under Applications and Forms: www.grad.cmich.edu.

Doctoral Research Fellowships

Doctoral Research Fellowships are awarded on a competitive basis to students who will be enrolled full-time in one of the doctoral programs. Doctoral Research Fellowships include a stipend and a 24-credit tuition scholarship. Recipients of Doctoral Research Fellowships also get special library privileges which allow them to check books out for six months at a time. Doctoral Research Fellowships provide a stipend and a 24-credit tuition scholarship. For 2012-13 stipend amounts, contact the College of Graduate Studies. Doctoral Research Fellowships will not pay for undergraduate coursework unless it is approved for graduate credit and pays for graduate tuition at the main campus tuition rate. All doctoral level fellows are classified as Michigan residents for tuition purposes. This classification remains in effect for the duration of their program. Each recipient of a fellowship is expected to act as a research fellow under the tutelage of a designated faculty member.

Eligibility. Recipients of Doctoral Research Fellowships must register for and complete at least nine graduate semester hours during each of the two semesters of the award, and maintain a GPA of 3.0 or higher. Doctoral Research Fellowships are awarded for one year. (Check with the department making the award to determine if fellowships are renewable.)

Application Procedure for Mathematics and Psychology

Applicants must submit the following information directly to the department: (1) completed Doctoral Research Fellowship application; (2) official GRE scores from the general test; (3) a statement of qualifications for the fellowship and goals for graduate study, and (4) three letters of recommendation from academic and professional people. At the student’s request, letters of recommendation used for admission purposes may also be used for fellowship application purposes. Prospective students must apply to the College of Graduate Studies by submitting an Application for Admission to the College of Graduate Studies, including two transcripts of all previous college coursework, except that completed at CMU.

To ensure that GRE scores arrive on time, the test must be taken no later than December. A GRE information bulletin is available on most college campuses. At CMU, the bulletin is available in the College of Graduate Studies and the Center for Learning Assessment Services in the lower level of Robinson Food Commons. The bulletin is also available by writing to Educational Testing Service, P.O. Box 6004, Princeton, NJ 08541.

Application Procedure for History

Applicants must submit the following information directly to the History Department (Powers 106): 1) completed Joint M.A./Ph.D. Fellowship Application; 2) official GRE scores from the general test; 3) a statement of qualifications for the fellowship and goals for graduate study; and 4) an official transcript of undergraduate and/or graduate work completed at a recognized university recording at least 20 credit hours in history, or related fields, with a grade point average of 2.7 or higher; and 5) three letters of recommendation, with at least two reference letters from persons within the proposed field of graduate study. Students who have completed a traditional MA degree or will complete an MA prior to beginning the Joint Program must also submit evidence of scholarship (request specific information from the department). At the student’s request, letters of recommendation used for admission purposes may also be used for fellowship application purposes. Prospective students must also apply to the College of Graduate Studies by submitting an Application for Admission and all supporting materials required by that application.

To ensure that GRE scores arrive on time, the test must be taken no later than December. A GRE information bulletin is available on most college campuses. At CMU, the bulletin is available in the College of Graduate Studies and the Center for Learning Assessment Services in the lower level of the Robinson Food Commons. The bulletin is also available by writing to Educational Testing Service, P.O. Box 6004, Princeton, NJ 08541.
Applications must submit fellowship applications and all supporting materials by Feb. 6. Awards are announced after admission decisions are made. (NOTE: Applications for admission to the Clinical and School Psychology programs are due Jan. 15, Applied /Experimental Psychology Feb. 1, and I/O Psychology Jan. 1, all earlier than fellowship applications.)

Application Forms and Information. For application materials and information, contact the Department of History, 106 Powers, (989) 774-3374; the Department of Psychology, 101 Sloan, (989) 774-3001; or the Department of Mathematics, 214 Pearce, (989) 774-3596.

King/Chávez/Parks (KCP) Future Faculty Program

Note: This program may, or may not, continue to be funded by the State of Michigan. Contact the College of Graduate Studies for information.

The purpose of the King/Chávez/Parks Future Faculty Fellowship Program is to increase the pool of traditionally underrepresented candidates pursuing faculty teaching careers in postsecondary education. Preference may not be given to applicants on the basis of race, color, ethnicity, gender, or national origin. We encourage applications from minorities, women, people with disabilities, and individuals from cultural, linguistic, geographic, and socio-economic backgrounds who would otherwise not adequately be represented in the graduate student and faculty populations.

KCP awards have a maximum value of up to $20,000 for master’s students and $35,000 for doctoral students. Future Faculty Fellowship graduates are obligated, by signed agreement, to remain in postsecondary faculty teaching or administration in a public or private, 2- or 4-year, in-state or out-of-state postsecondary institution for a minimum of three (3) years equivalent full-time. Fellows who do not fulfill the teaching and/or other obligations of their fellowship agreement may be placed in Default, which results in their fellowship converting to a loan (referred to as a KCP Loan) that the Fellow repays to the State of Michigan.

Eligibility. To be eligible for a KCP Future Faculty Fellowship, the student must meet all entrance requirements for the College of Graduate Studies and be accepted into a program of study that facilitates a teaching career in postsecondary education by the application deadline. The student must be a U.S. citizen and a resident of Michigan (as defined by CMU). Applicants must not currently be receiving a KCP Initiative Fellowship Award at another institution, and they may not have previously received another KCP Fellowship Award for the same degree level (master’s or doctorate). Applicants may not currently be in default on any guaranteed student loan and/or a KCP loan. Additionally, students must intend to teach at a postsecondary institution after graduation.

Students who accept a KCP fellowship must fulfill certain conditions or the award becomes a loan repayable to the State of Michigan. Recipients are required to: (1) maintain good academic standing (3.0 or higher); (2) earn the master’s degree within 4 years; (3) within one year after attaining a master’s degree, either enroll in a doctoral program or teach at a two or four year postsecondary institution for three years; (4) within one year after attaining the doctoral degree, teach in a postsecondary institution for at least three years.

Application Procedure. Applicants must submit the following: (1) a completed KCP application; (2) transcripts for all undergraduate and graduate coursework; (3) three letters of recommendation from academic and professional people, at least two of which must be from faculty within the applicant’s proposed field of study; (4) a professional statement describing current educational status, goals for graduate study, and how you would fulfill the goals of the FFF program; and (5) a current resume or curriculum vitae.

Application Deadline. Applications and all supporting materials must be submitted by March 30. Awards are announced in late April.

Application Forms and Information. Application materials are available on the college website under Applications and Forms: http://www.grad.cmich.edu/kcp

Awards and Scholarships

Contact the Office of Scholarships and Financial Aid for more information on the following awards and scholarships.

AAUW - M. Ruth Evans Award

Established in 1991 by Jackie M. Evans, members of the M. Ruth Evans family and members of the Mount 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.

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. Brown, former CMU employees, to honor their service and dedication in the area of political science at CMU. This endowment recognizes Bill Ballenger’s service as the Robert 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 or who has an interest in the study of political science and, who has a minimum GPA of at least 3.0.

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 Mount 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.

CDO-SLP Alumni Scholarship

Established in 1998 through alumni support, for a second-year graduate student in the Speech/Language Pathology Program in the Department of Communication Disorders.

CEL Endowed Scholarship

Established in 2001 by alumni and friends of Global Campus, proceeds from the endowment will be used to support a scholarship for CMU’s Global Campus Programs students with a 3.0 minimum GPA.

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 student at CMU who is a single parent or to a student from a single parent household. Recipient must demonstrate financial need with a minimum GPA of 2.75.

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 undergraduate students, the students must be a sophomore or junior, an authorized CPS or ITC major (Computer Science or Information Technology), and have a minimum 3.3 GPA. Graduate Students must be an authorized major in CPS MS. The award is renewable.
Paul David Cratin Physical Chemistry Graduate Student Endowed Award  
Established in 2000 to honor Paul David Cratin, former professor. Proceeds from the endowment will be used to establish an award for a graduate student enrolled in the masters degree program in the area of physical chemistry.

Dow Corning MBA Endowed Scholarship  
Established in 2006, the scholarship is in memory of Larry Reed, ’69. Income from the endowment will support a renewable scholarship for a graduate student enrolled in the College of Business Administration’s MBA program. The recipient will have regular admission status in the program and be performing at a high level in their academic coursework. Selection will be based upon GPA in the MBA program, performance in specific MBA courses, faculty recommendations, demonstrated leadership in MBA 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 may also recommend recipients. The selection committee shall 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.

J. Dean and Betty L. Eckersley Audiology Scholarship  
Established in 1996 as a renewable scholarship for a graduate student in Audiology. Dr. J. Dean Eckersley was a professor of Audiology and former department chairperson. 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 Department of Communication Disorders.

Richard D. Featheringham Endowed Scholarship  
Established in 2005 by Dr. Richard ’81, ’84 and Audrey Featheringham. Income from the endowment will support a renewable scholarship for an undergraduate or graduate student with a major or minor in organ and a minimum GPA of 3.0. The student must audition with the School of Music.

Bud Fisher and Fisher Companies Study Abroad Scholarship  
Established in 2005 by Bud Fisher and Fisher Companies. Income from the endowment will support a renewable scholarship for a student(s) who wishes to study abroad. The recipient(s) will be a sophomore or higher or a graduate student who has completed at least one semester of study, with a minimum GPA for an undergraduate of 2.7 and 3.2 for a graduate. Preference will be given to students studying in non-Western and non-English speaking countries. The recipient must be a U.S. citizen or permanent resident, demonstrate financial need, be enrolled full time at the time of the award and during the term of study abroad (one or two semesters), and fulfill the in-kind service requirement upon return.

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. Preference will be given to a graduate student, followed by a senior or junior.

James E. Hornak Endowed Award  
Established in 2009 by colleagues, former students, and family of Dr. James E. Hornak ‘65, ‘66, 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.

Robert and Marilouise Knott Special Education Award  
Established in 2010 by the estate of Robert Knott ’41, ’57, to commemorate Robert and his sister, Marilouise. Income from the endowment will support a renewable award for a student enrolled in the Master of Arts (M.A.) in the Special Education graduate program within the College of Education and Human Services with a minimum of five credit hours and a 3.5 GPA.

Dr. Barbara Leiting-O’Connell Family Endowed Scholarship  
Established in 2007 by Dr. John F. O’Connell ’83 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.

Robert E. McCabe Scholarship  
Established in 1998 by Robert McCabe ’46 for undergraduate or graduate students with a minimum 3.2 GPA and financial need. First preference will be given to students pursuing a degree in journalism. If no qualified candidate is identified, then the scholarship shall be awarded to a student pursuing a degree in liberal arts.

Edward E. McKenna Academic Excellence Award  
Established in 1998 in memory of this dedicated teacher, scholar, and unionist by the Department of Sociology, Anthropology, and Social Work. Endowment earning will provide cash awards for winning authors of an annual undergraduate and graduate paper competition.

Bernard N. Meltzer Scholarship  
Established by friends in honor of Bernard N. Meltzer, former faculty member and chairperson of the Department of Sociology, Anthropology, and Social Work, for a graduate student in sociology.

Anne Miller-Quimper Memorial Award  
The Anne Miller-Quimper Memorial Award was established in 1991 though gifts from family and friends in memory of Anne Miller-Quimper (1940-1980). A graduate student in the School of Psychology program, Anne was killed by a car while she was jogging. Endowment earnings will provide annual stipends to graduate students in the School Psychology Program to support thesis or dissertation research.

Morris Family CMU Endowed Scholarship  
Established in 2009 by Laurie and Michael J. Morris ’80, ’93. 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 masters program with Global Campus. Main campus students must have successfully completed a minimum of 12 credit hours and maintain a 3.2 GPA. 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.

Edward H. Pothoff, Jr. Scholarship  
Established in 1983 by family and friends for a public administration graduate student demonstrating a career interest in local government.

Nicholas P. Redfield Scholarship  
Established in 1998 by colleagues in memory of Dr. Redfield for a third-year Au.D. doctoral student who demonstrates a ‘client-centered’ approach in clinical performance. Volunteer work and efforts to better the audiology program at CMU will also be considered in selecting a candidate for this award.
Applications should be submitted by March 15. Scholarship recipients will be notified by May 1.

Army ROTC Scholarships

ROTC offers a variety of scholarships to students at CMU. The Army ROTC scholarship program for graduate students includes a financial benefit package for a period of two years. Scholarships are awarded on a competitive basis to prospective cadets, 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 or less at graduation, pass the Army Physical Fitness Test, have no criminal convictions (other than minor traffic violations), have a GPA of at least 2.5 (4.0 scale), possess scholar, athlete, and leader attributes, and have a minimum of two years remaining in graduate school.

Each scholarship pays for college tuition, laboratory fees, on campus educational fees, and $900 for the purchase of textbooks, classroom supplies, and equipment. Army ROTC Scholarship recipients also receive a non-competitive financial assistance package which pays for tuition and up to $1200 a month directly to the student.

Additional ROTC scholarship information may be obtained by contacting the Military Science Department at (989)774-3049 or (989)774-7440.

Graduate Assistantships

Program Description

Graduate assistantships are service-related appointments, requiring teaching, research, or administrative service. A full-time assistantship during fall and spring semesters requires approximately 20 hours of work per week; a half-time assistantship requires about 10 hours weekly. For summer assistantships, a full-time appointment requires approximately 320 hours of work throughout the summer; a half-time assistantship requires approximately 160 hours.

The responsibilities and funding for graduate administrative assistants may be quite variable. Teaching and Administrative Assistants are members of a negotiated bargaining unit. More information is available at: www.cmich.edu/about/careers/faculty_personnel_services/

Graduate Assistant Benefits

A full-time graduate assistant appointed for the academic year receives a tuition scholarship for 20 credit hours. Graduate assistants working less than full-time receive prorated tuition scholarships based on 24 credit hours. The tuition scholarship covers courses taken during the academic year or the following summer. Tuition is paid at the main campus rate. Faculty Personnel Services generates all graduate assistant and union contracts (www.cmich.edu/about/careers/faculty_personnel_services/Pages/default.aspx).

For the 2012-13 academic year, the funding amount for full-time master's and some post master's graduate assistants ranges from $10,150-$14,900. The funding amount for full-time graduate assistants in a specialists, doctoral (with 30 hours beyond baccalaureate) program ranges from $11,200- $19,575. Graduate assistants working less than full-time are paid on a prorated basis.

A full-time graduate assistant appointed for the academic year receives a tuition scholarship for 24 credit hours. Graduate assistants working less than full time receive prorated tuition scholarships. The tuition scholarship covers courses taken during the academic year or the following summer. Tuition is paid at the main campus rate.

Graduate assistants are classified as Michigan residents for the purpose of determining tuition rates at CMU. This classification remains in effect for the duration of their stay at CMU if working on a doctoral program. For specialist's and master's degrees, and graduate certificates, this classification as a Michigan resident is in effect only during the academic year of the award (including the subsequent summer).
Graduate assistants are covered by travel accident insurance which provides $25,000 to a beneficiary in case of accidental death while traveling on university business.

Graduate assistants are given special library privileges, allowing them to check books out for a six month period.

Eligibility

To receive an assistantship, a student must be admitted to the College of Graduate Studies under regular, conditional, or non-degree admission. Students who have concurrent or accelerated admission status may be appointed as graduate assistants only if they have special permission from the Dean of the College of Graduate Studies. Other hiring criteria are determined by the department or office responsible for the assistantship.

Graduate assistant appointments require that a student maintain a grade point average of 3.0 in graduate work. Graduate assistants with appointments for the fall and/or spring semesters must register for and maintain a minimum of six semester hours of graduate credit at CMU during each semester of the assistantship. During the final semester of enrollment before completing his/her degree requirements, students only need to register for the number of credits remaining on his/her program plan. This waiver is allowed for one semester only. Requests for exceptions will be evaluated on a case-by-case basis by the Dean of the College of Graduate Studies. Graduate research assistants with a summer appointment must register for and maintain a minimum of one semester hour of graduate credit during the summer at CMU. Graduate teaching assistants appointed for the summer will be required to take 1-6 credits for the summer.

U.S. Department of Homeland Security regulations affect international students' eligibility for assistantships. The College of Graduate Studies will confirm whether an individual international student is eligible for an assistantship.

Application and Selection Procedures

Each department establishes its own application and selection procedures. Therefore, prospective graduate assistants must contact individual departments to apply. While it is always best to apply early, different departments have different application deadlines and due to extenuating circumstances, graduate assistants are sometimes selected a few days before classes start.

Responsibilities

The responsibilities of a graduate assistant are determined by the hiring department. The responsibilities must be commensurate with the time constraints of the assistantship appointment.

General Requirements for Loans and Work Study

Academic Eligibility

Graduate students must register for at least five credit hours per semester at CMU to be eligible for federal student aid programs. Credit hours are determined after the close of the Drop/Add period.

Policy and Award Revision

CMU reserves the right to revise a student's financial aid award if government regulations, university policy or sources of funding change prior to or during an academic year; if overpayment occurs; or if acceptance of the award is made after the acceptance date.

Debt and Default

Federal aid recipients may not owe a refund from any grant or loan or be in default on any federal loan to be eligible for assistance.

Financial Aid Assessment

The federal need 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.

Satisfactory Academic Progress

Federal regulations require that Central Michigan University monitor the Satisfactory Academic Progress of all students. There are three distinct criteria which must be monitored and met to maintain eligibility for federal student aid, as well as most state and institutional student aid programs. This rule applies to all students applying for aid regardless if they have received financial aid in previous semesters. These financial aid requirements are separate from students' academic requirements. Attempted hours are based on what the student is registered for at the conclusion of the Registrar's posted Deadline for Dropping a Class with a Full Cancellation of Tuition. Progress is measured at the end of each semester (including the summer semester) to determine a student's financial and eligibility for the following semester.

Students in graduate programs may not receive financial aid if they have attempted 150% or more of the number of credits required of their program.

All students (graduate and graduate-professional) must complete 67 percent of the courses they attempt each semester of enrollment. 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."

In addition to these criteria, Graduate students must maintain a 3.00 cumulative grade point average.

Consequences of unsatisfactory progress

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. 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.

Students who fail to complete 67 percent of their attempted courses in a semester will be warned. A failure to bring their completion rate to 67 percent in the next semester of enrollment will result in denial of federal and most state and institutional aid beginning with the next semester of enrollment. A student will remain on financial aid suspension until he/she completes 67% of attempted courses within a semester at CMU. Only CMU credit hours completed are counted as credits earned. Grades of NC (no credit), I (Incomplete), W (withdrawal), X (audit), and Z (deferred) are not counted as earned credit. For example, a student who attended CMU in the Fall semester at CMU and attempted 9 graduate credits, but withdraws from a 3 credit course will have completed 6 of 9 credits for a completion rate of 66%. This student will be warned for one semester and eligible for aid while on warning. A second semester of less than a 67% completion will result in the student being denied further aid until he or she completes 67% of attempted courses within one semester of enrollment at CMU.

Graduate students who fail to maintain a cumulative GPA of 3.00 or higher at the end of each semester will be warned. A failure to bring the cumulative GPA to a 3.00 or higher by the completion of the next semester will result in the student being denied further aid until he or she brings the cumulative GPA to the required 3.00 or higher.
Appeal process

Students who have faced extraordinary circumstances may appeal the denial of financial aid. Documentation of your circumstances is required, and students are cautioned that appeals are not routinely approved. 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 email 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 (http://www.cmich.edu/x29381.xml#ALT1), or by funding their education themselves. Please note that on the alternative loan list, some loans listed are NOT available to students on Financial Aid Suspension.

Student Loans

Student loan requirements and regulations can be quite complex; all students are encouraged to work closely with the CMU Office of Scholarships and Financial Aid. The financial aid office has publications that provide detailed information on loan programs, and financial aid advisors are available to answer questions and offer information and advice concerning student loans. Financial aid advisors are available on a walk-in basis in the Student Service Court in the Bovee UC or by appointment in Warriner 202.

The total amount of all loans borrowed may not exceed the student’s estimated cost of attendance minus the financial aid awarded for the period of enrollment.

William D. Ford Federal Direct Loan Program

Unsubsidized Student Loans

Unsubsidized loans are made to students by the federal government and applied directly to the student’s account. The program is open to all students who have completed the FAFSA and have federal loan eligibility. The student is responsible for the interest that accrues while he/she is in school.

The aggregate maximum for undergraduate study is $31,000 for a dependent student and $57,500 for an independent student. Graduate students making satisfactory academic progress who carry at least five (5) graduate semester hours may borrow up to $20,500 in an unsubsidized Federal Direct Loan. The aggregate maximum for undergraduate and graduate study combined is $138,500. Application is usually made for one semester or an academic year (9 months), with summer school requiring a separate award.

The interest rate for a Graduate Federal Direct unsubsidized loan is fixed at 6.8%. Student borrowers are assessed a 1.0% origination fee prior to loan disbursement.

Six months after ceasing to be at least a half-time student, the borrower must begin repayment. Several repayment options are available; contact the federal servicer. Payment of principal may be deferred under certain conditions. Students should refer to their promissory notes for details.

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 online 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.

Federal Graduate PLUS Loan

This program is for students in graduate level programs only. Students must file the FAFSA, be enrolled at least half-time, and receive all unsubsidized loan eligibility before a PLUS loan can be disbursed. This loan is a non-need loan for students with good credit histories. Applicants may borrow up to the cost of attendance minus other financial assistance. Students will receive an automatic deferment while enrolled at least half-time. Interest accrues while the student is enrolled in school and during grace periods. The interest rate is 7.9%. Students may complete a Graduate PLUS Loan Application available online at: www.studentloans.gov.

Student Employment Opportunities

Internships and Co-op Opportunities

CMU encourages internship and co-op experiences for graduate students. By definition, an internship is a requirement of a student’s program of study, while a co-op experience enhances but is not required for the program. Both require that the student perform services related to the student's area of study. The service is generally provided to an agency or business outside of CMU's control, and pay levels generally reflect the graduate student’s advanced standing. For information on internship or co-op opportunities, students should contact their academic department.

CMU Student Employment Programs

During the academic year, there is no limit on the number of hours per week that a student may work (international students may work only 20 per week during the academic year). However, students are here primarily to complete their degree program and often work to help cover the associated expenses. The need for some students to be employed for a greater number of hours should not compromise their progress toward the fulfillment of their degree requirements. During periods of non-enrollment (summer, spring break, semester break), students may work up to forty hours a week.

Work Study. CMU participates in the Federal College Work Study (FWS) Program. This program requires that the student be enrolled in at least 5 credits in a graduate program of study.

Eligibility is based on financial need. Therefore, to qualify for work study, students must demonstrate financial need by completing the FAFSA form and if requested, by submitting verification materials (e.g., income tax returns) to the Office of Scholarships and Financial Aid. Contact the financial aid office for more specific information.

(Continued)
Eligibility for work study does not guarantee job placement. Pay rates are commensurate with job duties and skills. Any student participating in the FWS program is told the maximum amount he/she can earn during the academic year, from this program. After students have earned the amount for which they are eligible for a given year, they will be allowed to continue their job placement only if the hiring department has another source of funds for paying them. (See GSA below.)

**General Student Assistance Employment Opportunities.** General Student Assistance (GSA) provides an opportunity for campus offices to hire undergraduate and graduate students regardless of the students' financial need. The demand for these positions exceeds the supply, so pay levels may not be attractive to graduate students.

There is no limit to the amount of GSA money a student can earn in a year. Graduate students should check with their own departments and with the Student Employment Office in the Bovee University Center regarding GSA opportunities.

**Off-Campus Employment.** Students are free to seek employment off campus with no interference from the university. (International students should contact the Office of International Affairs to determine eligibility for off-campus employment.) To assist students in finding jobs, CMU operates the Job Bank, located in the Student Employment Office in the Bovee University Center. Students who are not employed on campus through the work study program (FWS) and who are not graduate assistants may use the services of the Job Bank.

**Contact Information**

All students covered under any of the above programs must contact the CMU OFSA, 202 Warriner Hall, 989-774-3674 for additional information.

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**Veterans' Resource Center**

The Veterans' Resource Center (VRC) serves main campus and Global Campus students who are veterans, spouses, dependents or military students. 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. or by appointment. The Veterans’ Resource Center is located in Warriner Hall 114B and may be reached at 989-774-7991.

**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, [http://www.michigan.gov/mdcr/0,1607,7-138--240889--,00.html](http://www.michigan.gov/mdcr/0,1607,7-138--240889--,00.html). The student must be enrolled in a degree-granting program.
ACADEMIC INFORMATION

Note: Graduate students are individually responsible for complying with the procedures, requirements, regulations, and deadlines printed in this Bulletin and the specific requirements of their department and program.

Assignment to Advisor and Authorization of Degree Program

As a graduate student studying for a certificate, master’s, specialist’s, or doctoral degree, an advisor in your area of specialization will be appointed by the department chairperson. You will receive notification of assignment to an advisor shortly after admission to a graduate program. As soon as possible after receiving this notification, an Authorization of Degree Program - Graduate or Certificate Program form should be filled out in consultation with your advisor and a copy placed on file in the College of Graduate Studies. This authorization will ensure that courses you take will count on your program; courses you take prior to authorization may not count.

If registering for graduate coursework prior to being assigned to an advisor, read carefully the appropriate sections of this Bulletin, or consult the appropriate department chairperson to make certain that the courses you register for are applicable to your program of study.

Changes to an authorized program should be made via the Course Substitution form available in the College of Graduate Studies. For a certificate, master’s, or specialist’s program, the form requires the advisor’s signature. For a doctoral program, the form requires the signatures of the advisor and the Dean of the College of Graduate Studies.

Residence Requirement

A graduate student should devote such time to graduate study and research in residence at CMU as may be appropriate to the program of study. Students are expected to take every opportunity to work in close association or collaboration with graduate faculty members, with other graduate students in the same program, and with distinguished visiting scholars. These opportunities exist at the university campus and in classes, seminars, internships, and research projects organized or placed elsewhere as part of the university’s continuing involvement in a broadly-based commitment to education.

Access to Records

University policy grants students access to their education records under conditions which conform to the Family Educational Rights and Privacy Act of 1974 as amended and regulated by the appropriate federal guidelines.

Directory information may be published or released by the university unless a student informs the Registrar’s Office in writing that any or all items should not be released without the student’s prior consent. Directory information is defined to include such items as a student’s name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height (of members of athletic teams), dates of attendance, degrees and awards received, and the previous educational institution attended by the student.

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 and degrees in this Bulletin.

Transcripts

Official transcripts are free, however there is an $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.

General Regulations

Matters upon which there has been no direct legislation for graduate students will be governed by the general university regulations.

Degree Candidacy

Admission to Candidacy

Specialist’s Degree. Admission to graduate study does not imply Admission to Candidacy for any specialist’s degree. Admission to Candidacy is granted only after the applicant has:

1. Fulfilled all the prerequisites for admission to the degree program;
2. Fulfilled all special requirements, such as admissions tests, letters of recommendation, and qualifying examinations specified by the department which has jurisdiction over the curriculum;
3. Submitted an Authorization of Degree Program - Graduate form approved and signed by the advisor;
4. Completed at least ten hours of graded graduate coursework on the chosen program at CMU with a cumulative graduate grade point average of 3.0 or higher in all of this work;
5. Filed an Admission to Candidacy - Specialist Degree form approved by the advisor and the Dean of the College of Graduate Studies.

Ph.D. or Ed.D. Degree. (Other doctoral programs may require candidacy.) Admission to graduate study does not imply Admission to Candidacy for a Ph.D. or Ed.D. degree. Admission to Candidacy is granted only after the applicant has:

1. Fulfilled all the prerequisites for admission to the degree program;
2. Fulfilled all special requirements, such as admissions tests, letters of recommendation, and additional student background information specified by the department;
3. Submitted an Authorization of Degree Program - Doctoral form approved and signed by the advisor;
4. Completed most of the prescribed coursework for the degree with a cumulative graduate grade point average of 3.0 or higher, satisfied any research or professional tool requirements established by the department, and passed a comprehensive examination conducted and evaluated by the student’s examination committee;

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5. Filed an Admission to Candidacy - Doctoral Degree form approved by the advisor and the Dean of the College of Graduate Studies.

**Degree Requirements**

Students may elect to graduate under the curricular requirements and regulations in any Graduate Bulletin in effect between the date of the original admission on a graduate degree or certificate program and the date that degree or certificate was received with such modifications and substitutions as may be necessitated by changes and developments in the university's programs.

**Graduate Certificate**

You are eligible to receive a graduate certificate* after you have:

1. Received Regular Admission to the graduate program and filed an Authorization of Degree Program - Graduate form approved and signed by an advisor;
2. Completed 15 to 18 hours of graduate coursework approved by the advisor. A maximum of six (6) semester hours from a previous or concurrent graduate degree or certificate can be transferred toward a graduate certificate. Military coursework with a grade of outstanding or excellent is transferable. If a student has not had adequate preparatory coursework for the curriculum chosen and has to take additional coursework to make up any deficiencies, these courses are not included in the fifteen to eighteen hour graduate course work requirement. These courses will, however, be stated on the Authorization of Degree Program - Graduate form. Any course in which the student earns a grade below C is not acceptable in fulfillment of a graduate certificate requirement.
3. Fulfilled all of the requirements of the curriculum on which the student is enrolled and all other university regulations pertaining to the program;
4. Obtained a cumulative graduate grade point average of 3.0 (B) or higher in graded graduate coursework at CMU and a cumulative graduate grade point average of 3.0 (B) in all coursework on the student's authorized graduate certificate program;
5. Completed all requirements for the graduate certificate within seven years after matriculation in the program. Courses completed more than seven years prior to graduation cannot be used to meet graduation requirements without an extension of the time request. Please note that extension of time requests are serious and approval by the advisor and department do not guarantee approval by the College of Graduate Studies. Extensions of time to complete a degree or certificate are rarely granted and only considered if there are clearly extenuating circumstances. Typically “life” events (employment changes, responsibilities, or promotions, marriage and births) do not count as extenuating circumstances. See Extension of Time section for further information.
6. Made application for the graduate certificate by the date specified in the section titled "Deadlines" on the inside front cover of this Bulletin, filed a Graduation Application in the College of Graduate Studies, and paid the required graduation fee. (See Graduation Procedures.)

*NOTE: Graduate Certificates as described in this section are not related to earning a teaching certificate. See page 224 of this Bulletin for Teacher Certification information.

**Master's Degree**

You are eligible to receive a master's degree after you have:

1. Received Regular Admission to the degree program and filed an Authorization of Degree Program - Graduate form, approved and signed by the advisor;
2. Completed a minimum of thirty hours of graduate work approved by the advisor. Courses in which you earn a grade below C are not acceptable in fulfillment of this degree requirement. If you have not had adequate preparatory coursework for the curriculum chosen, you must take additional coursework to make up the deficiencies either in the field of specialization, in cognate areas, or both, as determined by your advisor. If you must earn more than thirty hours to receive the degree, the additional hours and their nature will be stated in the Authorization of Degree Program - Graduate form;
3. Fulfilled all of the requirements of the curriculum on which you are enrolled and all other university regulations pertaining to the program;
4. Obtained a cumulative graduate grade point average of 3.0 (B) or higher in graded graduate coursework at CMU and a cumulative graduate grade point average of 3.0 (B) in all coursework on the student's authorized degree program;
5. Earned at least fifteen of the hours presented for the degree in courses at or above the 600 level;
6. Fulfilled all other university regulations pertaining to your program;
7. Submitted evidence of scholarship and/or creative or artistic ability beyond the completion of coursework. Two plans, differing to some extent in the various departments, are in general use. Subject to the approval of the major advisor, you may choose either plan. Plan A consists of coursework, a thesis (6 credits), an oral defense of the thesis. Plan B consists primarily of coursework, requires no thesis, but must include additional significant evidence of scholarship, such as research, independent studies, internships, or practica and/or creative or artistic ability which the department of the field of specialization may wish to prescribe. A comprehensive examination over the field of specialization may be required under either Plan A or Plan B. It shall be the responsibility of the department chairperson or program coordinator to notify the College of Graduate Studies of the student's fulfillment of the Plan A or Plan B requirements;
8. Made application for the degree and diploma by the date specified in the section titled Deadlines on the inside front cover of this Bulletin;
9. Completed all requirements for the graduate degree within seven years after matriculation in the program. Courses completed more than seven years prior to graduation cannot be used to meet graduation requirements without an extension of the time request. Please note that extension of time requests are serious and approval by the advisor and department do not guarantee approval by the College of Graduate Studies. Extensions of time to complete a degree or certificate are rarely granted and only considered if there are clearly extenuating circumstances. Typically “life” events (employment changes, responsibilities, or promotions, marriage and births) do not count as extenuating circumstances. See Extension of Time section for further information.
10. Filed a Graduation Application in the College of Graduate Studies and paid the required graduation fee. (See Graduation Procedures.)
Specialist's Degree
You are eligible to receive the Specialist's in Psychological Services degree or Specialist's in Education degree after you have:
1. Received the master's degree, if this is a prerequisite on your curriculum;
2. Been admitted to candidacy for the appropriate specialist's degree;
3. Completed a minimum of sixty semester hours (thirty hours beyond the master's degree if the master's is required or was earned elsewhere) of graduate work approved by your advisor. Courses in which you earn a grade below C are not acceptable in fulfillment of this degree requirement;
4. Completed all of the requirements of the curriculum in which you are enrolled and all other university regulations pertaining to your program;
5. Obtained a cumulative grade point average of 3.0 (B) or higher in graded graduate coursework at CMU and a cumulative graduate grade point average of 3.0 (B) in all coursework on the student's authorized degree program;
6. Completed a thesis or field study as part of your master's or your specialist's degree;
7. Earned at least twenty of the last thirty hours of coursework at or above the 600 level;
8. Applied for the degree and diploma by the date specified in the Deadline section on the inside front cover of this Bulletin;
9. Completed all requirements for the specialist degree within seven years after matriculation in the program. Courses completed more than seven years prior to graduation cannot be used to meet graduation requirements without an extension of the time request. Please note that extension of time requests are serious and approval by the advisor and department do not guarantee approval by the College of Graduate Studies. Extensions of time to complete a degree or certificate are rarely granted and only considered if there are clearly extenuating circumstances. Typically "life" events (employment changes, responsibilities, or promotions, marriage and births) do not count as extenuating circumstances. See Extension of Time section for further information.
10. Filed a Graduation Application in the College of Graduate Studies and paid the required graduation fee. (See Graduation Procedures.)

Doctoral Degree
You are eligible to receive a doctoral degree as approved and implemented by the university after having:
1. Received a master's or specialist's degree, if this is a prerequisite on the curriculum;
2. Acquired the research skills of the discipline as required by the specific department;
3. Passed a comprehensive examination or comprehensive clinical assessment evaluated by more than one member of the graduate faculty;
4. Been admitted to candidacy for the doctoral degree (if a Ph.D., Ed.D., or DHA degree program);
5. Completed a minimum of ninety semester hours of graduate work beyond the bachelor's degree with a graduate grade point average of 3.0 or better and a cumulative graduate grade point average of 3.0 (B) in all coursework on the student's authorized degree program. Coursework will be selected in consultation with the student's academic advisor or advising committee;
6. Maintained at least a cumulative graduate grade point average of 3.0. Courses in which the student earns or has earned a grade below C do not count toward meeting any degree requirements. A student with three or more grades below a B- may not be awarded a Ph.D., D.H.A., or Ed.D. degree. Coursework that is not part of the student's doctoral program of study is excluded from this policy. Particular programs may have more stringent grade requirements;
7. Fulfilled all the requirements on the authorized doctoral program as developed by the student and the student's advisor or advising committee. The advisor or advising committee will supervise the program until the degree is completed or until it has been determined that the student should discontinue doctoral study;
8. Earned at least fifteen hours in courses at the 700 level or above (excluding dissertation, doctoral project and internship credits) and fifty of the total hours at the 600 level or above;
9. Prepared a doctoral dissertation, or in the case of some applied programs, a doctoral project. A doctoral project must be conducted under an advisor who meets the requirements for regular graduate faculty status as defined by the Academic Senate's Graduate Education Policy. All other policies and procedures for the doctoral project are to be determined by the academic program and will be presented in the section of the bulletin pertaining to the academic program. For the dissertation, you may receive a minimum of twelve hours of credit and a maximum of thirty-six hours of credit as specified on the authorized doctoral program under the guidelines of the specific department. The research for the dissertation will be conducted under the guidance of a dissertation supervisor and must be approved by a doctoral committee consisting of at least three graduate faculty members. The student must pass an oral defense of the completed dissertation. The committee members are the examining committee and determine whether the student passes the defense. The dissertation must be prepared according to the regulations prescribed in the College of Graduate Studies' most recent edition of the Guidelines for the Preparation of Theses, Doctoral Projects, and Dissertations.
10. Completed the requirements for the doctoral degree within eight years prior to the award of the doctoral degree with prior relevant graduate degree and ten years if the student began doctoral study within prior relevant graduate degree. Courses completed outside these time frames cannot be used to meet graduation requirements without an extension of the time request. Please note that extension of time requests are serious and approval by the advisor and department do not guarantee approval by the College of Graduate Studies. Extensions of time to complete a degree or certificate are rarely granted and only considered if there are clearly extenuating circumstances. Typically "life" events (employment changes, responsibilities, or promotions, marriage and births) do not count as extenuating circumstances. See Extension of Time section for further information.
11. Filed a Graduation Application in the College of Graduate Studies and paid the required graduation fee. (See Graduation Procedures.)

NOTE: Particular doctoral programs may have more specific or more stringent program requirements.

Thesis, Doctoral Project, Dissertation, or Journal Article
The satisfactory completion of a thesis or journal article is a requirement on some master's degree programs and optional on others. The satisfactory completion of a thesis or journal article at CMU is a requirement for some specialist's degrees, and satisfactory completion of a doctoral project, dissertation, or journal article is a requirement for some doctoral degrees. Satisfactory completion is determined by the student's committee, department, college, and the College of Graduate Studies. Students should be aware that the university has specific policies that govern research involving human or animal subjects and recombinant DNA. Information on experimentation may be obtained from the department chairperson, committee chairperson, or the Office of Research and Sponsored Programs. (Continued)
For stylistic guidelines, students are expected to follow the most recent College of Graduate Studies' requirements, which are explained in the Guidelines for the Preparation of Theses, Doctoral Projects, Dissertations and Journal Articles. These guidelines are available online at www.grad.cmich.edu/forms.htm.

If students are writing a thesis/doctoral project/dissertation, it will be evaluated by a committee. Students should consult their advisor in selecting a committee chairperson and at least two committee members. The advisor may or may not be the committee chairperson, depending upon the student's academic emphasis. One member of the committee may be from a discipline other than that of the student's area of concentration. All members of the committee must have graduate faculty status. Students can check their committee members' status by contacting the College of Graduate Studies.

For theses/doctoral projects/dissertations completed through Central Michigan University's Global Campus, one of the three committee members must be a CMU main campus regular faculty member or a regular faculty member from a collaborating university (such as in a joint program), or if all committee members are from Global Campus, the committee chair must meet the requirements for regular graduate faculty status as defined by the Academic Senate's Graduate Education Policy and be approved as committee chair by the department.

The chairperson of the thesis/doctoral project/dissertation committee will have active direction of the work, but may wish to consult with other members of the committee about matters pertinent to its development. The committee as a whole, however, will determine the quality of the work.

After a committee has been selected and a topic chosen, a Prospectus - Theses, Doctoral Projects, and Dissertations form must be completed by the student and signed by the committee chair and members, the department chairperson, and the Dean of the College of Graduate Studies. Projects must not be undertaken until the form is approved by the Dean of the College of Graduate Studies. Projects undertaken prior to the Dean of the College of Graduate Studies approving the Prospectus may be denied, the project deemed invalid, and the student will have to begin the thesis/doctoral project/dissertation process anew. The department may require a more detailed prospectus.

Each student who writes a thesis/doctoral project/dissertation must enroll for such credit. Letter grades are not used in the evaluation of the thesis/doctoral project/dissertation; therefore, the student's grade point average is not affected by credit earned for these. In all departments the thesis/doctoral project/dissertation is designated as credit (CR) if acceptable and no credit (NC) if not acceptable. Students will receive six semester hours of credit for an acceptable thesis. For a dissertation, a minimum of twelve and a maximum of thirty-six semester credit hours may be earned depending on the guidelines for the specific department.

A student may not enroll for more than three credits of the thesis/doctoral project/dissertation until the project prospectus has been approved at the department level and composition of the committee has been verified by the Dean of the College of Graduate Studies. Projects must not be undertaken until this takes place. Projects undertaken prior to the Dean of the College of Graduate Studies approving the Prospectus may be denied, the project deemed invalid, and the student will have to begin the thesis/doctoral project/dissertation process anew. Credit will be granted upon satisfactory completion of the thesis/doctoral project/dissertation, and its acceptance by the committee and approval of the College of Graduate Studies.

Final Stages of Thesis, Doctoral Project, Dissertation or Journal Article Preparation

The final draft of the defended, committee-approved thesis/doctoral project/dissertation/journal article must be submitted to the College of Graduate Studies for approval according to the deadlines listed on the inside cover of the College of Graduate Studies Bulletin and within the Guidelines for the Preparation of Theses, Doctoral Projects, Dissertations, and Journal Articles. Failure to meet this deadline or any departmentally stipulated deadline may result in the student's graduation being delayed until the following semester. Students and Committee Chairs should consult the Guidelines for the Preparation of Theses, Doctoral Projects, Dissertations, and Journal Articles for the current process and University expectations.

Field Study

A field study requires the student to conduct a major project approved and directed by an advisor who meets the requirements for regular graduate faculty status as defined by the Academic Senate's Graduate Education Policy. Upon completion of the field study, the student must pass a publicly announced oral defense of the project.

Graduation Procedures

At least eight weeks before the end of the semester in which a student expects to graduate, he/she must send a completed Graduation Application form, along with a check or money order for $50.00 (made payable to CMU) to the College of Graduate Studies. Deadline dates are published on the front inside cover of this Bulletin.

Application for Graduation. In order to graduate, the student must submit a Graduation Application form. The form must be submitted to the College of Graduate Studies no later than the deadline specified on the inside front cover of this Bulletin. At the time of filing the graduation application, it is the responsibility of the student to determine whether his/her advisor will be available to approve the thesis or to sign any other papers necessary for graduation. In the event the student's advisor will not be available on campus at such a time, the student assumes responsibility for making suitable arrangements for the approval of the thesis, field study, dissertation, or other papers with the advisor prior to the advisor's departure.

Graduation Audit. After a student submits a Graduation Application form, the student's record is audited in the College of Graduate Studies to verify completion of program requirements. After the audit is complete, the student and advisor will each be mailed an audit form indicating either that all requirements are satisfied or that the student has requirements left to complete. If there are requirements left to complete, the audit form indicates what the student must do before graduating. Students who fail to complete requirements by the deadline will receive a Failure to Complete Requirements For Graduation form, indicating that they will not graduate at the upcoming graduation and advising them to apply for the next graduation period. Students must reapply to graduate in a subsequent semester; the fee for each subsequent graduate application is $25.00.

To encourage students to monitor their own progress toward graduation, the College of Graduate Studies has developed a Self Audit form, available in the College of Graduate Studies. Although it is not mandatory, students are urged to complete the Self Audit before submitting a Graduation Application.

Diplomas. Diplomas are mailed to students about six weeks after commencement. If a student needs evidence of degree completion in less than six weeks, written verification is available through the College of Graduate Studies.
Post-Baccalaureate Teacher Certification

See Appendix I, Standards Leading to Teacher Certification, for information on Post-Baccalaureate Teacher Certification.

Small Grants and Awards

The College of Graduate Studies offers four competitive awards for graduate students:

Research Grants. Graduate Student Research Grants provide up to $700 and Dissertation Support Awards provide up to $2,000 to offset costs associated with conducting research. Applications are reviewed twice each year, in October and in February. Applications are available on the college website under Applications and Forms: www.grad.cmich.edu. Decisions for Graduate Student Research Grants are made by a subcommittee of the Graduate Committee; decisions for Dissertation Support Awards are made by faculty from the doctoral programs.

Publication and Presentation Grants. Graduate Student Publication and Presentation Grants are awarded to assist graduate students whose research or creative endeavors are accepted for publication or presentation at the state, national, or international level. The grant consists of reimbursement for up to $350 of expenses associated with publication or presentation. There is no deadline for applications. Applications are available from the College of Graduate Studies and are reviewed as they are received.

Outstanding Thesis and Dissertation Awards. Outstanding Thesis and Dissertation Awards are announced in October to recognize significant scholarly activity by graduate students and the contribution made by their faculty supervisors. Students may be nominated by any faculty member for an outstanding thesis, dissertation, doctoral project or Plan B paper, completed at CMU during the 12 months prior to the nomination. Nominations are due in September. Applications are available on the college website under Applications and Forms: www.grad.cmich.edu. Decisions are made by a subcommittee of the Graduate Committee.

Academic Regulations

Credit and Points

The university uses specified quantitative and qualitative standards to appraise the quality of work done by its students.

Quantitative Unit. The quantitative unit of credit is the semester hour.

Qualitative Unit. The qualitative credit is the grade or rating used by the instructor to indicate an evaluation of the results accomplished. The work of the student in each course completed is rated in accordance with the following marking system.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points per semester hour</th>
<th>Grade Point Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td>Superior</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
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<td>C+</td>
<td>2.3</td>
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</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>0.0</td>
<td>Failing</td>
</tr>
</tbody>
</table>

CR Credit
NC No Credit
I Incomplete
W Withdrawn
X Audit
Z Deferred Grade

1 Does not count toward graduate degree; does count in grade point average.
2 Counts for graduation, but not in grade point average.

There is no grade of D in the graduate marking system. When a D grade is assigned to a graduate student, the Registrar’s Office will convert the grade to an E before recording it on the student’s permanent record. Courses in which the student earns or has earned a grade below C do not count toward meeting any graduate degree requirement, nor are they accepted, following the completion of the baccalaureate degree, for the removal of deficiencies. Particular programs may have more stringent grade requirements.

The grading system also applies to undergraduate courses taken for undergraduate or graduate credit by a student admitted to the College of Graduate Studies.

Points. To compute the quality of work done, points are assigned to letter grades as indicated above for credits earned at the university.

Grade Point Average

The grade point average (GPA) for graduate students is computed by dividing the total points earned in graduate courses by the total semester hours of graded graduate courses at CMU and graded A through E on the qualitative scale. Courses to be included in the computation of the grade point average must be graduate level. Such courses include all courses at or above the 500 level and those 300 and 400 level courses which have been specifically approved for a student’s graduate program. Credits graded CR/NC at this university and credits accepted in transfer from other institutions are not included in the computation.

Academic and Retention Standards

In order to obtain a graduate degree, a student must have at least a 3.0 (B) cumulative graduate grade point average, and a cumulative graduate grade point average of 3.0 (B) in all course work on the student’s authorized degree program. The policies which follow deal with cumulative graduate grade point average; the College of Graduate Studies monitors overall graduate grade point averages and follows these procedures when a student’s cumulative graduate grade point average is below a 3.0. When a student’s cumulative graduate grade point average in the academic program falls below a 3.0, the student’s graduate degree program will monitor and initiate action relative to these procedures.

If, in the first semester after being placed on probation, a student obtains a semester graduate GPA of at least 3.0 with a cumulative graduate GPA below 3.0, the student will be allowed a second semester to raise the cumulative graduate GPA to a 3.0. The student will remain on probation and will be so notified by the College of Graduate Studies.

If, in the first semester after being placed on probation, a student in a degree program does not obtain a semester graduate GPA of at least 3.0, then the Dean of the College of Graduate Studies will ask the department to make a recommendation as to whether the student should be allowed a second semester to raise the cumulative GPA to a 3.0. The Dean will consider the department’s recommendation and notify the student of the Dean’s decision. If the student is a Non-degree student, then the student must petition the Dean of Graduate Studies to continue taking graduate classes. The Dean will make a decision on whether to extend probation and will notify the student of the decision.

All students are expected to raise their cumulative graduate GPA to a 3.0 within two semesters of being placed on probation. When they are successful in achieving this goal, they will be removed from probation. If a student does not raise his/her cumulative graduate GPA to a 3.0 within two semesters of being placed on probation, the student will be dematriculated. If the student is in a degree program, the relevant department may specifically request an exception to policy. If the Dean of the College of Graduate Studies concurs, the student will be granted one additional semester to raise his/her cumulative graduate GPA to a 3.0. However, three semesters beyond the first probation period is the limit on extension to the probation policy.
Given the time it takes to implement these procedures, it is possible that a student will be dematriculated after he/she has registered for classes and perhaps even started attending them. If that is the case, the student will be dropped from the classes.

In addition to maintaining a satisfactory cumulative grade point average, students in graduate programs must abide by the university’s “Academic Integrity Policy”, which specifically prohibits “plagiarism, cheating and other forms of dishonest or unethical behavior...” Violations of the Academic Integrity Policy may lead to sanctions as described in the policy.

In addition, departments involved in clinical programs may evaluate students on the basis of their ability to relate successfully with clients. Students who do not meet the professional standards established by departments may be placed on probation, suspended, or dismissed from a program.

In cases where a student fails to satisfy departmental graduate program requirements, the Dean of the College of Graduate Studies, upon the recommendation of the advisor and the departmental chairperson or program coordinator, and after review of the student’s academic progress, may remove the student from the graduate program. Examples of specific departmental requirements to be met by students include, but are not limited to the following: (1) writing competency; (2) the number of attempts made in passing comprehensive or qualifying exams; (3) the completion of required papers or theses; and (4) meeting university and departmental time limitations.

Students dismissed from graduate study, regardless of whether they were non-degree students or students pursuing a graduate certificate or degree, may petition for readmission no sooner than one academic year after the semester they were dismissed. Exceptions to this waiting period can be granted by the Dean of the College Graduate Studies. A dismissed student can apply for either non-degree admission or admission to a graduate program. Admission as a non-degree student will be decided by the Dean of the College Graduate Studies. Admission to a graduate program will be decided by the procedures normally used for that program.

(“Semester” refers to semester for which the student registers. For example, “the first semester” refers to the first semester for which the student registers to take classes. A student may request that the two summer sessions be treated as a single semester.)

Outdated Courses

In cases where a graduate course is inadmissible on a student’s program because it predates the stipulated time period for the completion of the degree, both the course and the grade pertaining thereto shall be disregarded for purposes of evaluating the student’s performance toward the graduate degree or his or her status within the program.

Credit/No Credit (CR/NC)

Courses in which graduate student performance is evaluated CR/NC, rather than by a letter grade on the A through E scale, carry the designation “CR/NC only” in the departmental course descriptions. CR indicates that the student has performed at a level equivalent to or above the grade point average for graduation (B grade) and shall receive credit in the course. NC indicates that the student has performed at a level lower than a B and shall not receive credit. In either case, the title and other course identification and the symbol CR or NC shall be entered on the student’s transcript. CR and NC are not equated with qualitative letter grades, however, and are not included in computation of the student’s grade point average. Optional registration for Credit/No Credit in other graduate courses is not available to graduate students.

Optional registration for Credit/No Credit is available to graduate students who register in a course below the 500 level for undergraduate credit. Courses taken under this provision may not be applied to graduate certificate or degree requirements. Such optional registration for undergraduate credit is not available to students removing deficiencies specified in their Conditional Admission. The courses for which graduate students may register for undergraduate credit on a CR/NC option basis must be designated in the Class Schedule by the department as available on a CR/NC option basis. Procedures for registration, grading, and recording are explained in the CMU undergraduate Bulletin under Credit/No Credit Policy.

Incomplete Grades (I)

An incomplete (I) 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 the grade of I also submits to the department chairperson a formal statement 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 complete 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 grade of 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. A grade of I may not be removed by registering again for the course.

If the instructor of the class in which the grade of I was incurred is no longer a member of the faculty, then the student should contact the department chairperson, whom shall act on behalf of the former instructor.

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 Grades (Z)

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 to the department chairperson, on the proper form, a statement 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.

Repeat Course Policy

To improve a grade previously earned at CMU, a student may repeat any course except an Independent Study course up to two times at the graduate level. The last grade and credit hours earned at CMU completely replace the previous grade and credit hours in computing the grade point average, although the earlier record remains a part of the student’s transcript. A grade of A through E must be earned in a repeat course to replace the previous grade in computing the average.
Grade Grievance Policy

1. 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 with the student and give evidence to make clear his or 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 or her own initiative, the instructor who believes a change of grade is justified may initiate a request for a change in grade.

2. 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 sixty days after the beginning of the next regular semester. 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 or she may request in writing a joint consultation with the instructor and the chairperson of the department involved. In case 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 college involved. In such cases that dean shall act in place of the department chairperson.

3. The following procedures are available for review of allegations of capricious grading. They are not for review of the judgement of an instructor in assessing the quality of a student's work, nor are they to be used in cases involving academic dishonesty. Determination of the grade in such cases is left solely to the instructor. A student who is not satisfied after consultation with the instructor and department chairperson, and who alleges that the semester grade is the result of capricious grading, may file an appeal within ninety days of the start of the next regular semester 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 particularizing the basis for the allegation that the grade was the result of capricious grading, and present any evidence that he or she may have.

Capricious grading, as that term is used herein, constitutes any of the following: (a) the assignment of a grade to a particular student by resorting to more exacting or demanding standards than were applied to other students in that course. 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.

4. 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, it appears that the dispute may 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. If the instructor of the course is a member of the committee, he or she shall be disqualified from the consideration of that appeal.

5. If such a meeting is not held, or if held, such 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.

6. 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 proceed to determine the most appropriate remedy. The committee may direct the instructor to grade the student's work anew or to give the student a new examination in the course, or may 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 for the course. The decision of the committee shall be final and shall be reported in writing to the student, instructor, and departmental office.

7. 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, dematriculation, or withdrawal from the university. The same procedures as outlined above for review of alleged capricious grading shall be followed.

8. All dematriculations (grade point or additional department requirements) from CMU graduate programs will follow the grade grievance appeal process.

Courses of Unspecified Content or Variable Credit

Variable credit courses are identified by a semester hour designation such as 1-3 (Spec). The maximum hours that a student may earn in a variable credit course to apply toward graduation is the highest number in the semester hour designation for the course (i.e., 3 hours maximum in the example listed above).

Unspecified content courses are defined to be courses in which the student or department is not restricted by the course description in the graduate Bulletin to a specific area or subject matter to be included within the course.

It is up to each graduate advisor to ensure that a student's authorized program plan has sufficient university-approved coursework to provide the student with a solid grounding in the academic discipline. In order to assist advisors, a list of variable credit and unspecified content courses is given before the course listings of each department.

Independent Study and Thesis

Not more than a total of ten hours of independent study and thesis shall be allowed on any master's degree program. Exceptions to this regulation may be granted by the Dean of the College of Graduate Studies.

Graduate Transfer Credit Policy

Transferable Credit:

- **Graduate Certificate:** maximum of 6 semester hours from a previous or concurrent graduate degree or certificate can be transferred toward a graduate certificate.
- **Master's Degree:** maximum of 50% of the semester hours (exception: maximum of 30 semester hours on the 54 credit hour joint master's degree in history are transferable).
- **Specialist's Degree:** maximum of 12 semester hours beyond the master's degree if the master's degree was earned at CMU (exception: maximum of 9 semester hours beyond the master's degree if the degree was not earned at CMU).

(Continued)
• **Doctoral Degree:** maximum of 50% of the post-baccalaureate semester hours. Minimum percentage that must be earned at CMU can vary among academic programs.

• **Maximum of 6 semester hours** may only once be transferred from one earned degree program to another master's or higher degree program.

• **Military coursework:** coursework with a grade of outstanding or excellent is transferable.

A separate policy exists for the following: Students entering the Au.D. with a master's degree in Audiology and significant, relevant professional experience. See the Au.D. program description for details. Global Campus students are limited to six semester hours or prior learning according to California regulations.

Graduate transfer credits must be appropriate to the student's program, recommended by the student's academic advisor for use on the program plan, and approved by the Dean of the College of Graduate Studies. Transfer credits are not considered in the computation of the student's graduate grade point average. Graduate transfer credit must meet the following criteria:

1. Credits must have been earned at a regionally accredited higher education institution or one of the recognized standing (at the time the credits were earned) as defined by the College of Graduate Studies;
2. The credits are not in violation of any pertinent university or College of Graduate Studies regulation, procedure, or policy;
3. The credits do not correspond to a course previously taken at CMU;
4. The credits were earned within the time limit for program completion. Credits from a prior graduate degree or certificate that are to be applied to a doctoral degree may be exempt for the time limit for doctoral degree completion (see individual program description);
5. The credits are appropriate to the student's program and are not in conflict with credit limitation specified elsewhere in the Graduate Bulletin;
6. As certified on the official graduate transcript, courses must be at the graduate level.
7. The grade for the credits must be B or higher. Ungraded coursework will not be accepted in transfer unless accompanied by evidence that the work was of B or higher quality; Military coursework with a grade of outstanding or excellent is transferable.
8. The student is in good standing (3.0 cumulative graduate GPA or higher) at the institution at which the credit was earned.
9. Doctoral degree students must have regular admission to their degree program;
10. The student is responsible for having official graduate transcripts sent by the institution in which the credit was earned directly to the Dean of the College of Graduate Studies at CMU and for completing the most recent version of the Graduate Transfer Credit Request form (available online at www.grad.cmich.edu/forms.htm);
11. The credits must be approved by the student's academic advisor (for graduate certificates and Master's degrees) or Program Director (doctoral degrees) and the Dean of the College of Graduate Studies.
12. Courses earned by correspondence are not eligible for graduate transfer credit.
13. Transfer credits must be earned within the time limit for program completion. Transfer credits are not eligible for extension of time consideration.

Transfer credits are not included in the computation of the student's CMU graduate grade point average. Exceptions to any aspect of this policy will be considered only in extraordinary circumstances and will be granted at the discretion of the Dean of the College of Graduate Studies.

**Waiver of a Program Requirement**

An advisor/program director has the authority to waive a program requirement only if the proposed waiver is not in violation of any pertinent university regulation, procedure, or policy. Circumstances under which a course might be waived include:

1. The student has already met the required course objectives through some experience which was not in the form of a transferable course;
2. The student has not met the objectives of the course, but the advisor/program director determines that the student would derive greater benefit from a different course.

If a program requirement is waived, the minimum number of hours required for the program is unaffected.

A separate policy exists for students entering the Au.D. with a master's degree in Audiology and significant, relevant professional experience. See the Au.D. program description for details.

**Additional Master's Degrees**

A student who holds a master’s or higher degree may earn an additional master's degree in another discipline. With the approval of the department chairperson and the graduate dean, a student holding a degree in a discipline may earn another master's degree in the same discipline, provided it is on a different published option. In any case, a maximum of six semester hours submitted in fulfillment of the prior degree program at CMU or elsewhere may subsequently be transferred to another master's degree program, provided the hours apply to the stated requirements of the subsequent program and were earned within seven years of the student's completion of the additional degree.

**Credit by Examination**

A student who has been admitted to a graduate degree program and who has had experience or background comparable to a course at this university may file for a maximum of 12 semester hours of Credit by Examination under the following conditions:

1. No credit transferable to CMU has been earned in the course requested by examination;
2. No advanced placement has 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. Graduate credit by examination is available as Credit/No Credit only, and is not included in the computation of the student's grade point average.

At the time of the request, the student must have an Authorization of Degree Program signed by the advisor on file in the College of Graduate Studies. The student should obtain the application form for the credit by examination from the College of Graduate Studies and then obtain approval from the faculty member administering the examination, the department chairperson, and the Dean of the College of Graduate Studies. Approval may be granted for the number of credits requested or any portion of the credits requested. The student should submit the signed application for credit by examination to the Registrar's Office to register for the number of credits approved.
General Course Information

Course Numbers

Courses numbered 500 through 599. A student who has been admitted to graduate studies and who takes courses numbered 500 and higher will receive graduate credit.

Courses numbered 600-699. Graduate courses open only to students who have been admitted to the College of Graduate Studies, and to students in the Honors Program who present appropriate identification.

Courses numbered 700-799. Graduate courses open only to students who have been admitted to the College of Graduate Studies.

Courses numbered 800-899. Graduate courses open only to students who have been admitted to the College of Graduate Studies and who are at the post-master's level or are completing a full-time internship at the specialist's level.

Courses numbered 900-999. Graduate courses open only to doctoral students who are in the last years of their program.

600-Level Course Policy for Undergraduate Students.

Open only to students who have been admitted to the College of Graduate Studies, to students on the Honors Program who present appropriate approval, and to students who are approved by their advisor, course instructor, chairperson of the department offering the course and the College of Graduate Studies. In granting approval, the College of Graduate Studies will rely on the criteria for admission to the Honors Program.

Cognate Courses

A cognate course is one outside of but related to the principal discipline.

Substitutions

Course substitutions appropriate to the student’s program may be authorized by the advisor.

Prerequisites

A student may register for a class only if he or she has met the prerequisites prescribed or the requirements stated in this Bulletin. Procedures for granting exception vary by graduate program. Students should check with their department chairperson or graduate program coordinator to determine waiver procedures for their program.

In general, only immediate prerequisites for courses are listed. 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 permission. 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 are 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.

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. Within the parentheses, 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.

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 Courses

Distance learning courses include web-based courses, learning package 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 department's course listing section.

Other Designation

- CR/NC Credit/No Credit, see index for more information.
- Courses are listed in alphabetical order by designator.
Additional Academic Programs

Michigan Intercollegiate Graduate Studies (MIGS)

The Program. The Michigan Intercollegiate Graduate Studies (MIGS) program enables graduate students who are in good standing in a degree program to elect courses at various graduate schools in Michigan, with the approval of both Host and Home faculty. This program for guest scholars enables graduate students to take advantage of unique educational opportunities throughout the state. The schools participating in MIGS include: Andrews University (Berrien Springs), Aquinas College (Grand Rapids), Calvin College (Grand Rapids), CMU, Eastern Michigan University (Ypsilanti), Grand Valley State University (Allendale), Madonna University (Livonia), Marygrove College (Detroit), Michigan State University (East Lansing), Michigan Technological University (Houghton), Northern Michigan University (Marquette), Oakland University (Rochester), Saginaw Valley State University (University Center), Siena Heights College (Adrian), University of Detroit Mercy (Detroit), University of Michigan (Ann Arbor), Wayne State University (Detroit), and Western Michigan University (Kalamazoo).

Procedures. The Home Institution is where the student is currently enrolled in a graduate degree program; that is, CMU. The Host Institution is where the student wishes to be a guest. The student and academic advisor initially decide if the course(s) are appropriate to the student’s program of study and not available at his/her Home Institution. Then the advisor discusses the plan with the appropriate faculty members at the Host Institution. The Host Department is consulted to ensure that space is available for enrollment. Next the student obtains a MIGS application from the College of Graduate Studies at CMU. The academic advisor and the Dean of the College of Graduate Studies sign the application to indicate that the student is qualified and eligible, and the College of Graduate Studies forwards the application to the Host Institution for completion. Once the admission has been approved by the Host Department, the MIGS Liaison Officer at the Host Institution issues admissions documents and provides registration instructions, and forwards a copy of the admission letter to the Home institution.

Policies. The following policies apply to students participating in the MIGS program:

1. Students on a MIGS enrollment pay tuition and other fees normally charged by the Host Institution for the services rendered;
2. All credits earned under a MIGS enrollment will be accepted by CMU as if offered by CMU;
3. Grades earned in MIGS courses will be applied toward the student’s grade point average for the purpose of determining academic standing and eligibility for graduation;
4. A student may combine a part-time enrollment at CMU with a part-time MIGS enrollment, with approval of the student’s academic advisor;
5. Enrollments are limited to six credit hours for master’s or specialist’s degree students or nine credit hours for doctoral degree students; and
6. The student is responsible for arranging to have transcripts certifying completion of work under a MIGS enrollment forwarded to CMU.

Global Campus

A major goal of Central Michigan University is to provide academic programs for students whose career or personal circumstances limit their access to traditional forms of higher education. Global Campus was established in 1971 as the Institute for Personal and Career Development to help meet that goal. Global Campus uses flexible scheduling, compressed class formats and a sophisticated and comprehensive network of program centers in nearly 20 states and in Canada and Mexico to offer graduate and undergraduate degree programs to thousands of adult students each year.

Global Campus combines the university’s high academic standards with innovative teaching technologies and strategies. Global Campus is prepared to:

- Translate career and other forms of prior learning into academic credit.
- Provide flexible instructional, curricular and scheduling patterns.
- Tailor programs through individualized advising.
- Provide for wide use of internships, independent study, and other forms of individualized study.
- Utilize various distance education media.

In addition to complete degree programs, students may also earn credit for individual courses offered through Global Campus each semester at locations across Michigan and online. Many of the courses are designed to assist professionals in meeting certification regulations, to provide credit-bearing in-service opportunities, and to offer convenience to working adults who want to take courses toward various campus degree programs. The schedule for CMU Online courses has been combined with the schedules of educational opportunities at the various Global Campus sites in Michigan and together they provide enrollment, registration, advising, and other pertinent information for Global Campus students. CMU Online courses and Michigan site-based courses coincide with main campus terms.

Curricular Offerings

Academic programs available through Global Campus provide a wide range of educational experiences necessary for the attainment of undergraduate degrees, graduate degrees, certificates, and doctorate degrees.

Graduate programs, which are described in the CMU Graduate Bulletin and the Global Campus Bulletin, include a Master of Arts (M.A.) in Counseling, Educational Leadership, Educational Technology, Humanities, Reading and Literacy, School Principalship, or Sport Administration; a Master of Business Administration (M.B.A.); a Master of Public Administration (M.P.A.); a Master of Science (M.S.) in Nutrition and Dietetics; a Master of Science in Administration (M.S.A.); a Specialist in Education (Ed.S.); a Doctor of Health Administration (D.H.A.) and a Doctor of Education (Ed.D.). Graduate certificates are also offered through the MSA program, as well as International Health, Enterprise Systems (SAP) and Logistics Management.

Prior Learning Assessment Program

The Prior Learning Assessment Program provides academic recognition of college-level skills and knowledge acquired outside the formal college classroom. Credit may be earned for learning acquired through career and personal experiences in job-related activities, in community participation, or from training experiences through related on-the-job instruction or special schools.

Students who apply for Prior Learning credits submit a comprehensive portfolio which describes and documents their learning experiences. Evaluation is dependent on performance criteria established by a team of university faculty members.

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.

CMU Online

CMU Online is committed to providing educational opportunities to people whose busy lives prevent them from attending traditional, face-to-face classes. With new technologies, dedicated staff, and accessible instructors, CMU Online courses are not a solitary endeavor. Students interact with each other and with their instructors using discussion boards, chat rooms, and e-mail.
There are several bachelor’s degree completion programs offered through CMU Online. Advisors are available to help students determine the programs that best optimize their existing credits. Students may also go on to complete an entire master’s degree online or even an online Doctorate in Health Services Administration.

Program Operation

Courses offered by Global Campus are scheduled in varied geographic areas at times convenient to students. The extent of offerings in a particular location is limited by the number of individuals with common educational interests concentrated in the area and by human and material limitations of faculty and instructional facilities and resources. Organizations including local, state and federal agencies as well as corporations and associations may sponsor cohort programs for their members and for other students in the community.

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 Programs 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.

Non-Degree and Non-Credit Programs

Global Campus provides an opportunity for educators and educational administrators to earn credit toward certificate renewal and provides individuals interested in personal development with a range of non-credit programs. Broad in its offerings, there is something for everyone across the lifespan.

Non-Degree Credit for the Education Market

Through the District Designed Professional Development (DDPD) program, school districts and ISDs can design a university credit component for site-based professional development programs. The DDPD program offers educators and administrators with an opportunity to earn credits toward certificate renewal. For further information about the DDPD program, please contact Global Campus at 800-950-1144, ext. 4477.

Non-Credit Options

Corporate and Executive Development

Global Campus is able to partner with corporations to assist them with the learning and development needs within their organizations. Services include training, content collaboration, consulting services, organizational assessments and more. For further information, please contact 800-950-1144, Ext. 7137.

Community Programs

What you are looking for may be offered through Global Campus. A variety of offerings are available for youngsters and high school students including community music school, summer music camp, and color guard/drum major camps. For further information, please contact 800-950-1144, ext. 7137.

Life-Long Learning

If you are interested in adventures in lifelong learning, look no further than active travel programs through Elderhostel. International in scope, learners of at least 55 years of age come together as a group of travelers to share a common destination and a passion for learning. For more information about CMU offerings, please contact 800-950-1144, ext. 7129.
Course Descriptions: ACC

ACC 501 Advanced Accounting 3(3-0)
- Intercorporate investments and consolidated statements, purchases and pooling of interests, segment reporting, interim reporting, partnerships, foreign operations, and fund accounting. Prerequisites: completion of ACC 301 and ACC 302 with average of 2.5 GPA for both courses; 56 semester hours completed and admission to Professional Business Studies or listed on signed major or minor.

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 340.

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 services 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 597 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.

ACC 605 Accounting Theory I 3(3-0)

ACC 689 Accounting Internship 3(Spec)
Full time, on-the-job work experience for one semester in industry, government, or public accounting arranged through departmental internship supervisor. A research paper relating to the student’s work experience obtained on the internship is required. CR/NC only. Prerequisites: 12 hours of accounting, overall GPA of 3.2, accounting GPA of 3.2, acceptance by program supervisor.

ACC 711 Tax Seminar 3(3-0)
Development of tax principles and tax law; tax research methods; alternatives for tax law changes; effects of taxes in business decisions; tax administration and practice. Prerequisites: ACC 311, ACC 302, ECO 600.

ACC 721 Managerial Accounting Seminar 3(3-0)
Detailed analysis and discussion of controversial and contemporary problems and issues in managerial accounting. Prerequisites: ACC 321, FIN 332, ECO 600.

ACC 730 Configuration, Control & Implementation of Global Accounting Systems using GRC 3(3-0)
Basic conceptual framework, design, implementation, and control of enterprise resource planning systems. This course is approved for offering in a distance learning format. Prerequisites: MBA 619.

ACC 731 Auditing Seminar 3(3-0)
Analysis and evaluation of current thought and prospective developments in auditing. Emphasis on philosophy, standards, concepts, postulates, and problem areas. Prerequisites: ACC 370, ACC 531, STA 282.

ACC 741 Fund Accounting Seminar 3(3-0)
Coverage of current developments and trends in areas of concern in nonprofit entities including special studies or problem areas and potential solutions. Prerequisite: ACC 543.

ACC 791 Independent Studies 1-3(Spec)
Directed reading or research on an approved topic. Prerequisites: 15 hours of graduate credit and instructor approval. Not more than 3 credits for ACC 791 may count toward accounting concentration.

ACC 797 Special Topics in Accounting 1-3(Spec)
Advanced topics in accounting. Prerequisite: permission of instructor. No more than 3 credits for ACC 797 may count toward accounting concentration.
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 105 and permission of instructor.

ART 586 Seminar in Art History 3(3-0)
Students will pursue topics of special interest and share their research with the group. May be taken for graduate credit. Prerequisites: 12 credits in art history or graduate standing.

ART 597 Special Studies 1-6(Spec)
Further in-depth graduate study when scholarly/studio adequacy beyond ART 497 is achieved.
Nancy E. Seefelt, Ph.D., ecology and evolution of vertebrates, ecological modeling, ornithology
Michelle L. Steinhibl, Ph.D., genetic models of human neurodegenerative disease, cellular and molecular neurobiology
Bradley J. Swanson, Ph.D., ecology, molecular ecology, conservation biology, population genetics, population dynamics, animal behavior
Don Uzarski, Ph.D., limnology, wetland and stream ecology, experimental design
Rebecca Uzarski, Ph.D., toxicology, cell biology
Daelyn Woolnough, Ph.D., spatial ecology of aquatic and terrestrial systems
Dave Zanatta, Ph.D., fisheries biologist, conservation of freshwater mussels

The Department of Biology has two Master of Science (M.S.) degrees: the M.S. in Biology (general) and the M.S. in Biology with an emphasis on conservation. The general biology M.S. is designed to prepare students for careers in all areas of biology. The conservation biology M.S. is designed to prepare students for careers with state and federal agencies or non-government organizations. Students enrolled in either degree program may pursue a Plan A (thesis) or Plan B (non-thesis) option.

The Department of Biology supports teaching and research activities with excellent multi-user resources including:

1. the Applied Technology in Conservation Genetics Laboratory,
2. the DNA Sequencing and Analysis Core Facility,
3. the Michigan Water Research Center,
4. a microscopy facility with confocal, transmission electron and scanning electron microscopes, and
5. a natural history and herbarium collection.

The Department also boasts a fleet of boats and research vehicles, a Biological Station on Beaver Island in northern Lake Michigan with diverse and pristine island habitat available for field-oriented research and laboratory studies, and Neithcut Woodlands, a 252-acre tract of mixed hardwood forest providing habitats suitable for both aquatic and terrestrial studies.

The CMU Biological Station on Beaver Island is an approved residence center for graduate work in biology. It is possible to fulfill some course requirements at the Biological Station.

A number of graduate teaching assistantships and graduate research assistantships are available on a competitive basis in the Department of Biology. Application forms may be obtained from the Biology Department. The deadline for applications is February 15 each year for full consideration.

Graduate Teaching Assistantships (GTA) involve six to nine hours of instruction of laboratory sections in beginning and advanced undergraduate courses and assistance in laboratory preparation. During the academic year, GTAs receive a competitive stipend, all fees paid and a 20 credit tuition scholarship.

Most Graduate Research Assistantships (GRA) are supported through faculty research grants or contractual agreements. A limited number of GRAs are available for 12 months with highly competitive stipends.

Graduate Fellowships include a monetary award plus a tuition scholarship for 30 credits. Fellowships are awarded university wide on a competitive basis. Application materials are available from the College of Graduate Studies. The deadline is the first week in February. Applicants are asked to submit their Graduate Record Examination scores, including the advanced test in biology, and three letters of recommendation.

Raymond E. Hampton Excellence in Biology Research Award
Established in 1994 in recognition and appreciation of Dr. Hampton, who served 24 years as professor of biology at CMU. This merit-based award will recognize second-year biology graduate students identified as worthy of distinction to be used for a research project while at the CMU Biological Station on Beaver Island.

Daniel E. & Mildred G. Wujek Scholarship
This scholarship recognizes an outstanding second-year botany or aquatic biology graduate student who has been identified as worthy of distinction. The award may be used for tuition, books, room and board at a biological station, and for research supplies and logistics. This endowment was established by CMU alumni Daniel E. and Mildred G. Wujek. Daniel Wujek was a faculty member in the CMU Department of Biology.

Marian Whitney Summer Graduate Scholarship
Awarded to an outstanding graduate student who is completing a thesis in zoology. The award may be used to support the graduate student in the summer.

Master of Science (M.S.) in Biology

Minimum Totals for Graduation: 30 - 36 hours

The Department of Biology offers both the Plan A and the Plan B Master of Science degrees. Plan A requires completion of six credit hours in BIO 798 (Thesis), one credit hour in BIO 730 (Seminar), 23 hours of graduate course work approved by the student’s advisor and advisory committee, and an oral defense of the thesis. Plan A is recommended to those students preparing for research-oriented careers or for doctoral study. Plan B requires the completion of 36 credit hours of graduate-level course work approved by the student’s advisor and advisory committee and a written and/or oral comprehensive examination over the course work.

Admission Requirements, Retention & Termination Standards

To be eligible for Regular Admission to the graduate program in biology, applicants should have completed an undergraduate degree with a major in a biological science with a 3.0 or better grade point average in their major and a 3.0 GPA overall. Applicants will need to submit general GRE scores, statement of interests, transcripts, and three letters of recommendation as specified in the Biology Department Web page (https://cen-trallink.cmich.edu/academics/sci_tech/biology). In addition, chemistry (including organic) is required while mathematics and physics are highly recommended. An applicant who does not meet the foregoing requirements may be granted Conditional Admission by the department graduate committee.

Fifteen credit hours (seminar and thesis or research in biology included) must be earned at the 600-level or above.

Degree Requirements

Options:
Select one of the following options:

Biology - Plan A (30 hours)

<table>
<thead>
<tr>
<th>Required Courses (7-12 hours)</th>
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<tbody>
<tr>
<td>BIO 500 - Biological Statistics 3(2-2)</td>
</tr>
<tr>
<td>BIO 630 - Art of Scientific Communication 2(2-2)</td>
</tr>
<tr>
<td>BIO 730 - Seminar 1(1-0)</td>
</tr>
<tr>
<td>BIO 798 - Thesis 1-6(Spec)</td>
</tr>
</tbody>
</table>

Note: Also requires oral defense of thesis.

(continued)
Electives I (13-23 hours)
Select graduate course work approved by the student’s advisor and advisory committee.

Electives II (0-10 hours)
Additional courses in cognate areas selected in consultation with student’s advisor and advisory committee.

Total: 30 Semester Hours

Biology - Plan B (36 hours)
Thirty-six hours of graduate-level coursework approved by the advisory committee. Up to 10 hours may be in one or more cognate areas, subject to approval by the advisory committee. Students must submit an approved Plan B paper demonstrating either research, independent study, or internship. A comprehensive oral and/or written examination over the coursework administered by the advisory committee.

Total: 36 Semester Hours

Biology: Conservation Concentration
This concentration in Conservation Biology is designed to prepare students for career opportunities with state and federal agencies and conservation organizations. Fifteen credit hours (seminar and thesis or research in biology included) must be earned at the 600-level or above.

Required Courses (7-12 hours)
BIO 500 - Biological Statistics 3(2-2)
BIO 630 - Art of Scientific Communication 2(2-2)
BIO 730 - Seminar 1(1-0)
BIO 798 - Thesis 1-6(Spec)

Note: Also requires oral defense of thesis.

Required Courses II (9-10 hours)
Conservation Concentration
BIO 650 - Population Ecology 4(3-2)
BIO 680 - Conservation Biology 3(3-0)

Note: A course in community ecology is also required.

Electives (8-14 hours)
Select course work approved by the student’s advisor and advisory committee.

Total: 30 Semester Hours

M.A.T. Integrated Science
This degree is an interdisciplinary program. Please see the index for the page number.

M.S. and Ph.D. in Neuroscience
These degrees are interdisciplinary programs. Please see the index for the page number.

Ph.D. in the Science of Advanced Materials
This degree is an interdisciplinary program. Please see the index for the page number.

Course Descriptions: BIO
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 22 hours of biology; a GPA of 2.7 in biology courses; admission to 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 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 principle cells and tissues of humans. Prerequisites: BIO 218 and 392; or graduate standing.

BIO 537 Immunology 4(3-3)
A description of the biological and biochemical mechanisms of the immune response. Emphasis will be placed on antibody structure, antigen-antibody interaction, immunobiology, and serology. Prerequisites: BIO 326 and CHM 521. Recommended: A knowledge of aseptic techniques is strongly recommended.

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 4(3-3)
Genetic approach to fundamental biological problems via lecture and laboratory. Covers classical genetic techniques and modern molecular methods, including recombinant DNA technology and functional genomics. Prerequisites: BIO 324, 326; CHM 345.

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(3-3)
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 fisheries, wildlife, forests, and watersheds 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 340 or graduate standing. Recommended: BIO 515.

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 3(2-3)
Wetland systems classification and characterization in North America; includes ecological evaluation of wetland soil, water, plants, plant communities, animals, animal communities, values, destruction, conservation, management. Prerequisite: BIO 340.

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 577 Hematology and Immunohematology 3(2-3)
Concepts of hemopoiesis and immunohematology, including cell counts and white cell morphogenesis, physiology and pathophysiology. Clinical techniques and procedures commonly used in hematological evaluation. Prerequisite: 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 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 the Class Schedule. Prerequisite: See Class Schedule.

BIO 600 Biological Research Design and Analysis 3(2-2)
An examination of the proper design and statistical analysis needed to solve problems in laboratory and field biology. Recommended: BIO 500.

BIO 610 Biology Colloquium 1-9(Spec)
Advanced study of selected subject areas under faculty guidance through lecture and/or seminar colloquia in special competence areas of the graduate faculty. Prerequisite: permission of instructor.

BIO 619 Continuing Registration for Final Research Project 1(1-0)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

BIO 620 Biology Practicum 1-9(Spec)
Practical experience in methodology and techniques in selected field or laboratory-oriented topics, offered in subjects related to graduate faculty specialties. Prerequisites: See Class Schedule.

BIO 626 Topics In Genetics 1-3(Spec)
Various advanced topics in genetics are covered which range from transmission genetics to molecular genetics and evolution. Student participation is expected. May be repeated as offered to maximum of 3 hours. Prerequisite: BIO 326.

BIO 629 Topics in Eukaryotic Molecular Genetics 1-4(Spec)
Seminar on current research papers in molecular genetics of animals, plants and fungi. Student presentations and discussions expected. May be repeated up to 4 credits. Prerequisites: Admission to the Biology M.S. program.

BIO 630 Art of Scientific Communication 2(2-2)
Exploration of methods involved in the writing of refereed scientific papers, grant proposals, theses and dissertations, and oral or poster presentations at scientific meetings.

BIO 635 Toxicology 3(3-0)
Study of toxic chemicals, their effects on living organisms, and the metabolism and fate of the chemical in the organism. Prerequisites: BIO 392, CHM 346, CHM 521, CHM 522.

BIO 637 Topics in Immunology 1-3(Spec)
Various topics in immunology are covered as lecture or readings from current literature. May be repeated as offered to a maximum of 3 hours. Prerequisites: BIO 537.

BIO 650 Population Ecology 4(3-2)
Theoretical and realistic considerations of mechanisms affecting dynamics of plant and animal populations.

BIO 651 Topics in Ethology 1-3(Spec)
Discussion of various ethological topics from current literature. May be repeated as offered to a maximum of 3 hours. Prerequisite: BIO 518 and permission of instructor.
BIO 652 Behavioral Ecology 3(2-3)
An integration of behavior and ecology from the standpoint of species diversity, habitat utilization, reproduction, and competition. Field observations to illustrate principles of adaptation through behavioral channels. Prerequisites: BIO 340 and BIO 518.

BIO 653 Stream Ecology 3(2-3)
Structure and function of stream ecosystems with emphasis on biological processes. Prerequisites: BIO 340 or admission to Biology MS Program.

BIO 656 Fish Ecology 2(2-0)
A study of the ecological relationships of fishes. Prerequisites: BIO 509 or graduate status.

BIO 657 Fisheries Management 2(2-0)
A study of specific habitats as related to fisheries management, habitat alteration problems, alternative management solutions, special techniques, and specific management topics. Prerequisites: BIO 510 or graduate status.

BIO 658 Zooplankton Biology 3(2-3)
An examination of the taxonomy, physiology, behavior and ecology of planktonic animals. Prerequisites: BIO 218, 340.

BIO 670 Concepts in Biological Areas for Educators 3(2-2)
In-depth studies on organisms of a local park, museum, zoo, aquarium, garden or other related biological facility providing basic knowledge to communicate to others. Prerequisite: Admission in the MAT Integrated Science Program or Master of Arts in Education with 9 credits of Biology earned in the undergraduate degree.

BIO 680 Conservation Biology 3(3-0)
Addresses dynamics and problems of small populations and perturbed species, communities and ecosystems and practical aspects of implementing protection. Prerequisites: BIO 326, 340; or admission to the biology graduate program.

BIO 690 Conservation Genetics 4(3-3)
Students learn technical and theoretical genetic methods used in conservation while generating, analyzing and interpreting data to generate sound scientific conclusions.

BIO 691 Landscape Ecology 4(3-3)
Technical and theoretical foundations of landscape ecology as applied to conservation biology, including use of GIS tools. Prerequisites: Completion of, or concurrent enrollment in, BIO 680; BIO 500 or STA 382; GEO 203, 303.

BIO 692 Topics in Physiology 1-(4 Spec)
Seminars, technique courses or lecture courses on new frontiers in physiology or of special interest. May be repeated for a maximum of 4 hours. Prerequisites: BIO 392.

BIO 695 Graduate Internship in Biology 1-6(Spec)
Prerequisite: A graduate internship agreement must be signed and on file in the Biology office or with the Director of the Biological Station at least four weeks prior to enrollment.

BIO 730 Seminar 1(1-0)
Format, oral departmental presentation of the Plan A thesis research. Required of students receiving the M.S. in Biology, Plan A. CR/NC only. Prerequisites: Permission of thesis Committee Chair.

BIO 790 Research in Biology 2-4(Spec)
Acquaints the student with research techniques. Prerequisite: Registration requires the approval of the department chairperson. CR/NC only.

BIO 798 Thesis 1-6(Spec)
An acceptable thesis may be presented for six hours of credit. Prerequisite: Plan A thesis prospectus on file in the biology office and approval of the department chairperson. CR/NC only.

Course Descriptions: MAR
MAR 590 Special Problems in Marine Science 1-6(SPEC)
Prerequisites: permission of instructor.

School of Broadcast and Cinematic Arts (BCA)
College of Communication and Fine Arts

Peter B. Orlik, Director
340 Moore Hall, (989)774-3851.

William Anderson, Ed.D., Northern Illinois University; Writing, Promotion, Public Relations

Edward Christian, M.A., Central Michigan University; Media Management, Sales

Kevin Corbett, Ph.D., Bowling Green State University; Film Studies, Scriptwriting

Kenneth Jurkiewicz, Ph.D., University of Detroit; Film History, Theory, and Criticism

Sangwon Lee, Ph.D., University of Florida; Media Law, Management, Convergence

Eric Limarenko, M.F.A., Savannah College of Art and Design; Video, Graphics, and Broadband Production

Peter B. Orlik, Ph.D., (School Director) Wayne State University; Writing, Criticism

W. Lawrence Patrick, Ph.D., Ohio University; J.D., Georgetown; Media Management, Regulation, and Economics

Mark Poindexter, Ph.D., University of Minnesota; Media Theory and Criticism, International and Comparative Media

Heather Polinsky, Ph.D., Michigan State University; Audio Production, Research Methods, Radio Operations

Chad Roberts, M.S., St. Cloud State University; Radio Operations, Audio Production

Jeffrey Smith, Ph.D., (Internship Supervisor) Ohio University; Electronic Media Law, Internet Applications

Trey Stohlman, Ed.D., Central Michigan University; Writing, Assessment

Curt Sutterfield, M.A., Ball State University; Electronic Journalism, Performance

William R. Sykes, M.A., Central Michigan University; Electronic Journalism, Sports Broadcasting

Ben Tigner, M.S.A., Central Michigan University; Video and Multimedia Production

Patty Williamson, (Graduate Coordinator) Ph.D., Michigan State University; Criticism, Research, Programming

Facilities
The School of BCA oversees WMHW-FM, a two-service HD FM station which broadcasts 365 days a year at 91.5 and 101.1; two television studios servicing cable station MHTV; two advanced audio studios; video-editing suites; a computerized newsroom from which News Central, the area's only locally focused television newscast, is produced; and an online production suite for M2D2, the school's web publisher. The school also maintains its own recording studio, Moore Media Records, and oversees CMU's Film Society.
Graduate Assistantships

Broadcast and Cinematic Arts graduate assistants aid in teaching basic audio, video, and news production sections, and film survey courses, as well as performing other online and administrative duties as determined by the School Director. For a graduate assistantship application, contact the director at 340 Moore Hall, CMU, Mount Pleasant, MI 48859.

Master of Arts (M.A.) in Broadcast and Cinematic Arts

Minimum Totals for Graduation: 30 hours

The Master of Arts program in Broadcast and Cinematic Arts offers opportunities for both industry professionals seeking new skills and recent undergraduates desiring to pursue advanced study in electronic media or film theory and criticism. Students interested in the electronic media studies, electronic media management, or electronic media production concentrations should possess a professional or academic background in mass communication. Students interested in the film theory and criticism concentration should have a background in film, mass communication, speech, or literary studies.

Graduate students can complete coursework in formal classroom, seminar, and independent study settings, leading to an emphasis in:

1. electronic media studies,
2. electronic media management,
3. film theory and criticism, or
4. electronic media production.

Classes are taught by a faculty possessing diverse professional and theoretical backgrounds. In addition, many students supplement their studies with offerings from Interpersonal and Public Communication, Political Science, English, and Journalism. One-on-one advising and personalized course study with members of the graduate faculty make the Broadcast and Cinematic Arts M.A. program one of the most attractive in the Midwest.

For an application, catalog, and graduate assistant information contact the Graduate Coordinator-School of Broadcast & Cinematic Arts, 340 Moore Hall, Central Michigan University, Mount Pleasant, MI 48859.

Admission Requirements, Retention & Termination Standards

To receive regular admission to the program, a student must attain an undergraduate grade point average of 2.7 on a 4.0 scale. Additional preparatory course work or particular courses may be required. All students applying to the Electronic Media Production concentration in BCA must submit a skills-based resume and a demo reel of their best audio and/or video production work with their application.

International applicants must present a TOEFL score of at least 550 (213 CBT or 79 Internet or IELTS of 6.5).

Degree Requirements

Select one of the following concentrations:

Broadcast & Cinematic Arts: Electronic Media Studies

In consultation with the School of BCA graduate advisor, M.A. students may choose Plan A or B. Plan A consists of course work, thesis (6 hours), and oral defense of the thesis. The oral examination may also include subject matter related to course work.

Students on Plan B must satisfactorily complete an independent research project (3 hours) and an oral examination related to the independent research and course work.

Required Courses I (6 hours)

- BCA 601 - Theories of Mass Communication 3(3-0)
- BCA 602 - Mass Communication Research Methods 3(3-0)

Required Courses II (3-6 hours)

Select one of the following:

- BCA 730 - Plan B Project Research 3(3-0)
- BCA 798 - Thesis 1-6(Spec)

Required Courses III (3 hours)

Select one of the following:

- BCA 611 - Seminar in Telecommunications Media Policy 3(3-0)
- BCA 612 - Electronic Media Seminar 3(3-0)
- BCA 613 - Seminar in Media Convergence 3(3-0)

Electives (15-18 hours)

Select from the following:

- BCA 503 - Critiquing Mass Media 3(3-0)
- BCA 506 - Series Script Writing For Visual Media 3(3-0)
- BCA 508 - Screenwriting for Cinematic Narrative 3(3-0)
- BCA 510 - Electronic Media Law 3(3-0)
- BCA 511 - Electronic Media Sales 3(3-0)
- BCA 512 - Electronic Media Promotion 3(3-0)
- BCA 515 - Sports Broadcasting 3(2-2)
- BCA 516 - Electronic Media Management 3(3-0)
- BCA 517 - Advanced Audio and Video Performance 3(2-2)
- BCA 518 - Electronic News Reporting 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 524 - Producing Television News 3(1-4)
- 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 529 - Internship in Electronic Media-Film 2-6(Spec)
- BCA 531 - Industrial and Educational Video/Media Production 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 560 - Radio Operations I 3(1-4)
- BCA 561 - Radio Operations II 3(1-4)
- BCA 566 - Hockey's Cinematic Depictions 1(1-0)
- BCA 611 - Seminar in Telecommunications Media Policy 3(3-0)
- BCA 612 - Electronic Media Seminar 3(3-0)
- BCA 613 - Seminar in Media Convergence 3(3-0)
- BCA 619 - Continuing Registration for Final Research Project 1(1-0)
- BCA 625 - Film and Video Theory and Criticism 3(3-0)
- BCA 720 - Special Topics in Mass Media 3-9(Spec)
- BCA 729 - Advanced Independent Study in Electronic Media 1-9(Spec)

Total: 30 semester hours
Broadcast & Cinematic Arts: 
Film Theory & Criticism

In consultation with the School of BCA graduate advisor, M.A. students may choose Plan A or B. Plan A consists of course work, thesis (6 hours), and oral defense of the thesis. The oral examination may also include subject matter related to course work.

Students on Plan B must satisfactorily complete an independent research project (3 hours) and an oral examination related to the independent research and course work.

Required Courses I (12 hours)
BCA 528 - History and Analysis of Nonfiction Film 3(2-2)
BCA 601 - Theories of Mass Communication (3-0)
BCA 602 - Mass Communication Research Methods 3(3-0)
BCA 625 - Film and Video Theory and Criticism 3(3-0)

Required Courses II (3-6 hours)
Select one of the following:
BCA 730 - Plan B Project Research 3(3-0)
BCA 798 - Thesis 1-6(Spec)

Electives (12-15 hours)
Select hours from the following:
BCA 503 - Critiquing Mass Media 3(3-0)
BCA 506 - Series Script Writing For Visual Media 3(3-0)
BCA 508 - Screenwriting for Cinematic Narrative 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 566 - Hockey's Cinematic Depictions 1(1-0)
BCA 611 - Seminar in Telecommunications Media Policy 3(3-0)

Note: Students may take a maximum of 9 hours outside of BCA.

Total: 30 semester hours

Broadcast & Cinematic Arts: 
Electronic Media Management

In consultation with the School of BCA graduate advisor, M.A. students may choose Plan A or B. Plan A consists of course work, thesis (6 hours), and oral defense of the thesis. The oral examination may also include subject matter related to course work.

Students on Plan B must satisfactorily complete an independent research project (3 hours) and an oral examination related to the independent research and course work.

Required Courses I (12 hours)
BCA 516 - Electronic Media Management 3(3-0)
BCA 601 - Theories of Mass Communication 3(3-0)
BCA 602 - Mass Communication Research Methods 3(3-0)
BCA 611 - Seminar in Telecommunications Media Policy 3(3-0)

Required Courses II (3-6 hours)
Select one of the following:
BCA 730 - Plan B Project Research 3(3-0)
BCA 798 - Thesis 1-6(Spec)

Required Courses III (3 hours)
Select one of the following:
BCA 612 - Electronic Media Seminar 3(3-0)
BCA 613 - Seminar in Media Convergence 3(3-0)

Required Course IV (3 hours)
Select one of the following:
BCA 519 - Electronic Media Programming 3(3-0)
BCA 533 - Advanced Electronic Media Design 3(2-2)
BCA 540 - Recording Industry & Business 3(3-0)

Electives (6-9 hours)
Select from the following:
BCA 503 - Critiquing Mass Media 3(3-0)
BCA 510 - Electronic Media Law 3(3-0)
BCA 511 - Electronic Media Sales 3(3-0)
BCA 512 - Electronic Media Promotion 3(3-0)
BCA 519 - Electronic Media Programming 3(3-0)
BCA 533 - Advanced Electronic Media Design 3(2-2)
BCA 540 - Recording Industry & Business 3(3-0)
BCA 560 - Radio Operations I 3(1-4)
BCA 561 - Radio Operations II 3(1-4)
BCA 612 - Electronic Media Seminar 3(3-0)
BCA 613 - Seminar in Media Convergence 3(3-0)
BCA 729 - Advanced Independent Study 1-9(Spec)

Total: 30 semester hours
Broadcast & Cinematic Arts: Electronic Media Production

Students on Plan B must satisfactorily complete an independent production project (3 hours) and an oral examination related to the independent research and course work.

Required Courses I (12 hours)

BCA 601 - Theories of Mass Communication 3(3-0)
BCA 602 - Mass Communication Research Methods 3(3-0)
BCA 613 - Seminar in Media Convergence 3(3-0)
BCA 625 - Film and Video Theory and Criticism 3(3-0)

Required Courses II (3 hours)

BCA 730 - Plan B Project Research 3(3-0)

Required Courses III (9 hours)

Select three of the following:

BCA 521 - Advanced Electronic Cinematography 3(2-2)
BCA 522 - Multimedia Audio Post-Production 3(2-2)
BCA 531 - Industrial and Educational Video/Media Production 3(2-2)
BCA 532 - Advanced Video/Multimedia Post-Production 3(2-2)
BCA 533 - Advanced Electronic Media Design 3(2-2)
BCA 542 - Contemporary Recording & Mixing 3(2-2)

Electives I (6 hours)

BCA 506 - Series Script Writing For Visual Media 3(3-0)
BCA 508 - Screenwriting for Cinematic Narrative 3(3-0)
BCA 515 - Sports Broadcasting 3(2-2)
BCA 516 Electronic Media Promotion 3(3-0)
BCA 517 Advanced Audio and Video Performance 3(2-2)
BCA 518 Electronic News Reporting 3(2-2)
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 524 Producing Television News 3(1-4)
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 529 Internship in Electronic Media-Film 2-6(Spec)
BCA 531 Industrial and Educational Video/Media Production 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 560 Radio Operations I 3(1-4)
BCA 561 Radio Operations II 3(1-4)
BCA 611 Seminar in Telecommunications Media Policy 3(3-0)
BCA 612 Electronic Media Seminar 3(3-0)
BCA 613 Seminar in Media Convergence 3(3-0)
BCA 729 Advanced Independent Study in Electronic Media 1-9(Spec)

Note: Student may take up to 6 credits of BCA 729 as an elective.

Total: 30 semester hours

Course Descriptions: BCA

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 spec scripts and original electronic media series. 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 narrative screenplays, emphasizing characterization, plot and structure. 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 materials 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 media 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 as electronic sports reporting. Prerequisites: BCA 210, 317 each with 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. Writing Intensive. Prerequisites: Limited to juniors or above; or graduate standing.

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 broadcasting and cable. Prerequisites: Limited to juniors or above; or graduate standing in Broadcast and Cinematic Arts.

BCA 520 Special Topics in Electronic Media 1-9(Spec)
Current topics for each semester listed in Schedule of Classes. 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. Prereq-
usites: 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)
A practical approach to producing news. Encompasses gather-
ing, 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 themes and visual style. Repeatable up to nine hours when
content previously studied is not duplicated. 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 the non-fiction film, with emphasis on narrative,
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 produc-
tion of video and interactive programming specifically for and
within institutional/corporate settings. Prerequisites: BCA 210,
223, 440 each with a minimum grade of C in each; 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 produc-
tion of multimedia/interactive digital video, with emphasis on advanced post-production techniques 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 theory,
and website maintenance. Prerequisites: BCA 332; or graduate
standing in Broadcast and Cinematic Arts.

BCA 540 Recording Industry & Business 3(3-0)
Exploration of the music recording industry, music copyrights
and music industry business strategies to reach consumers in the
physical and online domains. 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 management principles.
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. Sum-
mer 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.

BCA 601 Theories of Mass Communication 3(3-0)
Examination of theories and application of conceptual
frameworks to the study of mass communication. Prerequisites:
Graduate standing in Broadcast and Cinematic Arts.

BCA 602 Mass Communication Research Methods 3(3-0)
Examination of quantitative and qualitative research methods
applied to the study of mass communication.

BCA 611 Seminar in Telecommunications Media Policy 3(3-0)
An examination of the policies that impact the structure,
functions and prospects of American electronic media systems.
Prerequisites: Graduate standing in Broadcast and Cinematic Arts.

BCA 612 Electronic Media Seminar 3(0-3)
Directed readings of current issues and controversies in
electronic media. Prerequisites: BCA 601, 602.

BCA 613 Seminar in Media Convergence 3(3-0)
Examination of social and legal issues in electronic media
environments related to technological convergence. Prerequi-

BCA 619 Continuing Registration for Final Research Project 1(1-0)
Non-credit course intended for students who have completed
all program credits but still need to use university resources to
complete their degree requirements. Prerequisite: Graduate
standing in Broadcast and Cinematic Arts.

BCA 625 Film and Video Theory and Criticism 3(3-0)
Study of the major theories of film and video emphasizing the
reflective, transformational, and semiotic schools. Survey of
various critical modes. Prerequisite: Graduate standing in
Broadcast and Cinematic Arts.

BCA 627 Special Topics in Mass Media 3-9(Spec)
Current topics for each semester listed in the Schedule of
Classes. 3 hours each; maximum credit, 9 hours. Prerequisite:
One course in BCA numbered 500 and above, Graduate Standing
in Broadcast and Cinematic Arts.

BCA 729 Advanced Independent Study in Electronic Media 1-9(Spec)
Intensive, specialized study under guidance of a faculty mem-
er or faculty committee. Prerequisites: Completion of appro-
priate contract proposal; Permission of advisor and instructor.

BCA 730 Plan B Project Research 3(3-0)
Advanced research for Plan B project. No more than nine
credits may be earned in BCA 729 and BCA 730 combined. CR/
NC only. Prerequisites: BCA 601, 602; permission of Plan B com-
mitee members based on satisfactory completion of research
prospectus.

BCA 798 Thesis 1-9(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: permission of Plan B com-
mitee. Prerequisites: BCA 601, 602; Permission of Graduate
Advisor.
The Plan B requirement is fulfilled to a program that emphasizes:

- Have substantial business experience. The faculty are committed graduate business faculty are not only well educated but also have substantial business experience that will allow them to move into management positions;
- Awareness of ethical issues and standards and their influence on business decisions;
- Integration of the functional core areas of business;
- Ability to work in teams through group projects and collaborative learning;
- Enhancement of oral and written communication skills integrating the most current technology;
- Application of theory and concepts to the solution of business problems through the use of cases, business projects, consulting projects, simulations and the study of real world business practice;
- Integration of business concepts in an applied project.

Minimum Totals for Graduation: 30 - 48 hours

The MBA program’s mission is to prepare graduate business students for leadership positions in today’s global economy. The program features an active student learning environment with a curriculum that meets the needs of both part-time and full-time students all over the world. Accredited by AACSB International - The Association to Advance Collegiate Schools of Business, the program is designed to meet the needs of three groups of people:

1. Individuals whose business careers have focused on specialized areas and who seek to develop a more general management perspective in anticipation of further advancement;
2. Individuals with previous education and work experience in areas other than business who seek a general business education that will allow them to move into management positions; and
3. Individuals with limited work experience who plan to use the MBA as a foundation from which to begin their careers.

This program is approved for online delivery for the concentrations in Information Systems, Logistics Management, and Value-Driven Organization.

The College of Business Administration offers the online program for working professionals who seek career-enhancing education but are not able to take classes in Mt. Pleasant. This online MBA is equivalent to our traditional MBA in that it has rigorous coursework from an AACSB International - The Association to Advance Collegiate Schools of Business - accredited business school.

In existence for over 40 years, the curriculum receives constant review to keep pace with emerging business trends. The graduate business faculty are not only well educated but also have substantial business experience. The faculty are committed to a program that emphasizes:

1. Integration of the functional core areas of business;
2. Providing the perspective required to manage in a global world;
3. Awareness of ethical issues and standards and their influence on business decisions;
4. Ability to work in teams through group projects and collaborative learning;
5. Enhancement of oral and written communication skills integrating the most current technology;
6. Application of theory and concepts to the solution of business problems through the use of cases, business projects, consulting projects, simulations and the study of real world business practice;
7. Integration of business concepts in an applied project.

Admission Requirements, Retention & Termination Standards

To be considered for admission to the MBA program, a student must first be admitted to the College of Graduate Studies. The Application for Admission should be sent to the College of Graduate Studies, CMU, Mount Pleasant, MI, 48859 at least six weeks prior to the beginning of the first semester of anticipated enrollment in classes.

A Graduate Management Admission Test (GMAT) score must be on file in the College of Business Administration before an application for admission to the MBA program can be considered. Applicants lacking a GMAT score are granted non-degree admission to the College of Graduate Studies. A student with non-degree admission may register for prerequisite courses only. To be admitted, students must have at least 1,050 points based on the formula: 200 times the cumulative undergraduate GPA plus a minimum GMAT score of 450. Applicants are expected to reflect the current MBA student body, which possesses an average formula score of more than 1,150. International students must submit a GMAT score and submit a score of 213 (550 on paper-based test or 79 Internet-based test) or higher on the Test of English as Foreign Language (TOEFL).

Regular Admission. To be granted regular admission to the MBA program, a student must meet the university requirements for admission to the College of Graduate Studies, possess an acceptable GMAT score and undergraduate GPA, and have successfully completed the prerequisite courses or equivalent.

Conditional Admission. Applicants who have satisfied the GMAT requirement, but are lacking only prerequisites are allowed to enroll in a maximum of 12 credit hours of MBA degree requirements while completing prerequisite requirements.

Any exceptions to the above admission requirements must be approved by the Graduate Studies Committee of the College of Business Administration.

Degree Requirements I (0-18 hours)

Foundation Courses (Prerequisites)

Applicants must present evidence of a working knowledge of advanced business applications in spreadsheet, database, and presentation graphics.

In addition, the following courses or equivalents may be completed before or after admission to the MBA program.

- MBA 503 - Professional Business Communications 2(2-0)
- MBA 504 - Using Financial Accounting Information 2(2-0)
- MBA 505 - The Economic Environment of Business 2(2-0)
- MBA 506 - Legal Environment of Business 2(2-0)
- MBA 507 - Introduction to Marketing Management 2(2-0)
- MBA 508 - Management and Organization 2(2-0)
- MBA 509 - Production/Operations Management 2(2-0)
- MBA 510 - Financial Management and Analysis 2(2-0)
- MBA 511 - Statistics for Managerial Decisions 2(2-0)

Degree Requirements II (27 hours)

MBA Program Core Courses

- MBA 610 - Managing Information Systems in a Global Economy 3(3-0)
- MBA 620 - Managerial Accounting: A Management Perspective 3(3-0)
- MBA 630 - Managing and Leading Individuals and Groups in Organizations 3(3-0)
- MBA 640 - Data Analysis for Managers 3(3-0)
- MBA 650 - Marketing-Based Management 3(3-0)
- MBA 660 - Global Business and Sustainability 3(3-0)
- MBA 670 - Financial Analysis and Risk Management 3(3-0)
- MBA 680 - Global Economic Environment 3(3-0)
- MBA 690 - Strategic Management: Integrative Experience 3(3-0)

Plan B Requirement. The Plan B requirement is fulfilled through successful completion of MBA 690.
Degree Requirements III (8-16 hours)

Areas of Concentration

Select one of the following areas, to be approved by a graduate advisor:

- Accounting
- Business Economics
- Consulting
- Finance
- General Business
- International Business
- Information Systems
- Marketing
- Human Resource Management
- Value-Driven Organization
- Logistics Management (currently offered only online)

Minimum 35-43 Total Hours for MBA Degree
(35-61 hours, with prerequisites)

ACCELERATED MASTER OF BUSINESS ADMINISTRATION:
ACCOUNTING CONCENTRATION

Students admitted to the Master's Degree Program who are obtaining a concentration in accounting may earn up to six hours of credit for 500-level accounting courses taken. These courses will count both toward their undergraduate degree and toward their MBA Degree with an Accounting Concentration.

Admission: Generally, students will apply during their junior year for admission into the Master's Degree Program to begin Fall Semester in their senior year.

Admission Requirements: GPA of 3.25; and have completed ACC 302 and ACC 370; plus, meets the regular admission requirements of the MBA Program.

Plan of Study: For students admitted to the MBA with an accelerated Accounting Concentration Program, ACC 501 and ACC 531 with minimum grades of B will be counted toward both the undergraduate degree and will count as six hours of the eight elective hours on the MBA Degree with an Accounting Concentration. At least one 600- or 700- level accounting elective, not including ACC 689, must be taken.

Course Descriptions: MBA

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 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 graduate status and permission of the MBA director.

MBA 609 Information Systems Management 2(2-0)

Examination of issues involved in managing and deploying information systems in organizations with an emphasis on technologies and human factors that support competitive strategies. This course is approved for offering in a distance learning format. Prerequisites: knowledge of advanced business applications in spreadsheets, database, and presentation graphics software, admission to the MBA program or permission of the MBA director.
MBA 610 Managing Information Systems in a Global Economy 3(3-0)

The management and deployment of information systems (IS) in organizations around the world, creating value from IS assets and exploring emerging technologies. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 618 Continuing Registration for Final Research Project 1(1-0)

Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

MBA 619 Accounting Information for Managers 2(2-0)

This course is approved for offering in a distance learning format. Prerequisite: Admission to the MBA program or permission of the MBA director. Recommended: MBA 504, MBA 510, and BUS 600.

MBA 620 Managerial Accounting: A Management Perspective 3(3-0)

Investigates the central role accounting systems play in planning, control, and decision making by managers. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 629 Managing Behavioral Change 2(2-0)

A study of organization culture and behavior which emphasizes the importance of and need for influencing individual and small group behavior in contemporary organizational settings. This course is approved for offering in a distance learning format. Prerequisite: Admission to the MBA program or permission of the MBA director. Recommended: MBA 508.

MBA 630 Managing and Leading Individuals and Groups in Organizations 3(3-0)

A study of the frameworks used to understand and lead individual and group behavior and the processes used to create organization change. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 639 Quantitative Applications for Managers 2(2-0)

The application of quantitative methods to managerial decisions. Applications include optimization, modeling, and simulation, and focus on using the computer to support decision making. This course is approved for offering in a distance learning format. Prerequisite: Admission to the MBA program or permission of the MBA director. Recommended: MBA 504, BUS 600, and knowledge of advanced business applications in spreadsheet software.

MBA 640 Data Analysis for Managers 3(3-0)

Understanding and applying quantitative methods of data analysis that facilitate getting information for business decisions from the raw data that business professionals have available. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 649 Marketing Management 2(2-0)

Dynamic nature and managerial aspects of marketing. Formulation of analytical decisions concerning marketing strategy. This course is approved for offering in a distance learning format. Prerequisites: Admission to the MBA program or permission of the MBA director. Recommended: MBA 503 and MBA 507.

MBA 650 Marketing-Based Management 3(3-0)

Dynamic nature and managerial aspects of customer-centric marketing. Formulation of analytical decisions concerning marketing strategy. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 659 Managing in a Global Economy 2(2-0)

Covers challenges of globalization of product- and factor-markets, managing subsidiaries and influencing affiliates in diverse cultures, in industrialized and emerging economies. This course is approved for offering in a distance learning format. Prerequisite: Admission to the MBA program or permission of the MBA director. Recommended: MBA 508.

MBA 660 Global Business and Sustainability 3(3-0)

This course is designed to enable students to discuss and apply the major international business and sustainability issues and theories facing global managers. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 669 Financial Decision-Making 2(2-0)

This course provides a framework for the analysis of the investment and financing decisions of the firm and an understanding of how to apply finance theory to practical situations. This course is approved for offering in a distance learning format. Prerequisites: MBA 504, MBA 510, and BUS 600. Admission to the MBA program or permission of the MBA director.

MBA 670 Financial Analysis and Risk Management 3(3-0)

This course provides a framework for analysis of investment and financing decisions of the firm and understanding of how to apply finance theory to practical solutions. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 679 Economic Analysis for Managers 2(2-0)

Application of economics and statistics to business decisions. Integration of theory with issues from Business Week and The Wall Street Journal. Development of business regression models. Recommended: ECO 600 and BUS 600. Prerequisite: Admission to the MBA program or permission of the MBA director. This course is approved for offering in a distance learning format.

MBA 680 Global Economic Environment 3(3-0)

The global economy and its impact on managerial decision making. Economic growth, fiscal and monetary policy, trade, exchange rate determination, capital and financial flows. This course may be offered in an online or hybrid format. Prerequisite: Admission to the MBA program.

MBA 688 Directed Work/Observation/Internship 1(1-0)

Work or internship experience relevant to the MBA program. Prerequisites: Admission to the MBA program.

MBA 689 Strategic Management 2(2-0)

Focuses on developing competitive business strategies through a process of analyzing environments, establishing and implementing strategies, and evaluating results. This course is approved for offering in a distance learning format. Prerequisites: completion of 14 hours of MBA program including the following courses: MBA 619, MBA 649, MBA 659, and MBA 669. Admission to the MBA program or permission of the MBA director.

MBA 690 Strategic Management: Integrative Experience 3(3-0)

Focuses on integrative approach in developing competitive business strategies through a process of analyzing environments, selecting and implementing strategies, and evaluating results. This course may be offered in an online or hybrid format. Prerequisites: Admission to the MBA program. Completion of MBA 620, 650, 660, and 670.

MBA 697 Special Topics 1-6(Spec)

Special topics of interest not included in courses currently listed in the Bulletin. Prerequisites: regular admission to the MBA program or permission of the MBA director.
MBA 699 The MBA Project 4(4-0)
The capstone experience where skills and competencies are applied to actual business problems. Students develop cross-functional business solutions with the guidance of a faculty committee. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: completion of 20 hours of the MBA program, including at least seven MBA-designated core courses at the 600-level. Admission to the MBA program or permission of the MBA director.

Course Descriptions: BUS

BUS 619 Voice of the Customer 3(3-0)
Examination of the marketing research methodologies utilized to capture the “voice of the customer” in a competitive marketplace. This course is approved for offering in a distance learning format. Prerequisites: Permission of the MBA director; graduate status.

BUS 629 Corporate Governance & Social Responsibility 3(3-0)
The study of corporate governance and social responsibility within the contemporary business world. This course is approved for offering in a distance learning format. Prerequisites: Permission of the MBA director and graduate status.

BUS 639 Process Improvement 3(3-0)
Process improvement as it relates to organizations within the contemporary business world. Methodologies, tools and techniques used for process improvement will be examined. This course is approved for offering in a distance learning format. Prerequisites: Permission of the MBA director; graduate status.

BUS 691 Management Consulting: Client Relations 2(2-0)
Development and maintenance of relationships between management consultants and their clients. Emphasis on change management principles. Prerequisites: Admission to Graduate Studies.

BUS 692 Management Consulting: Diagnosis 2(2-0)
Review of diagnostic techniques to assess organizational problems. Qualitative research and analytical techniques are also studied. Prerequisites: BUS 691; admission to Graduate Studies.

BUS 693 Management Consulting: Measurement 2(2-0)
Theory and managerial tools guiding the consultant to measure and understand complex problems within organizations. Prerequisites: BUS 692; admission to Graduate Studies.

BUS 694 Management Consulting: Implementation 2(2-0)
Implementation of the change strategy in the organization. Development of a framework for the assessment of the effectiveness of the change mechanism. Prerequisites: BUS 693; admission to Graduate Studies.

BUS 697 Special Topics in Business 1-12(Spec)
Special topics of interest which are not normally included in existing courses. Specific topic will be listed on student’s transcript. This course may be offered in an online or hybrid format. Prerequisites: Admission to MBA program, permission of the MBA director, and graduate status.

BUS 698 Integration of Business Processes for Management using SAP Software 4(4-0)
Examination of how business processes interact with mySAP ERP in the SAP modules including the analytical and reporting functions in mySAP ERP. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: An SAP course taken at CMU or permission of the MBA director.

DEPARTMENT OF BUSINESS
INFORMATION SYSTEMS (BIS)
College of Business Administration

Karl Smart, Chairperson
305 Grawn Hall, (989) 774-3588

Frank J. C. Andera, Ed.D., Business Communication, Information Systems, Research
James J. Cappel, Ph.D., Information Systems, Research
Roger L. Hayen, D.B.A., Information Systems, Research
Nancy Hicks, Ph.D., Business Communications, Research
Monica Holmes, Ph.D., Information Systems, Research
Zhenyu Huang, Ph.D., Information Systems, Research
Mark I. Hwang, Ph.D., Information Systems, Research
Anil Kumar, Ph.D., Information Systems, Research
James Melton, Ph.D., Business Communication, Research
Robert Miller, Ph.D., Information Systems Research
James P. Scott, Ph.D., Information Systems, Research
Karl Smart, Ph.D., Business Communications, Research

Business Education emphasis is available in the Master of Arts in Secondary Education Degree (Page 196) and consists of 15 hours (refer to page 75 for a list of the Business Education graduate courses offered for this degree and additional program information).

Master of Science (M.S.) in Information Systems

Emil Boasson, Director of MSIS Program
322 Grawn Hall; 989-774-3588

Minimum Totals for Graduation: 33 hours

The Program
The mission of the Master of Science in Information Systems Program (MSIS) is to prepare students to contribute to the analysis, design, development, and maintenance of information systems, and provide technology leadership with a global perspective.

Degree Requirements:
Students are required to complete a minimum of 33 graduate credits, pass a comprehensive examination, and satisfy a research requirement through completion of an applied project (Plan B).

Admission Requirements, Retention & Termination Standards
To be considered for regular admission, an applicant must have a bachelor’s degree from an accredited institution with a 2.7 GPA, or an undergraduate grade point average of at least 3.0 in the last two years of study.

Required Courses (12 hours)
BIS 601 - Information Systems 3(3-0)
BIS 628 - Application Development 3(3-0)
BIS 630 - Systems Analysis and Design 3(3-0)
BIS 638 - Database Management for Business Systems 3(3-0)

Area of Concentration (9 hours)
A planned course of study in one of the following areas, to be approved by the graduate advisor:
• Enterprise Systems using SAP Software
• Business Informatics
• Accounting Information Systems
• Information Systems

Electives (6 hours)
Graduate-level courses approved by the graduate advisor.
Other Requirement
Pass a written comprehensive examination in information systems.

Research Requirement (6 hours)
Plan B Requirement
Plan B requirement is fulfilled with successful completion of:
BIS 625 - Research in Information Systems 3(3-0)
BIS 635 - Business Systems Applications 3(3-0)

To provide evidence of scholarship, each student will complete a substantial written report in the application of information systems within an organization. The project will typically include significant information systems development activity demonstrating evidence of creative ability.

Total: 33 credit hours

Course Descriptions: BIS

BIS 520 Teaching & Training at the Post-Secondary Level 3(3-0)
Learning process, planning and delivering instruction and training, assessing learning, using technology, adult learners, and current research. Designed for collegiate-level business instructors or trainers. Prerequisites: BIS 350 or admission to the MSIS or MBA program or graduate standing. This course is approved for offering in a distance learning format.

BIS 597 Special Studies in Business Information Systems 1-12(Spec)
Selected topics not normally included in existing courses, with current topics listed in the semester Class Schedule. Repeatable up to 12 credits with different topics. Prerequisites: See Class Schedule.

BIS 598 Integration of Business Processes Using SAP Software 4(4-0)
Examination of how ERP fundamental business processes interact using SAP software. This course may be offered in an online or hybrid format. Prerequisites: A course supported by SAP software taken at CMU or permission of BIS Chairperson.

BIS 601 Information Systems 3(3-0)
Introduction to the development and use of Information Systems (IS) in organizations, contemporary IS issues, and the use of software to solve business problems. This course may be offered in an online or hybrid format.

BIS 619 Continuing Registration for Final Research Project 1(1-0)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

BIS 625 Research in Information Systems 3(3-0)
Addresses information systems (IS) research concepts and methods, and the application of concepts in planning and conducting IS research studies. This course may be offered in an online or hybrid format.

BIS 628 Application Development 3(3-0)
This course involves designing and developing computer applications using a modern programming language. This course may be offered in an online or hybrid format.

BIS 630 Systems Analysis and Design 3(3-0)
Introduction to the systems approach to the analysis, design and development of information systems. Methods, tools and technologies are used to develop information systems prototypes. This course may be offered in an online or hybrid format.

BIS 632 Business Network Systems Management 3(3-0)
Examination of the management of telecommunication issues in business applications, especially those related to business network systems. Prerequisites: Admission to the MBA program or MSIS program or permission of the MBA director or MSIS director and completion of the following courses: BIS 221 or BIS 255, ACC 201 and ACC 202 or ACC 250 and ACC 255, MTH 132 or MTH 217 and STA 282, with a minimum grade-point of 2.7 with no course grade lower than a C.

BIS 633 Business Intelligence/Analytics 3(3-0)
A seminar on the information systems and tools used to aid intelligent decision making in contemporary business environment. This course may be offered in an online or hybrid format. Prerequisite: BIS 601.

BIS 634 Seminar in Information Systems Issues 3(3-0)
Overview of contemporary information systems issues. This course may be offered in an online or hybrid format.

BIS 635 Business Systems Applications 3(3-0)
A capstone, project-oriented study of the planning, analysis, design, implementation and testing of a business system application using modeling tools and available technology platforms. This course may be offered in an online or hybrid format. Prerequisites: BIS 630.

BIS 638 Database Management for Business Systems 3(3-0)
A broad overview of the development and use of database systems in business. The management of databases and their strategic implications will also be covered. This course may be offered in an online or hybrid format. Prerequisite: BIS 601.

BIS 640 Essentials of Transaction Processing Systems 2(2-0)
The development of information systems for processing business transactions using a procedural programming language for processing daily business transactions. Prerequisites: Admission to MBA Program or permission of the MBA Director and completion of the following courses: MBA 504, MBA 511 and knowledge of advanced business applications in spreadsheet software.

BIS 641 Essentials of Business Systems Analysis and Design 2(2-0)
Essentials of the analysis and design of business systems; studying the current system, and developing system alternatives. Prerequisites: Admission to MBA Program or permission of the MBA Director and completion of the following courses: MBA 504, MBA 510, MBA 511 and knowledge of advanced business applications in spreadsheet software.

BIS 643 Essentials of Database Management 2(2-0)
Essential database concepts with emphasis on the relational model and its application to business systems. Prerequisites: BIS 640 and knowledge of advanced business applications in database software.

BIS 644 Decision Support for Management 2(2-0)
Concepts and practices of decision support systems are investigated for assisting managers in decision making including current research issues. Prerequisites: MBA 609.

BIS 647 Enterprise Systems for Management Using SAP Software 3(3-0)
Examination of the application and management of enterprise software for SAP. Issues include software deployment that supports transaction processing in the business supply chain. This course may be offered in an online or hybrid format.

BIS 650 Business Intelligence Using SAP BW 3(3-0)
A study of SAP Business Intelligence Warehouse (BW). Enterprise data warehousing and advanced reporting and data analysis tools are covered. This course may be offered in an online or hybrid format. Prerequisite: BIS 601.
BIS 657 ABAP Programming for Managerial Systems 3(3-0)
Application of the ABAP Programming language to implement business processing using the SAP R/3 System as an example of contemporary enterprise software. Prerequisites: BIS 628 or BIS 640, BIS 647 and admission to the MBA or MSIS program; or permission of the MBA or MSIS director. This course is approved for offering in a distance learning format.

BIS 658 Enterprise System Configuration Using SAP Software 3(3-0)
Configuration issues, concepts, and application of enterprise software (SAP) for global business organization integration. This course may be offered in an online or hybrid format. Prerequisites: BIS 630, 647.

BIS 660 Administrative Business Communication 3(3-0)
Developing and refining business communication skills for enhancing corporate policy, management, and technology. Prerequisite: admission to MBA or MBE.

BIS 667 Electronic Business Systems for e-Commerce 3(3-0)
Business opportunities, challenges, and strategies to leverage the global information infrastructure will be discussed. Students will also learn tools and technologies needed for electronic business systems. Prerequisites: admission to the MBA or MSIS program, or permission of the MBA or MSIS Director.

BIS 688 Directed Work/Observation/Internship 1-6(Spec)
Work or internship experience and/or directed observation at business/business education sites. Maximum of three hours may be applied to MBE. Prerequisite: admission to MBE.

BIS 697 Special Studies in Business Information Systems 1-12(Spec)
Special topics of interest which are not normally included in existing courses. Specific topic will be listed on student’s transcript. Prerequisite: Admission to MBE or MBA.

BIS 791 Independent Research 3(Spec)
Development of research skills and completion of a formal research study. CR/NC only. Prerequisite: BIS 625 and admission to the MBE. Enrollment must occur the semester after successful completion of BIS 625.

BIS 798 Thesis 1-6(Spec)
Provides the student with research skills through development and completion of a research study in a specific area of business education. CR/NC only. Prerequisites: BIS 625; admission to the MBE. Enrollment must occur the semester after successful completion of BIS 625.

Department of Chemistry (CHM)
College of Science and Technology

David E. Ash, Chairperson
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https://centrallink.cmich.edu/academics/sci_tech/chemistry

David E. Ash, Ph.D., University of Pennsylvania, Biochemistry
Minghui Chai, Ph.D., University of Akron, Analytical Chemistry
Anthony Chappaz, Ph.D., INRS-ETE, University of Quebec, Geochemistry and Environmental Chemistry
Wenjun Du, Ph.D., University of California - Davis, Biomaterials, Organic and Polymer Chemistry
Bradley D. Fahlin, Ph.D., Rice University, Inorganic Materials Chemistry
Bob A. Howell, Ph.D., Ohio University, Organic and Organometallic Chemistry
Anton W. Jensen, Ph.D., Brigham Young University, Organic Chemistry
Estelle L. Lebeau, Ph.D., University of North Carolina, Inorganic Chemistry
Dale J. LeCaptain, Ph.D., Michigan State University, Analytical Chemistry
Choon Young Lee, Ph.D., Northeastern University, Organic/Medical Chemistry
Bingbing Li, Ph.D., Virginia Polytechnic Institute and State University, Physical Chemistry
Dillip K. Mohanty, Ph.D., Virginia Polytechnic Institute and State University, Polymer Chemistry
Anja Mueller, Ph.D., Washington University in St. Louis, Polymer Chemistry/Biomaterials
Ajit Sharma, Ph.D., Wayne State University, Biochemistry/Clinical Chemistry
Philip J. Squattrito, Ph.D., Northwestern University, Inorganic Chemistry/Crystallography
Mary M.J. Tecklenburg, Ph.D., Texas A & M University, Physical/Analytical Chemistry
Janice Hall Tomasik, Ph.D., University of Wisconsin - Madison, Chemical Education
Calvin D. Tormanen, Ph.D., University of Minnesota, Biochemistry

Programs of Study

As detailed below, the Department of Chemistry offers programs of study leading to the master of science (M.S.) degree and the master of arts (M.A.) degree with emphasis in teaching high school chemistry and college chemistry. The M.S. is a research degree and specializations are possible in biochemistry, and in analytical, inorganic, organic, materials, physical and polymer chemistry.

A minimum of 30 semester hours must be satisfactorily completed for either master’s degree. A maximum of 15 hours of satisfactory graduate credit may be transferred into the CMU programs. Regular students are expected to be in residence for a period of two years.

Research may be started at any time and may be carried out in the Central Michigan University laboratories, at the Michigan Molecular Institute’s complex in Midland or, by special arrangement, at nearby industrial locations.

Many CMU chemistry graduates enter employment in the Tri-Cities industrial complex which includes the Dow Chemical and Dow Corning companies. Graduates may choose to enter the Ph.D. program in the Science of Advanced Materials at CMU or Ph.D. programs of other institutions.
Research Facilities

The department occupies approximately 62,000 square feet in the Dow Science Complex, which contains research stations for more than 20 full-time graduate students. Instrumentation includes specialized equipment used in specific research projects, GC/MS, thermal analysis systems, Raman, GPC and HPLC chromatographic systems, as well as UV, AA, FT-IR, AFM, and superconducting NMR instruments. A small collection of bound research journals is kept within the department, and a complete research library is located in nearby Park Library.

Financial Aid

Financial support for chemistry graduate students is available in several forms. Graduate teaching assistantships, the most common form of support, involve full-time graduate study and require teaching activities. Graduate teaching assistants receive a cash stipend (adjusted annually) and remission of 20 credits of tuition. Full-time students with outstanding records may receive graduate research fellowships. A reduced amount of teaching is required of fellows. Individual faculty research grants support fellowship or summer research activities as well. Generally all full-time graduate students receive aid in one of the categories described above.

Master of Science (M.S.) in Chemistry

Minimum Totals for Graduation: 30 hours

Admission Requirements, Retention & Termination Standards

Applicants for admission to the Chemistry M.S. program must be admitted initially to the College of Graduate Studies. The application should be sent to the College of Graduate Studies, Central Michigan University, Mount Pleasant, MI 48859 or completed on-line at http://go.cmich.edu/academic_programs/graduate/Pages/default.aspx. In addition to the College of Graduate Studies admission materials, the applicant must provide general GRE scores and is strongly encouraged to provide the chemistry subject matter GRE scores to the College. Students from non-English speaking countries may be required to submit TOEFL scores. Upon submission of all required materials, the College forwards the materials to the Department of Chemistry for admission recommendation. Final notice of admission comes from the College of Graduate Studies. Applicants should submit all required materials at least six weeks before the beginning of the semester.

Applicants should have received a baccalaureate degree in chemistry, biochemistry, or related area, with a minimum grade point average of 2.7 overall and 2.7 in chemistry courses. Undergraduate coursework should include mathematics through calculus and one year of physics. Students with deficiencies in chemistry, mathematics, or physics may receive conditional admission. Regular admission is granted when those deficiencies are removed by completing coursework in addition to that required for the M.S. degree.

Financial support in the form of teaching and research assistantships is received by application directly to the Department of Chemistry (see the chemistry website). Further information about the program may be found at the same web address. Completed applications for financial support should be received by March 1 for fall semester admission and by October 1 for spring semester admission.

Full-time students are required to attend and actively participate in all department seminars.

Satisfactory progress through the M.S. program involves maintaining at 3.0 cumulative grade point average in required courses, completion of a faculty directed program of research, and successful preparation and defense of a written thesis.

Foundation Courses (9-10 hours)
Select three from the following:

CHM 511 - Advanced Analytical Chemistry 4(2-4)
CHM 521 - Fundamentals of Biochemistry 3(3-0)
CHM 531 - Advanced Inorganic Chemistry 3(3-0)
CHM 541 - Intermediate Organic Chemistry 3(3-0)
CHM 555 - Advanced Physical Chemistry 3(3-0)

Note: Students are expected to show competency in all foundation areas at the undergraduate level. The Graduate Program Committee will determine any required foundation courses based on transcripts and placement exam performance (Chemistry department or American Chemical Society exams taken the week before the student’s initial semester).

Required Courses (3 hours)
CHM 601 · Chemistry Seminar Presentations 2(2-0)
CHM 602 · Scientific Writing in Chemistry 1(1-0)

Electives (11-12 hours)
At least 6 credit hours must be earned in Chemistry courses at the 600 level. Electives must be approved by the Graduate Program Committee.

Thesis (6 hours)
CHM 798 · Thesis 1-6(Spec)

Note: Arrangements for completion of the thesis requirements are worked out between the student, research director and thesis committee chair. For further information, the student may confer with the graduate program coordinator or the Department of Chemistry.

Total: 30 semester hours

Master of Arts (M.A.) in Teaching Chemistry

Minimum Totals for Graduation: 30 hours

Admission Requirements, Retention & Termination Standards

All applicants must submit scores for the general GRE and subject matter GRE in chemistry. To receive full consideration for financial support beginning in a fall semester, all application materials must be received in the Department of Chemistry no later than March 1. Applicants should allow approximately six weeks for materials submitted to the College of Graduate Studies to be processed and forwarded to the department. Details regarding the application process and the program may be found on the Department of Chemistry website.

In addition to general university requirements, the student must demonstrate appropriate proficiency in chemistry and in mathematics.

Degree Requirements

Select one of the following options:

Chemistry: Teaching College Chemistry

- A minimum of 30 semester hours of courses taken as a graduate student.
- A minimum of 55 semester hours of chemistry (combining graduate and undergraduate credits).
- A minimum of 15 semester hours of chemistry at or above the 600 level.

CHM 781 · Chemistry Teaching Practicum 2(Spec)
CHM 793 · Chemistry Teaching Internship 1-9(Spec)
CHM 794 · Experimentation in the Teaching of Chemistry 1-6(Spec)

Note: Three to nine hours of CHM 793 are required.

(Continued)
Six semester hours of CHM 794 shall be fulfilled by demonstration of creative scholarship in the teaching of chemistry as designated by the committee.

Total: 30 Semester Hours

Chemistry: Teaching High School Chemistry
- A minimum of 30 semester hours of courses taken as a graduate student.
- A minimum of 45 semester hours of graduate and undergraduate chemistry courses.
- A minimum of 12 semester hours of graduate chemistry courses at or above the 600 level.
- Evidence of high school certification.

CHM 781 - Chemistry Teaching Practicum 2(Spec)
CHM 794 - Experimentation in the Teaching of Chemistry 1-6(Spec)

Note: Three to six semester hours of CHM 794 are required.

Total: 30 Semester Hours

Ph.D. in the Science of Advanced Materials
This degree is an interdisciplinary program. Please see the index for the page number.

Course Descriptions: CHM

CHM 505 Teaching Chemistry and Physics in Secondary CHM 505 Teaching Chemistry and Physics in Secondary Schools 3(3-0)
Course surveys materials for the teaching of secondary chemistry/physics. For students on teaching curricula, the course must be completed prior to student teaching. Identical to PHY 505. Credit may not be earned in more than one of these courses. Prerequisites: junior standing; CHM 132 or CHM 161; PHY 131 or PHY 146.

CHM 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 PHY 507. Credit may not be earned in more than one of these courses. CR/NC only. Corequisite: CHM/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. 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(2-4)
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 use. 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-require: 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 CHM 521, Pre/Co-require: 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 thermodynamical basis, 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, stereochemy, 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: Inorganics 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 700 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 mechanic 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 561.

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 testing. Prerequisite: CHM 346 or graduate standing. Recommended: CHM 352 or 355, CHM 425 or 521, CHM 561, BIO 110.

CHM 576 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 541. Advanced Topics in Organic Chemistry 1-9(Spec)
Special topics in chemistry presented at an advanced undergraduate level. Course may be taken for credit more than once; total credit not to exceed nine hours. Prerequisites: See Class Schedule.

CHM 641 Advanced Topics in Organic Chemistry 1-9(Spec)
A variety of specialized topics presented by experts. May be repeated as offered to a maximum of 9 hours. Prerequisite: CHM 541.

CHM 642 Physical Organic Chemistry 3(3-0)
Mechanisms of diverse organic reactions based on reactivity of compounds, emphasizing the study of mechanisms including kinetics, free energy relationships, bonding, and stereochemistry. Prerequisites: CHM 541.

CHM 644 Organic Reactions and Synthesis 3(3-0)
A general survey of advanced organic reactions and synthesis; examples from the research literature are emphasized. Prerequisites: CHM 541.

CHM 651 Advanced Topics in Physical Chemistry 1-9(Spec)
A variety of specialized topics presented by experts. May be repeated as offered to maximum of 9 hours. Prerequisite: CHM 352.

CHM 655 Quantum and Computational Chemistry 3(3-0)
Application of physical theories using a quantum mechanical approach and computational techniques for understanding of properties of atoms, molecules, and molecular systems. Prerequisites: CHM 352, MTH 233.

CHM 663 Polymer Synthesis 3(3-0)
Advanced methods for polymer synthesis; examples from the research literature are emphasized. Prerequisites: CHM 561 or SAM 710.

CHM 665 Advanced Topics in Polymer Chemistry 1-9(Spec)
Special topics in polymer chemistry not included in the regular courses in the chemistry graduate program. Course may be taken for credit more than once; total credit not to exceed nine hours. Prerequisites: CHM 561.

CHM 669 Polymer Processing 3(3-0)
A description of polymer systems, including solution properties, rheology, degradation, and processing; examples from the research literature are emphasized. Prerequisites: CHM 561 or SAM 710.

CHM 781 Chemistry Teaching Practicum 2(Spec)
The design and delivery of instructional materials, presentations, and laboratory experiments. Emphasis placed on improving student subject matter capabilities in chemistry. CR/NC only. Prerequisites: Admission to the Master of Arts in Teaching Chemistry Program; permission of instructor.

CHM 791 Directed Research 1-6(Spec)
Directed research supervised by a chemistry faculty member. May be repeated for a total of 6 credits. Prerequisites: Permission of Chemistry department chair. CR/NC only.

CHM 795 Chemistry Teaching Internship 1-9(Spec)
Teaching of undergraduate chemistry courses. Students carry out a teaching internship under the direction of a graduate faculty member. CR/NC only. Prerequisites: Admission to the Master of Arts in Teaching Chemistry Program; permission of instructor.

CHM 794 Experimentation in the Teaching of Chemistry 1-6(Spec)
The research and development of techniques in chemistry education. CR/NC only. Prerequisites: Admission to the Master of Arts in Teaching Chemistry Program; permission of the instructor.

CHM 798 Thesis 1-6(Spec)
A written thesis and an oral departmental seminar on the thesis research. Prerequisites: Admission to a graduate program in chemistry; permission of the chemistry department chairperson. CR/NC only.


DEPARTMENT OF COMMUNICATION AND DRAMATIC ARTS

(COM, DAN, TAI)

College of Communication and Fine Arts

William Dailey, Chairperson
333 Moore Hall, (989) 774-3177

Steven Berglund, M.F.A., Theatre, Interpretation and Dance
Nancy L. Buerkel-Rothfuss, Ph.D., Communication
Timothy Connors, Ph.D., Theatre, Interpretation and Dance
William Dailey, Ph.D., Communication
Ann Dasen, M.F.A., Theatre, Interpretation and Dance
Daniel Daugherty, M.F.A., Design and Technology
Jeff Drury, Ph.D., Communication
Nancy Eddy, M.F.A., Theatre, Interpretation and Dance
Pamela Gray, Ph.D., Communication
Edward Hinck, Ph.D., Communication
Stan Jensen, M.F.A., Theatre, Interpretation and Dance
Diane Krider, Ph.D., Communication
Lauren McConnell, Ph.D., Theatre, Interpretation, and Dance
Michael Papa, Ph.D., Communication
Wendy Papa, Ph.D., Communication
Doris J. Ramsey, M.A., Theatre, Interpretation and Dance
Mary Ann Renz, Ph.D., Communication
Keeley Stanley-Bohn, M.F.A., Theatre, Interpretation and Dance
Jill Taft-Kaufman, Ph.D., Theatre, Interpretation and Dance
Annette Thornton, Ph.D., Theatre, Interpretation and Dance
Kirsten Weber, Ph.D., Communication
Lesley Withers, Ph.D., (Director of Graduate Studies)
Communication

Master of Arts (M.A.) in Communication

Minimum Totals for Graduation: 33 hours

The graduate program of study in Communication provides a strong background in communication research methods and classical and contemporary communication theory. Graduates from the program follow a variety of careers. Many continue graduate work in Ph.D. programs, become secondary or community college teachers, or find positions in business and media (marketing, management, training, consulting) or as coordinators of social service and volunteer organizations. Still others pursue careers in law, politics or the ministry.

Admission Requirements, Retention & Termination Standards

Application Deadline:
October 15 for spring admittance consideration;
March 15 for fall admittance consideration

In addition to the general university requirements, for regular admission to this program, the student must have an overall grade point average of 2.7 or higher in the last 60 hours of undergraduate credit, and a grade point average of 3.0 or higher in the last 15 hours of communication courses or courses determined by the department to be related to communication.

A student who does not meet the above requirements may be admitted to graduate study on a conditional basis. Acceptance of transfer credit will be dependent upon the decision of the academic advisor. A maximum of 15 semester hours of approved graduate-level courses appropriate to a student's degree program from an accredited college or university may be transferred. Students must receive approval from the Director of Graduate Studies or their academic advisor and apply to the College of Graduate Studies for permission to transfer credit.

English Language Competency Requirements for International Students

The Department of Communication and Dramatic Arts has introduced guidelines for the English language competency requirements of international graduate students seeking admission to the department's graduate program. The guidelines are as follows:

1. International students who have a score of 600 PBT1 (250 CBT, 100 iBT2) or better on the International TOEFL are eligible for regular admission to the graduate program in the Department of Communication and Dramatic Arts if all other requirements are met.

2. International students who have a score of between 575 PBT (232 CBT, 90 iBT) and 599 PBT (249 CBT, 99 iBT) on the International TOEFL, a score of 80 points or higher on CMU's ELI Written English Competency Test, and a score of 25 or higher on CMU's ELI Oral English Language Competency Test are eligible for regular admission to the graduate program in the Department of Communication and Dramatic Arts if all other requirements are met.

3. International students who have a score between 575 (232 CBT, 90 iBT) and 599 (248 CBT, 99 iBT) on the International TOEFL, but have a score of 79 points or less on CMU's ELI Written English Competency Test, and/or a score of 24 or less on CMU's ELI Oral English Language Competency Test are eligible for conditional admission to the graduate program in the Department of Communication and Dramatic Arts if all other requirements are met. Such students must complete by the end of their first semester of graduate work, a course of English language study as outlined by the ELI in conjunction with the Department of Communication and Dramatic Arts.

4. International students with a score of less than 574 (230 CBT, 89 iBT) on the International TOEFL will be denied admission to the graduate program of the Department of Communication and Dramatic Arts.

Notes:
1 PBT = Paper-Based Test
2 CBT = Computer-Based Test
3 iBT = Internet-Based Test

Core Courses (6 hours)
COM 600 · Introduction to Research and Graduate Study in Communication and Dramatic Arts 3(3-0)
COM 601 · Research Design in Communication 3(3-0)

Required Courses I (3 hours)
Select one of the following:
COM 602 · Qualitative Research Methods 3(3-0)
COM 750 · Seminar in Rhetorical Criticism 3(3-0)

Required Courses II (12 hours)
COM 603 · Professional Seminar in Communication 3(3-0)
COM 604 · Seminar in Organizational Communication 3(3-0)
COM 661 · Contemporary Communication Theory 3(3-0)
COM 668 · Seminar in Interpersonal Communication 3(3-0)

Additional Requirement (0-6 hours)
Student must complete either a comprehensive examination or a 6-credit hour thesis (research or applied).

COM 798 · Thesis 1-6(Spec)

Electives (6-12 hours)
Courses in Communication selected in consultation with advisor. No more than 3 credits from COM 764 or COM 790.

Total: 33 semester hours
Master of Science in Administration (M.S.A.)

CONCENTRATION IN ORGANIZATIONAL COMMUNICATION

The MSA program requires 36 Credit Hours of graduate study. The program provides students with the fundamental principles required for successful administrative careers in the public, private, or nonprofit sectors.

The required core courses (15-21 Credit Hours) provide a comprehensive overview of organizational and human relationships and the administrative mechanisms through which to make sound analytical judgments and decisions.

The Organizational Communication concentration (15-18 hours) provides students with a thorough grounding in the theory and practice of effective oral and written communication in modern organizations. Please go to page 208 for concentrations or to https://centrallink.cmich.edu/academics/grad_studies/GSMasterofScienceinAdministration.

Financial Aid

The department offers the following kinds of financial aid: teaching assistantships, and forensics assistantships. Graduate teaching assistants teach two classes of COM 101 per semester, graduate forensics assistants work and travel with either the debate team or individual events participants and may teach one COM 101 class. Graduate administrative assistantships may also be available. All assistantships begin in the fall semester. Assistants in good standing are eligible for a minimum of two semesters of financial support and a 20-credit tuition scholarship. Graduate assistantships may be renewed for an additional two semesters. Application deadline: March 15.

Course Descriptions: COM

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; COM 361.

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, American people, and the media. Prerequisites: COM 251, 301 with a grade of C or better; junior standing.

COM 555 Special Topics in Communication 1-9(Spec)
Current topics of each semester listed in the Class Schedule. 3 hours each; maximum credit 9 hours. Prerequisites: grades of C (2.0) or better in COM 251, COM 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 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.

COM 569 Communication in the Classroom 3(3-0)
Integrated research from several fields describing communication patterns among students and teacher-to-student within school settings. Designed for students interested in teaching or administration. Prerequisites: 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.

COM 600 Introduction to Research and Graduate Study in Communication and Dramatic Arts 3(3-0)
Introduces students to qualitative and quantitative methods of research relevant to communication arts and sciences.

COM 601 Research Design in Communication 3(3-0)
Prepares the student to understand the assumptions and rationale of social scientific research, and to understand and perform laboratory and field experiments.

COM 602 Qualitative Research Methods 3(3-0)
Exploration of theoretical and methodological issues in qualitative research in communication, focusing on particular research strategies including participant observation, ethnography, in-depth interviewing, and narrative. Prerequisites: COM 600.

COM 603 Professional Seminar in Communication 3(3-0)
This course explores topics such as: managing graduate workload, presenting/publishing professionally, conducting ethical research, choosing either comprehensive exam or thesis options, development of a prospectus. Prerequisites: Admitted into the Master of Arts in Communication and Dramatic Arts program. CR/NC Only.

COM 619 Continuing Registration for Final Research Project 1(1-0)
An on-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

COM 660 Seminar in Interpersonal Communication 3-9(Spec)
Current topics for each semester listed in the Class Schedule. 3 hours each; maximum credit, 9 hours.

COM 661 Contemporary Communication Theory 3(3-0)
Critical interpretation and evaluation of published social psychological research which serves as the theoretical foundation of communication.

COM 662 Seminar in Persuasion 3(3-0)
Examines and analyzes theories and principles concerned with persuasion and attitude change. Emphasis placed on theory development, application, and evaluation. Prerequisites: COM 365.

COM 664 Seminar in Organizational Communication 3(3-0)
Includes a rigorous examination of the principles governing organizational communication and how these principles may be applied in practice and research. Prerequisites: COM 600.

COM 665 Seminar in Communication and Negotiation in Employee Relations 3(3-0)
The course examines the role of communication and negotiation in the employee relations process within a work organization. Prerequisite: COM 264, or applied experience of three years in a full-time position in a work organization and permission of the instructor.
COM 667 Seminar in Intercultural Communication 3(3-0)
This course examines the theory, practice, and research related to the process of communication between people from different cultural backgrounds. This course is approved for offering in a distance learning format. Prerequisites: COM 600.

COM 668 Seminar in Interpersonal Communication 3(3-0)
Seminar focuses on interpersonal communication theories and research. Students critically evaluate current theories and examine popular research methods. Prerequisites: admission to the Master of Arts graduate program in Interpersonal and Public Communication.

COM 750 Seminar in Rhetorical Criticism 3(3-0)
Conceptual approaches to the criticism of oral communication. Criteria for criticism, description, analysis, and critical evaluation of speeches and other forms of interpersonal communication.

COM 764 Communication Internship 1-6(Spec)
Designed to apply knowledge of and skills in speech communication within a supervised organizational context. Prerequisite: Prior written approval of internship coordinator.

COM 790 Advanced Independent Study 1-4(Spec)
Intensive study of some special problem under guidance of a faculty member or faculty committee. Prerequisites: permission of advisor and instructor.

COM 795 Seminar: Teaching College Communication 3(2-2)
Workshop/seminar in philosophies, strategies, and practices of teaching basic speech courses, directing communication programs, and applying theory at the college level. Prerequisites: 15 hours in speech communication and dramatic arts.

COM 798 Thesis 1-6(Spec)
CR/NC only.

Course Descriptions: TAI
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 160, 260.

TAI 569 History of American Theatre 3(3-0)
Development of drama and theater 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 the Phase I or II Class Schedule. 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.

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 the Phase I or II Class Schedule. 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 the Phase I or II Class Schedule. 3 hours each; maximum credit 9 hours. Prerequisites: Two undergraduate courses in theatrical production.

TAI 579 Costume Design and Construction 3(3-0)
Concentration in the problems of design, pattern drafting, and construction of costumes for the theatre. Prerequisites: TAI 377; AMD 140.

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 Dublin during Spring Break. Prerequisites: Permission of Instructor.

TAI 588 Contemporary Theatre 3(3-0)
Development of drama and theater 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.

TAI 602 Modern Performance Theory 3(3-0)
Intensive examination of the growth and development of major assumptions underlying modern approaches to theatrical production.

TAI 619 Continuing Registration for Final Research Project 1(1-0)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

TAI 790 Advanced Independent Study 1-4(Spec)
Intensive study of some special problem under guidance of a faculty member or faculty committee. Prerequisite: permission of advisor and instructor (and completion of form).

Course Descriptions: DAN
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 the class schedule. This course may be repeated for up to 9 credit hours. Prerequisite: Two undergraduate courses in Dance with a C or better.
Communication Disorders 83

DEPARTMENT OF COMMUNICATION DISORDERS (CDO, ASL)
The Herbert H. and Grace A. Dow College of Health Professions

(Audiology, Speech Language Pathology)

Bradford L. Swartz, Chairperson
989-774-3471, 2186 Health Professions

Kathryn Atkinson, Clinical Supervisor, CCC-SLP; M.A., Central Michigan University. Adult traumatic brain injury, adult dysphagia, adult neurogenic group therapy, multidisciplinary therapeutic processes

Laurie Bahlo, Clinical Supervisor, Speech-Language Pathology; CCC-SLP; M.A., Central Michigan University. Dysphagia, traumatic brain injury, adult neurogenic, child speech and language

Christina Bratlund, Assistant Professor; CCC-SLP, Ph.D., James Madison University. Adult dysphagia and voice

Gerald Church, Professor and Director of Audiology Division; FAAA, CCC-A; M.A. and Ph.D., Syracuse University. Acoustic reflex, acoustic immittance, auditory evoked potentials, electronystagmography, diagnostic audiometry, amplification, temporal auditory processing, hearing-science

Kathryn Glynn, Clinical Supervisor, CCC-A, M.A. Gallaudet University, Au.D. Salus University. Adult diagnostics and amplification, electrophysiology, vestibular testing

Nicole Hacker, Director of Clinical Instruction and Audiological Services; CCC-A, Au.D. Central Michigan University. Pediatric diagnostics, cochlear implants, vestibular and electrophysiology

Frederick L. Hinebaugh, Clinical Supervisor and Coordinator of Summer Speech-Language Specialty Clinics, Communication Disorders; CSW, CCC-SLP; M.A., Wayne State University; M.A., Central Michigan University; Ph.D., Michigan State University. Pediatric communication disorders, neuro-linguistics, infant-child development

Jane Jack, Director of Clinical Instruction and Services in Speech-Language Pathology Services; CCC-SLP; M.S.P., Arkansas State University. Administrative and regulatory issues in speech-language pathology, service delivery, child speech and language, and accent modification

Barbara Jackson, Clinical Supervisor, CCC-A, Au.D. Central Michigan University. Cochlear implants, amplification and educational audiology

Theresa Jones, Clinical Supervisor, Speech-Language Pathology; CCC-SLP; M.S., Howard University. Infant-toddler specialization, early intervention, sensory integration, pediatric traumatic brain injury, voice, multidisciplinary and transdisciplinary therapy

Mark Lehman, Professor; CCC-SLP; M.A. and Ph.D., University of Michigan. Speech science, anatomy and physiology, dysarthria, voice in adults.

Susan Naeve-Velguth, Professor and Director of American Sign Language Division; CCC-A; M.S. and Ph.D., University of Minnesota. Rehabilitative audiology, American Sign Language, speech and language development of children with hearing loss

M. Dawn Nelson, Associate Professor; FAAA; CCC-A; M.S., University of Maryland; Ph.D., Vanderbilt University. Auditory electrophysiology, central auditory processing, vestibular assessment and rehabilitation, neuroanatomy

Shannon Palmer, Assistant Professor; CCC-A; Au.D. and Ph.D., University of Connecticut; Diagnostic audiology, electrophysiology, central auditory processing disorders, cochlear implants

Lori Pietrandrea-Bissell, Adjunct Faculty; CCC-SLP, M.A., Central Michigan University. Language development, anatomy and physiology.

Ann Ratcliff, Professor; CCC-SLP; M.S., University of Redlands; Ph.D., University of Wisconsin. Child language development and disorders, craniofacial anomalies including cleft palate, augmentative and alternative communication

Mary Beth Smith, Adjunct Faculty; CCC-SLP, M.A., Michigan State University. Phonology, autism

Michael Stewart, Professor; CCC-A; M.A., Western Michigan University; Ph.D., Michigan State University. Hearing aids, hearing conservation, clinical supervision, private practice

Janet Sturm, Associate Professor; CCC-SLP; Ph.D., University of Nebraska - Lincoln. Child language disorders, augmentative and alternative communication, literacy

Bradford L. Swartz, Associate Professor and Department Chairperson; CCC-SLP; M.A., Central Michigan University; Ph.D., Michigan State University. Speech and hearing science, phonetics, dysphagia, voice

Suzanne Woods, Associate Professor and Director of Speech-Language Pathology Division; CCC-SLP; M.A. in Educational Administration, Central Michigan University; Ph.D., Michigan State University. Clinical supervision, fluency, programs for special populations, neurogenics, phonology, school age settings

The Programs

The Department of Communication Disorders offers the Doctor of Audiology degree for audiologists and Master of Arts degree in Speech-Language Pathology for speech-language pathologists, which lead to clinical certification and are accredited by the American Speech-Language-Hearing Association’s (ASHA) Council on Academic Accreditation.

The high quality research facilities of the department are exemplary and extensive. Students are encouraged to participate in research and grant writing. A range of state-of-the art instruments and software is available for specialized audiometric, acoustic and speech-language analyses.

Students and faculty study a wide range of speech, language, and hearing problems. The Carls Center clinical population furnishes appropriate opportunities to carry out research projects. Many off-campus clinical facilities welcome student training and research activity. The clinic offers experiences in both individual and group treatment. There are opportunities available for pre-school placements within the speech-language clinic as well as clinical experience with those in need of augmentative and alternative communication services and endoscopic visualization of larynx for voice/swallow assessment. In addition, a number of students are afforded the opportunity to travel to local schools to work with school-aged children in programs which involve traditional speech and language therapy as well as phonemic awareness programs. Experiences with adult populations involve innovative therapy for all types of speech and language disorders, including those secondary to traumatic brain injury (TBI), aphasia and voice, stuttering, among others. The Summer Speech-Language Specialty Clinics include a specialized five-week treatment program for children and adolescents with all types of communication disorders.

Each semester, a number of graduate students are awarded competitive assistantships, which may be renewed for students whose academic achievement and clinical skills warrant continued support. Stipend amounts vary, depending upon the funding source. Appointment to an assistantship qualifies graduate students for in-state tuition rates.

In order for prospective students to receive full consideration for admission and financial assistance, applications and all accompanying documents must be received by January 15 for both degree programs for entrance in the fall semester. There are no spring semester admissions. (Early applications are encouraged.) Both graduate programs participate with the Communication Sciences and Disorders Centralized Application System (CSDCAS) on-line application process. This can be accessed at http://csdcas.org. Admission to both graduate programs is a competitive process.
Neither successful completion of an undergraduate degree at CMU or another university, nor meeting the minimal entrance requirements of CDO or the College of Graduate Studies guarantees admission. The number of students admitted each fall is governed by the number of available openings in the program.

Scholarships

CDO-SLP Alumni Scholarship
Established in 1998 through alumni support, for a second-year graduate student in the Speech-Language Pathology Program in the Department of Communication Disorders.

J. Dean and Betty L. Eckersley Audiology Scholarship
Established in 1996 as a renewable scholarship for a graduate student in audiology study within the Department of Communication Disorders who earned a minimum GPA of 3.5 as 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 Department of Communication Disorders.

Nicholas P. Redfield Scholarship
Established in 1998 by colleagues in memory of Dr. Redfield for a third-year Au.D. doctoral student who demonstrates a “client-centered” approach in clinical performance. Volunteer work and efforts to better the audiology program at CMU will also be considered in selecting a candidate for this award.

Master of Arts (M.A.) in Speech-Language Pathology

Minimum Total for Graduation: 54 hours

Admissions Requirements, Retention & Termination Standards

Retention Standards
All students pursuing the Master of Arts in Speech-Language Pathology degree must comply with the American Speech-Language-Hearing Association national certification requirements and maintain a 3.0 GPA. All students concentrating in speech-language pathology must complete a minimum of 400 hours of directly supervised clinical experience under the supervision of an ASHA certified supervisor during their undergraduate and graduate programs. Of these, a minimum of 325 hours must be completed at the graduate level. Each full-time graduate student will be expected to enroll in clinical practicum each semester. Various clinical duties will be assigned in consultation with the Director of Clinical Services. In addition, graduate students will be expected to participate in the Summer Speech-Language Specialty Clinics as a student clinician during the summer following their first year in the graduate program. Additional courses may be required, depending on the student’s academic background. The final determination of course requirements is made in consultation with the student’s academic guidance committee.

The Speech-Language Pathology program at Central Michigan University is designed to prepare graduates for clinical careers as Speech-Language Pathologists. The Essential Functions and Technical Standards for Speech-Language Pathology establish essential qualities that each individual admitted to the program and graduate of the program must possess in preparation for national certification by the American Speech-Language and Hearing Association. In the event that, during the educational process, a student is unable to fulfill these standards, with or without reasonable accommodation, then the student may be dismissed from the program. Acknowledgment and signatory of the document by the student is required upon admission. It is also reviewed on an annual basis or as appropriately requested by the student, faculty, or clinical supervisor. This document can be accessed at: https://centrallink.cmich.edu/academics/health_professions/HPDocs/Documents/slp_tech_standards.pdf

Admission Standards

Admission to the graduate program in speech-language pathology is a competitive process. Each fall semester, the program accepts approximately 35 students. The number of applicants ranges from 150-250 each year. In order to apply for admission, the student must meet the general university requirements, have a grade point average of 3.00 or higher in the last 60 semester hours of undergraduate credit and a grade point average of 3.0 or higher with no grade lower than a C in the major courses or courses determined by CDO to be communication-disorders related. Over the past decade, those accepted into the program have had a major GPA ranging from 3.40 to 4.00. Successful applicants have had strong overall and major GPAs, and strong letters of recommendation. (The GRE is not a criterion for admission.) A student who does not meet the above requirements may be admitted to graduate study on a conditional basis.

Capstone Experience
All speech-language pathology graduate students will complete a “capstone” experience prior to graduation. Students may choose in consultation with an advisor one of the following options:

1. Students will conduct a research project resulting in a thesis study.
2. Students will do a clinical internship at an off-campus site, and participate in a presentation to synthesize and integrate their learning during this experience.
3. Students will conduct a research project resulting in an independent study paper.

Required Courses (43-52 hours)
CDO 513 - Voice Disorders/Laryngectomee Rehabilitation 3(3-0)
CDO 535 - Augmentative and Alternative Communication 3(3-0)
CDO 539 - Stuttering 3(3-0)
CDO 638 - Seminar: Adult and Pediatric Swallowing and Feeding Disorders 3(3-0)
CDO 704 - Language Disorders in Pre-school Children 3(3-0)
CDO 708 - Language Disorders in School-Age Children 3(3-0)
CDO 714 - Motor Speech Disorders 3(3-0)
CDO 717 - Aphasia & Related Neurogenic Disorder 4(4-0)
CDO 730 - Experimental Studies in Communication Disorders 3(3-0)
CDO 734 - Acoustic Phonetics 3(3-0)
CDO 749 - Clinical Practicum in Speech-Language Pathology or Audiology 1-15(Spec)

Note 1: CDO 513, 535, and 539 are required only if the student has not taken an equivalent course at the undergraduate level.

Note 2: Fifteen (15) hours of CDO 749 is required. Each full-time graduate student is expected to enroll in clinical practicum each semester for three (3) credits. Participation in the Summer Speech-Language Specialty Clinics is required during the summer following the first year in the graduate program.

Practicum coursework includes obtaining clock hours with clients. These clock-hours are based upon student need as determined by the academic guidance committee and the Director of Clinical Services.

Additional Requirement
Select one of the following capstone experiences:

Plan A
Required Course (6 hours)
CDO 798 - Thesis 1-6(Spec)

Plan B: Option 1
Required Course (6 hours)
CDO 795 - Internship 3-6(Spec)

Plan B: Option 2
Required Course (3 hours)
CDO 790 - Advanced Independent Study 1-9(Spec)
Electives (0-8 hours)
Select from the following courses in consultation with student’s academic advisor and approval of student’s academic advising committee to bring total program credits to a minimum of fifty-four (54):
CDO 537 - Special Topics in Communication Disorders
CDO 550 - Communication Assessment and Intervention in Children with Autism 3(3-0)
CDO 632 - Counseling Issues in Communication Disorders 3(3-0)
CDO 637 - Special Topics in Communication Disorders 3(Spec)
CDO 639 - Hypopharyngeal Visualization 2(1-2)
CDO -640 - Cadaveric Anatomy for Communication 3(2-2)
CDO 702 - Infant-Toddler Communication: Assessment and Intervention 2(2-0)
CDO 705 - Traumatic Brain Injury 2(2-0)
CDO 711 - Craniofacial Disorders 2(2-0)
CDO 740 - Neuroanatomy 3(3-0)
CDO 790 - Advanced Independent Study 1-9(Spec)
Total: 54 semester hours

Doctor of Audiology (Au.D.)
Minimum Totals for Graduation: 115 hours
Audiology, Post Baccalaureate
Doctors of Audiology are highly skilled in the wide array of diagnostic, remedial and related areas associated with hearing-impaired persons and their families. Although the Au.D. is not a research-oriented degree, students will acquire the knowledge and skills requisite to evaluate/interpret the existing literature, and will be required to synthesize and apply pertinent research knowledge to clinical practice and personal research activities. The first two years of study are devoted primarily to the mastery of the auditory knowledge base. Clinical experience evolves in scope and complexity, with the final two years heavily weighted toward clinical training in a variety of settings with practicing audiologists.

Admission Requirements, Retention & Termination Standards

Admission
The deadline for receipt of all application materials is February 1st for the professional doctoral (Au.D.) program in Audiology. Admission requirements may be obtained from the Department of Communication Disorders.

The admissions committee will consider the applicant’s undergraduate transcript, GRE scores and letters of recommendation. In addition, personal statements and relevant professional experiences will be considered. Applicants from non-English speaking countries must also submit a minimum score of 600 on the TOEFL. Since an audiologist interacts with patients, an applicant’s maturity and interpersonal skills will also be considered. After the initial screening of paper credentials, an interview with each of the most qualified applicants will be used to select the final candidates for admission.

Students normally are accepted into the program on a full-time basis and maintain a course load of approximately 13 credit hours per semester. Exceptions to this are considered on a case by case basis. Each student is assigned a faculty advisor, who will help the student in course selection and monitor his/her progress through the program.

The Audiology program at Central Michigan University is designed to prepare graduates for clinical careers as Audiologists. The Essential Functions and Technical Standards for Audiology establish essential qualities that each individual admitted to the program and graduate of the program must possess. In the event that, during the educational process, a student is unable to fulfill these standards, with or without reasonable accommodation, then the student may be dismissed from the program.

Acknowledgment and signatory of the document by the student is required upon admission. It is also reviewed on an annual basis or as appropriately requested by the student, faculty, or clinical supervisor. The document can be accessed at: http://www.cmich.edu/chp/Documents/college_of_health_professions/CDO/AUD/aud_tech_standards.pdf.

Retention Standards
Progress through the program is based upon compliance with university grading standards. In addition, the student must successfully pass comprehensive examinations at the end of his/her third year of the program in order to enroll in CDO 995. The Au.D. degree will be awarded upon successful completion of course work, clinical practica, comprehensive examination, doctoral project defense, and clinical residency requirements.

Although the curriculum has the flexibility to incorporate the latest advances in the field of audiology, the current curriculum requirements are listed below under Degree Requirements in order of the year they are typically taken.

Students will be placed on probation for:
1. Any grade below a C (2.0) or NC (No credit) in any course required in the Au.D. curriculum.
2. A semester GAP below 3.0 for courses required in the Au.D. curriculum.
3. A cumulative GPA below 3.0 for any semester.

Termination Standards
Students may be dismissed from the program for:
1. Failure to satisfactorily complete remedial work required to be taken off probation within one calendar year.
2. Failure to satisfactorily complete a repeated course at a level of C (or above) or CR (credit) for CR/NC courses the next time the course is offered.
3. Failure (grade of C- or E) of any three courses (academic or on-campus practicum) on the Au.D. curriculum.
4. A final grade of failure on the comprehensive examinations means that the student has failed a rewrite and oral examination of one or more of the comprehensive questions. Determination of whether to retain or dismiss the student from the program will be reached by a majority vote of the faculty/staff of Audiology.
5. Failure to successfully complete any assigned academic or clinical remediation after completion of the comprehensive examinations.
6. Failure (NC) of any of the fourth year clinical externship courses.
7. Students who display a lack of professionalism conduct and/or any behavioral patterns that may jeopardize the safety or well being of patients or others.
8. Students who participate in unethical or illegal activity including, but not limited to, academic dishonesty or violations of the AAA and/or ASHA Code of Ethics.

Degree Requirements
Required Courses I (36 hours)
The following courses should be taken in the first year:
CDO 643 - Disorders of Hearing 3(3-0)
CDO 720 - Anatomy and Physiology Underlying Neuro-otology 3(3-0)
CDO 730 - Experimental Studies in Communication Disorders 3(3-0)
CDO 731 - Diagnostic Audiology 3(3-0)
CDO 740 - Neuroanatomy 3(3-0)
CDO 751 - Speech Audiometry 3(3-0)
CDO 752 - Amplification for the Hearing Impaired 3(3-0)
CDO 759 - Introduction to Clinical Practicum: Audiology 3-9(Spec)
CDO 765 - Cochlear Implants and Other Implantable Technologies 3(3-0)
CDO 771 - Advanced Auditory Assessment 3(3-0)

(Collected)
Required Courses II (33 hours)
The following courses should be taken in the second year:

CDO 750 - Advanced Hearing Science 3(3-0)
CDO 754 - Pediatric Audiology 3(3-0)
CDO 763 - Audiological Rehabilitation Considerations in Education 3(3-0)
CDO 764 - Audiologic Rehabilitation for Adults 3(3-0)
CDO 769 - Intermediate Clinical Practicum: Audiology 3(3-0)
CDO 773 - Advanced Amplification Fitting Strategies 3(2-2)
CDO 781 - Electrophysiological Techniques in Audiology 3(2-2)
CDO 783 - Advanced Electrophysiological Techniques in Audiology 3(3-0)
CDO 853 - Psychosocial Aspects of Hearing Loss 3(3-0)

Required Courses III (28 hours)
The following courses should be taken in the third year:

CDO 744 - Occupational and Environmental Hearing Conservation 3(3-0)
CDO 782 - Evaluation and Management of Balance Disorders 3(3-0)
CDO 849 - Advanced Clinical Practicum: Audiology 4-12(Spec)
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)

Notes:
CDO 898: Students must complete CDO 898 for a total of 6 credit hours. The doctoral project will be an evidenced-based endeavor designed to enhance the student’s capacity to be a critical consumer of audiologic research and to create and opportunity for the student to engage in an in-depth study of an area of Audiology. Students may enroll for CDO 898 as variable credit in blocks ranging from 1-6 credit hours. Concurrent with enrollment in CDO 898, the student will select a doctoral project advisor who must have graduate faculty status at Central Michigan University. Prior to initiating the doctoral project, it must be approved by the Division of Audiology Doctoral Project Committee. Upon completion of the doctoral project, the student must submit it to the Division of Audiology Doctoral Project Committee in an acceptable format.
CDO 995: 5 credit hours of CDO 995 in year 3.

Required Courses IV (18 hours)
The following course should be taken in the fourth year:

CDO 995 - Clinical Externship 5-23(Spec)
Note: 18 credit hours of CDO 995 in year 4 (9 each semester).

Total: 115 semester hours

Course Descriptions: CDO
CDO 513 Voice Disorders/Laryngectomee Rehabilitation 3(3-0)
This course covers etiology, types, evaluation, and treatment of persons with voice disorders and laryngectomees. Prerequisites: 30 hours of undergraduate coursework in CDO or admission to the graduate program in SLP.
CDO 535 Augmentative and Alternative Communication 3(3-0)
Assessment and treatment of communications disorders resulting from multiple deficits originating from neurological, neuromuscular, sensory, and cognitive disorders. Prerequisites: 30 hours of undergraduate coursework in CDO or admission to the graduate program in SLP.
CDO 537 Special Topics in Communication Disorders 1-9(Spec)
Current topics for each semester listed in the Class Schedule. 3 hours each; maximum credit 9 hours.
CDO 539 Stuttering 3(3-0)
Overt and covert characteristics of stuttering behavior including their prevention, etiology, and modification. Prerequisites: 30 hours of undergraduate coursework in CDO or admission to the graduate program in SLP.
CDO 545 Communication Disorders and Aging 3(3-0)
Theoretical foundations for 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 children with autism spectrum disorders, and reviews strategies for enhancing communication and language. Prerequisites: admission to the graduate program in speech-language pathology.
CDO 619 Continuing Registration for Final Research Project 1(1-0)
Non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.
CDO 632 Counseling Issues in Communication Disorders 3(3-0)
Review of theory and practice of counseling methods and techniques to be used by speech-language pathologists in clinical practice. Prerequisites: Admission to the graduate program in speech-language pathology.
CDO 637 Special Topics in Communication Disorders 3(Spec)
Current topics for each semester listed in the Class Schedule. Maximum credit 9 hours. Prerequisite: admission to the graduate program in speech-language pathology.
CDO 638 Seminar: Adult and Pediatric Swallowing and Feeding Disorders 3(3-0)
Study of direct and indirect evaluation and treatment of swallowing disorders in patients with neuromuscular disorders, oral, pharyngeal, laryngeal cancer and pediatric feeding disorders. Prerequisites: admission to the graduate program in speech-language pathology.
CDO 639 Hypopharyngeal Visualization 2(1-2)
Practice in manipulation of instrumentation used in visualizing hypopharyngeal structures. Assessment of laryngeal functions for voice and swallowing based on visual images. Prerequisite: Admission to the graduate program in speech-language pathology.
CDO 640 Cadaveric Anatomy for Communication 3(2-2)
The dissection course will cover the anatomy and neuroanatomy which pertains to the head and neck, in relation to articulation, phonation, and respiration for speech. Prerequisite: Admission to the graduate program in speech-language pathology.
CDO 643 Disorders of Hearing 3(3-0)
Disorders resulting from diseases, injury of the ear, and lesions of the nervous system from the point of view of audiometric diagnosis. Prerequisite: admission to the Au.D. Program. This course is approved for offering in a distance learning format.
CDO 702 Infant-Toddler Communication: Assessment and Intervention 2(2-0)
Course reviews normal communication development from birth to three years, describes high-risk populations, and provides information for assessing and intervening with infants and their families. Prerequisite: Admission to the graduate program in speech-language pathology.
CDO 704 Language Disorders in Preschool Children 3(3-0)
Course includes identification, assessment of, and intervention for communication and language delays in children, with focus on three to five year olds. Prerequisite: Admission to the graduate program in speech-language pathology.
CDO 705 Traumatic Brain Injury 2(2-0)
An introduction to traumatic brain injury with emphasis on medical aspects, behavioral sequelae, and cognitive-communicative disorders related to closed head injury. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 708 Language Disorders in School-Age Children 3(3-0)
Study of normal and disordered language and cognitive processes, as they relate to school age children. Prerequisites: CDO 704; admission to the graduate program in speech-language pathology.

CDO 711 Craniofacial Disorders 2(2-0)
Study of a variety of craniofacial anomalies including cleft lip and palate. Topics to include etiology, evaluation, and treatment from an interdisciplinary perspective. Prerequisites: admission to the graduate program in speech-language pathology.

CDO 712 Physiological Phonetics 2(2-0)
Use of basic equipment in physiological analysis of articulation, phonation, respiration, resonance, and swallowing. Discussion of relevant research and implications for clinical work. Prerequisite: admission to the graduate program in speech-language pathology.

CDO 714 Motor Speech Disorders 3(3-0)
Advanced study in the diagnosis and treatment of motor speech disorders in children and adults. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 717 Aphasia & Related Neurogenic Disorder 4(4-0)
Study of theoretical framework and intervention procedures for aphasia and communication disorders in other neurogenic disorders including right hemisphere dysfunction, dementia, and traumatic brain injury. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 720 Anatomy and Physiology Underlying Neuro-otology 3(3-0)
In-depth study of the anatomy/physiology of the auditory and vestibular systems. Prerequisites: admission to the Au.D. program.

CDO 721 Audiological Aspects of Pharmacology and Microbiology 3(3-0)
Principles of microbiology and bacterial pathogenesis important to audiology, antibiotic therapy for ear infections, common adverse effects, antibiotic resistance, and strategies that minimize pathogen transmission. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 730 Experimental Studies in Communication Disorders 3(3-0)
Selection of a research topic: study of designs, scaling methods, statistics and computer analysis of research in audiology and speech-language pathology; preparation of a prospectus; and critical review of research literature in communication disorders. Prerequisite: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 731 Diagnostic Audiology 3(3-0)
Rationale and application of specialized procedures used in the assessment of hearing function. Advanced study of diagnostic methods. Prerequisite: admission to the Au.D. Program.

CDO 734 Acoustic Phonetics 3(3-0)
Operation of basic laboratory equipment used in acoustical research, and the reading and discussion of significant publications on phonetics. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 736 Phonological Disorders in Children 3(3-0)
Advanced study of the diagnostic and treatment phonological disorders in children. Prerequisite: Admission to the graduate program in speech-language pathology.

CDO 740 Neuroanatomy 3(3-0)
Comprehensive study of the central nervous system, emphasizing the structural and functional organization of the human brain underlying communication disorders. Prerequisite: Admission to the graduate program in speech-language pathology or admission to the Au.D. Program.

CDO 741 Special Topics in Audiology 1-9(Spec)
Current topics for each semester listed in the Class Schedule. 3 hours each; maximum credit 9 hours. Prerequisites: admission to the Au.D. Program.

CDO 744 Occupational and Environmental Hearing Conservation 3(3-0)
Effects of noise as a health hazard especially related to hearing. Government regulations regarding noise levels in vocational environments. Prerequisites: admission to the Au.D. Program. This course is approved for offering in a distance learning format.

CDO 749 Clinical Practicum in Speech-Language Pathology or Audiology 1-15(Spec)
Experience in clinical practices and applicable documentation with various types of clinical profiles in different settings inclusive of educational and medical speech-language pathology. Up to 15 credits earned in this course will not count in the variable credit total. Prerequisites: Admission to the graduate program in speech-language pathology, completion of 25 hours of clinical observation under the supervision of an ASHA certified speech-language pathologist, and a grade point average (GPA) of at least 3.0 in the CDO graduate courses.

CDO 750 Advanced Hearing Science 3(3-0)
Study of principles and concepts basic to the understanding of the normal hearing process. Prerequisite: admission to the Au.D. program.

CDO 751 Speech Audiometry 3(3-0)
Study of topics related to speech audiometry including speech acoustics, speech perception, threshold and discrimination measures, and development of assessment stimuli. Prerequisites: admission to the Au.D.

CDO 752 Amplification for the Hearing Impaired 3(3-0)
Study of topics related to prosthetic amplification including electroacoustic characteristics, clinical measures, relationship of electro-and psycho-acoustic measures and delivery systems. Prerequisite: admission to the Au.D. Program.

CDO 754 Pediatric Audiology 3(3-0)
Study and evaluation of auditory function of neonates, infants, and young children. Prerequisite: admission to the Au.D. Program. This course is approved for offering in a distance learning format.

CDO 756 Early Identification and Management of Hearing Loss 3(3-0)
Principles underlying early hearing detection and intervention programs including universal newborn screening, assessment and management of hearing loss. Prerequisites: admission to the Au.D. program and CDO 754. This course is approved for offering in a distance learning format.

CDO 759 Introduction to Clinical Practicum: Audiology 3-9(Spec)
An introductory experience to clinical practicum in audiology. Prerequisites: admission to the Au.D. program.

CDO 762 Advanced Amplification for the Hearing-Impaired 3(3-0)
Advanced study of amplification for the hearing-impaired including special clinical procedures, research needs, and evolving technology in hearing instruments. Prerequisites: admission to the Au.D. program and CDO 752. This course is approved for offering in a distance learning format.

CDO 763 Audiological Rehabilitation Considerations in Education 3(3-0)
Study of management, educational placement, and remediation strategies for hearing-impaired children. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.
CDO 764 Audioligic Rehabilitation for Adults 3(3-0)
Focuses on the audiological management of hearing loss in adults. Assessment of communication function and implementation of appropriate remedial strategies are emphasized. Prerequisites: admission to the Au.D. program and CDO 763. This course is approved for offering in a distance learning format.

CDO 765 Cochlear Implants and Other Implantable Technologies 3(3-0)
Advanced study of implantable devices including: clinical procedures, applications to specific clinical populations, research needs, evolving selection, evaluating strategies for treatment of the hearing impaired. Prerequisites: CDO 752; Admission to the Au.D. program.

CDO 769 Intermediate Clinical Practicum: Audiology 3-9(Spec)
Clinical practicum providing for the independent performance of basic audiologic procedures, including hearing aid management. Prerequisites: admission to the Au.D. program, completion of CDO 759.

CDO 771 Advanced Auditory Assessment 3(3-0)
Study of advanced diagnostic techniques including acoustic immittance, acoustic reflex and otoacoustic emissions. The clinical management of various disordered clients will be discussed. Prerequisites: admission to the Au.D. program, CDO 731, CDO 751.

CDO 772 Advanced Technology & Practice Aspects of Amplification 3(3-0)
Examination of current and future technologies that relate to amplification and their potential for impact on both clinical and research domains. Prerequisites: admission to the Au.D. program, CDO 752, CDO 762. This course is approved for offering in a distance learning format.

CDO 773 Advanced Amplification Fitting Strategies 3(2-2)
Advanced concepts in the adjustment of electroacoustic characteristics of conventional, programmable and digital hearing aid circuits for the purpose of selecting appropriate amplification. Prerequisites: admission into the Au.D. program, CDO 752, CDO 762.

CDO 781 Electrophysiological Techniques in Audiology 3(2-2)
Study of evoked responses used in diagnostic audiology. Includes ABR, AMLR, ECoG, ALR, P300, ENOG, VER and SSER. Prerequisites: CDO 771, admission to the Au.D. program.

CDO 782 Evaluation and Management of Balance Disorders 3(3-0)
A review of the anatomy, physiology of balance, differential diagnostic procedures such as electronystagmography, posturology and rotational testing, and the rehabilitation of the balance disordered patient. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 783 Advanced Electrophysiological Techniques in Audiology 3(3-0)
Advanced audiological diagnostic techniques used for electric and Magnetic ABR, Brain Mapping, AMLR, ALR, P300, MWN, ENOG, SSER & VER. Prerequisites: admission to the Au.D. program, CDO 781. This course is approved for offering in a distance learning format.

CDO 785 Auditory Processing Disorders 3(3-0)
Principles underlying neuroanatomic and neurophysiologic bases of auditory processing and auditory processing disorders, behavioral and electrophysiologic assessment strategies, and management of auditory processing disorders. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 790 Advanced Independent Study 1-9(Spec)
Intensive study of a subject area initiated by the student and guided by faculty member or faculty committee. Prerequisites: permission of advisor and instructor and completion of CDO independent study form. Students can take no more than 3 credits at one time.

CDO 795 Internship 3-6(Spec)
Full-time clinical experience with an approved supervisor in hospital, private practice, school, or other appropriate setting. CR/NC only. Prerequisites: admission to the graduate program in speech-language pathology.

CDO 798 Thesis 1-6(Spec)
CR/NC only.

CDO 849 Advanced Clinical Practicum: Audiology 4-12(Spec)
Clinical practicum which encompasses the entire range of audioligic procedures including rehabilitation. Prerequisites: admission to the Au.D. program, completion of CDO 769.

CDO 853 Psychosocial Aspects of Hearing Loss 3(3-0)
An investigation into the advising role of the audiologist with persons having hearing impairment. Psychological, social, and vocational aspects of hearing loss are emphasized. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 863 Professional Issues in the Practice of Audiology 3(3-0)
Issues of a professional nature which impact on the practice of audiology. Topics include accreditation/certification, quality assurance, reimbursement, establishing a private practice, and professional liability. Prerequisites: admission to the Au.D. program. This course is approved for offering in a distance learning format.

CDO 898 Doctoral Project 1-12(Spec)
Doctoral project. This course is approved for offering in a distance learning format. CR/NC only. Prerequisites: admission to the Au.D. program, CDO 730.

CDO 995 Clinical Externship 5-23(Spec)
Full-time clinical experience with an approved preceptor in a hospital, private practice or other appropriate setting. CR/NC only. Prerequisites: Admission to the Au.D. program, CDO 849, CDO 898.

Course Descriptions: ASL

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 ASL skills and knowledge of Deaf culture by providing ASL instruction in a community educational enrichment program for elementary school children. Prerequisite: ASL 202; ASL 100 or 390; 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; and permission of instructor.

ASL 599 Special Topics 1-3(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.
DEPARTMENT OF
COMPUTER SCIENCE (CPS)
College of Science and Technology

Michael C. Stinson, Chairperson
413 Pearce Hall, (989) 774-3774
https://www.cmich.edu/academics/sci_tech/comp_sci

Thomas E. Alhsweede, Ph.D., Natural Language Processing, Computer Graphics
Gongzhu Hu, Ph.D., Databases, Distributed Programming, Pattern Recognition
Patrick Kinnicutt, Ph.D., Geostatistics, Science Informatics
Roger Y. Lee, Ph.D., Software Engineering, Object-oriented Modeling
Qi Liao, Ph.D., Computer and Network Security, Economics/Game Theory for Cybersecurity
S. N. Jayaram Murthy, Ph.D., Multimedia, Pattern Recognition, Data Mining
Ishwar Rattan, Ph.D., Operating Systems, Distributed Processing
Patrick Seeling, Ph.D., Multimedia, Networks, Engineering Education
Neelima Shrikhande, Ph.D., Artificial Intelligence, Computer Vision, Image Processing
Lal P. S. Singh, Ph.D., Databases, Intelligent Tutoring Systems
Michael C. Stinson, Ph.D., Neural Networks, Software Engineering
Ahmet Ugur, Ph.D., Evolutionary Programming, Generic logarithms, Biocomputing

The Program
The graduate programs in computer science are supported by a UNIX lab, 3 PC labs and dedicated laboratories for computer graphics, databases, operating systems, networks, and software engineering. In addition, the university's computer network is available.

Some graduate assistantships are available; the application deadline is February 15 for fall and October 1 for spring. Research assistantships may be available depending on funding.

Master of Science (M.S.) in Computer Science

Minimum Totals for Graduation: 30 hours

Admissions Requirements, Retention & Termination Standards

Conditional admission may be granted upon completion of a bachelor's degree, including a two semester sequence in a modern programming language with elementary data structures (CPS 180, CPS 181), from an accredited institution with a minimum overall grade point average of 3.0 in the last two years of study, as well as in the programming courses. International students are required to demonstrate English competency. (See section on English Language Competency in this Bulletin).

Regular admission is granted to students who meet the above conditional requirements and have completed the following or the equivalent:

- Computer Architecture
- Data Structures and Algorithms
- Program Languages
- Operating Systems
- Calculus I
- Discrete Mathematics

GRE scores may be considered in cases where a student is deficient in the above knowledge areas.

Conditionally admitted students who have not met all these requirements will be required to get the department chairperson's permission to register in each graduate course.

Students are required to achieve a minimum grade point average of 2.5 in the above-listed courses.

Degree Requirements

Required Courses I (6 hours)
CPS 542 - Analysis and Design of Algorithms 3(3-0)
CPS 691 - Graduate Seminar 3(3-0)

Required Courses II (6 hours)
Select six (6) credit hours from the following courses:
CPS 520 - Software Architecture 3(3-0)
CPS 541 - Databases 3(3-0)
CPS 585 - Applied Data Engineering 3(3-0)
CPS 610 - Advanced Software Design and Development 3(3-0)
CPS 685 - Pattern Recognition and Data Mining 3(3-0)
CPS 710 - Software Engineering Metrics, Models and Management 3(3-0)

Other Requirement
Select either Plan A or Plan B.

Plan A Requirement (6 hours)
The 30-hour requirements include 24 hours of coursework, a Masters thesis of 6 hours (CPS 798), and an oral examination on the thesis. For Masters thesis, a Thesis Committee shall be formed according to the procedure outlined in the Thesis, Field Study, or Dissertation section of College of Graduate Studies Bulletin.
CPS 798 - Thesis 1-6(Spec)

Plan B Requirement
The 30-hour requirements include 30 hours of coursework and a Plan B Project. A student must complete a substantial written report in computer science or an application of computer science for the Plan B project.

Copies of procedures for such projects are available from the department chairperson. The project will ordinarily include a significant original programming component with a written defense of the programming component and must include evidence of scholarly and creative ability. The project must be supervised while in progress and approved by a committee of two faculty members.

Electives (12-18 hours)
At least 12 hours must have the CPS designator. Electives from related areas are selected with approval of the CPS advisor.
Total: 30 semester hours

Notes:
At least 15 semester hours of courses must be at 600-level or above.
A student who satisfied any of the course requirements prior to entering the program may be excused from that course requirement. However, the 30-hour requirement will not be affected.

(Continued)
**Accelerated Master of Science in Computer Science**

Undergraduate students in Computer Science can pursue a Master of Science program in Computer Science while still fulfilling the requirements for their Bachelor’s degree. The Accelerated Master’s Degree Program (AMDP) which was recently approved at CMU allows students to reduce the total number of credits required to complete their undergraduate and graduate level courses by applying up to 12 credits (500 and 600 level courses) towards graduation requirements on both degree programs.

**Admission Criteria:**

To be eligible for the accelerated program, a student must have completed a minimum of 90 credits (including transfer and/or AP credits) towards a Bachelor’s degree, including all University Program requirements. An overall grade point average (GPA) of at least 3.25 is required, as well as a minimum of 3.00 in Computer Science course work. In addition, students must satisfy all requirements for regular admission to the Master’s program in Computer Science, with the possible exception of completing CPS 450 and 470 courses, which may be completed during the senior year.

During the fourth year, students will complete 12 credits of graduate level course work (excluding independent study credits) that will be counted towards both the undergraduate and graduate degrees. In addition, students will take either CPS 450 and 470 or 6 hours of CPS electives. Other courses may be taken to complete Bachelor of Science degree requirements. Students will complete the course work required for a Master of Science degree and complete either Plan A or Plan B option by the end of the fifth year.

A sample curriculum for a student who has completed 90 credit hours of undergraduate course work is given below:

**Sample Curriculum for Plan A or Plan B option:**

**Year Four**

*Fall (15 hours):*
- CPS 542 (Elective for BS, required for MS) - 3 hours
- CPS Elective or CPS 450 - 3 hours
- Undergraduate Courses - 9 hours

*Spring (15 hours):*
- CPS Elective or CPS 470 - 3 hours
- Other BS Requirement - 3 hours
- CPS electives for both BS and MS - 9 hours

**Summer (3 hours):**
- UG Courses - 3 hours (if necessary?)

**Year Five**

*Fall (12 hours):*
- CPS 670 (required for MS) - 3 hours
- Electives for MS* - 9 hours

*Spring (12 hours):*
- CPS 650 (Required for MS) - 3 hours
- Electives for MS* - 9 hours

*Note: Students may complete CPS 798 - 6 hours over the course of two semesters for the MS Plan A Option.*

**Certificate in Data Mining**

This is an interdepartmental graduate certificate. Please check the index for the page number.

**Course Descriptions: CPS**

**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 for 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 280J.

**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 560 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 223.

**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 the semester Class Schedule. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Prerequisite: See Class Schedule. 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.

CPS 603 Computer Information Systems 3(3-0)
Growth stages of computer usage, information flow, role of MIS manager in providing information to an organization. Does not count on the M.S degree in computer science. Prerequisite: CPS 501. This course is approved for offering in a distance learning format.

CPS 610 Advanced Software Design and Development 3(3-0)
Advanced topics in software engineering. Developing a large software system using modern software engineering techniques including object-oriented programming and CASE tools. Prerequisite: CPS 410.

CPS 611 Software Verification and Validation 3(3-0)
Software verification and validation techniques are introduced and their applicability discussed. In-depth study of verification and validation area. Does not count for the MS in Computer Science. Prerequisites: CPS 510 and MTH 175.

CPS 612 Software Project Management 3(3-0)
Software engineering process, software project organization and management issues, software project economics, software quality assurance, software configuration management, software operations issues. Does not count for MS in Computer Science. Prerequisites: CPS 510. This course is approved for offering in a distance learning format.

CPS 613 Specification of Software Systems 3(3-0)
Formal models and representations. Specification techniques and tools that support them. Assessment of specification for attributes such as consistency and completeness. Does not count on the MS in Computer Science. Prerequisites: CPS 510 and MTH 175.

CPS 614 Principles and Applications of Software 3(3-0)
Covers several different methods and languages for expressing designs. The process of assessment is also covered. Does not count for the MS in Computer Science. Prerequisites: CPS 510 and MTH 175.

CPS 615 Software Generation and Maintenance 3(3-0)
Techniques for performing software generation and maintenance Alternatives to coding, language concepts, the role of standards and style, the role of tools, performance analysis, regression analysis, other maintenance-specific subjects. Does not count for the MS in Computer Science. Prerequisites: CPS 510.

CPS 619 Continuing Registration for Final Research Project 1(1-0)
An non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

CPS 641 Advanced Topics in Databases 3(3-0)
Conceptual models. Relational theory. Access methods, query optimization. Concurrency Integrity. Selected current topics, e.g., distributed, temporal, and object-oriented databases. Student projects; literature review. Prerequisite: CPS 541.

CPS 650 Theory and Practice of Compiler Construction 3(3-0)
Automata theory, context-free languages, syntax analysis and parsing techniques. Semantic processing for structured and/or object-oriented programming languages. Code generation and optimization. Prerequisite: CPS 450.

CPS 665 Computer Networks II 3(3-0)
Principles, design, implementation, performance, security issues and areas of current research in computer networks. Prerequisites: CPS 565; STA 382.

CPS 670 Operating Systems 3(3-0)
Concepts, communication, synchronization, processes, and processors in distribution systems. Distributed file systems. Distributed shared memory systems. Prerequisite: CPS 470.

CPS 675 Advanced Topics in Computer Graphics 3(3-0)
Detailed study of selected advanced topics in computer graphics. Prerequisite: CPS 575.

CPS 680 Artificial Intelligence 3(3-0)
Introduction to search, knowledge representation, Machine learning, neural networks, evolutionary and bio-inspired computation techniques, Intelligent agents, and expert systems. Prerequisite: CPS 542.

CPS 685 Pattern Recognition and Data Mining 3(3-0)
Pattern modeling, classification, recognition, and their applications in data mining. Data mining process and techniques, including data transformation, supervised induction, association discovery, and conceptual clustering. Prerequisites: CPS 410, MTH 223, STA 282, STA 382 or STA 584.

CPS 691 Graduate Seminar 3(3-0)
Current topics in computer science and technology. Literature study. Development, demonstration, and presentation of research and application projects. Technical writing. Prerequisites: 12 hours of graduate courses in CPS.

CPS 695 Professional Field Experience 1-6(Spec)
Professional field experience via internship or apprenticeship. Must be integral to the student's program of study. Does not count towards a degree in Computer Science. CR/NC only. Prerequisites: permission of graduate advisor or department chairperson.

CPS 696 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 the semester Class Schedule. Repeatable up to 6 credits when content does not duplicate previous special topic studies. Pre/Co-requisite: See Class Schedule. Determined by the specific topics presented.

CPS 697 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 698 Computer Information Systems 3(3-0)
Study of modern software design techniques, complexity metrics, testing techniques, models and projects management. Prerequisites: CPS 520, 610.

CPS 798 Thesis 1-6(Spec)
Research topic in computer science selected by the student and approved by thesis advisor. CR/NC only. Prerequisites: Written permission of advisor and department chairperson.
Department of Counseling and Special Education
(CED, SPE)
College of Education and Human Services

Suzanne Shellady, Chairperson
321 EHS Building, (989) 774-3205
Dawn Decker, Ph.D., Cognitive Impairment
J. Rico Drake, Ph.D., Professional Counseling
Laura M. Frey, Ph.D., Emotional Impairment
LaShonda Fuller, Ph.D., School Counseling
Holly Hoffman, Ph.D., Emotional Impairment, Early Childhood Special Education
Candy McCorkle, Ph.D., Professional Counseling
Twinet Parmer, Ph.D., Professional Counseling
Suzanne Shellady, Ph.D., Emotional Impairment, Autism, Learning Disabilities
Jordan Shurr, Ph.D., Cognitive Impairment
Jennifer Wizr, Ph.D., Learning Disabilities, Emotional Impairment

Master of Arts (M.A.) in Counseling
Minimum Totals for Graduation: 48 hours

The Counselor Education faculty at Central Michigan University offer courses and programs designed to prepare students to work as counseling personnel in public and private schools, institutions of higher education, community-based social service agencies, and private practice. Many classes are offered nights and weekends to better accommodate the nontraditional student. Students who successfully complete a program for Counselor Education earn a Master of Arts degree in Counseling.

Faculty members include licensed professional counselors, nationally certified counselors, and licensed psychologists. Teaching excellence is a top priority of the faculty.

Admission Requirements, Retention & Termination Standards

Note: See the Global Campus Bulletin for Admission Requirements and Program Requirements for Global Campus students.

Admission

1. Applicant screenings are conducted twice a year. All application materials (see below) must be received by submission deadlines: February 1 or September 1.

2. In addition to submitting the application, all transcripts, and written statement of purpose and general plans for graduate study, the applicant must arrange for a recent (not more than five years old) Miller Analogies Test (MAT) score to be sent directly to the Department of Counseling and Special Education and be received by the application deadline. The MAT score, undergraduate GPA, and the applicant's statement of purpose and general plans for graduate study are all considered in determining admission. The MAT is available through testing centers such as the Computer-based and Placement Testing Center located on the CMU campus.

3. Applicants chosen in the screening process will be initially admitted to the program on a Conditional basis. To be eligible for Regular Admission status, the student must first complete a minimum of 10 semester hours of coursework in the Counselor Education program with a minimum 3.0 grade point average.

4. In addition to the above requirements, applicants seeking school counseling endorsement must have or be eligible for Michigan Teacher Certification.

Program Requirements

The candidate should complete their Authorization of Degree Program form with their assigned advisor after achieving Regular Admission status. Elective courses will be selected with the approval of the advisor. The faculty recommends taking the comprehensive examination during the semester the student intends to graduate.

Progress through the program is based on satisfactory grades (a grade point average of B or better overall) and satisfactory evaluations of pre-professional functioning (e.g., demonstration of appropriate personal and professional skills, ethical standards, and behaviors). Serious and persistent difficulties in pre-professional functioning may result in dismissal from the program.

Each on-campus student participates in a supervised counseling experience (practicum) in the Human Development Clinic. (Global Campus students’ practicum will take place in the field.) The Human Development Clinic provides counseling services for community residents, area school children, and Central Michigan University students. As a required part of their counseling training, advanced students ordinarily perform these services under the supervision of the Counselor Education faculty. 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 Human Development Clinic provides extensive counseling and consultative services during the summer months. The Human Development Clinic is administered by the Department of Counseling and Special Education.

Degree Requirements

Select one of the following options:

Counseling: Professional Counseling

This option prepares students who wish to qualify for licensure as school counselors or professional counselors (LPC) in Michigan. Students will gain knowledge and experience in professional orientation and ethical practice, social and cultural diversity, human growth and development, career development, helping relationships, group work, assessment, and research. Practicum and internship experiences will complete the minimum requirements. Elective hours will allow the individual student to gain additional knowledge and experience in areas of particular interest. (Note: School counseling licensure will usually require some coursework beyond the 48 credit hour degree.)

Core Courses I (3 hours)

Select one of the following:
CED 610 - Career Development and Counseling 3(3-0)
CED 611 - Developmental Career Counseling 3(2-1)

Core Courses II (30 hours)
CED 566 - Lifespan Development for Counselors 3(3-0)
CED 620 - Introduction to Multicultural Issues in Counseling 3(3-0)
CED 630 - Counseling Ethics and Professional Issues 3(3-0)
CED 640 - Standardized Tests 3(3-0)
CED 650 - Theories and Techniques of Group Counseling 3(3-0)
CED 660 - Counseling Techniques 3(3-0)
CED 677 - Theories of Counseling 3(3-0)
CED 690 - Counseling Practicum 3(1-3)
CED 695/SPE 695 - Research for Counseling and Special Education 3(3-0)
CED 765 - Professional Counseling and Consulting 3(3-0)
Additional Requirements (3 hours)
Select one of the following:
CED 502 - Student Development in Higher Education 3(3-1)
CED 503 - Introduction to Community Agency Counseling 3(3-0)
CED 504 - Introduction to School Counseling 3(3-0)
Electives (3 hours)
Select other CED courses, approved SPE courses, or approved
transfer credits to bring credit hour total to at least 48.

Plan B Requirement (6 hours)
Satisfied by CED 691 (6 hours) and Comprehensive Examination.
CED 691 - Internship in Counseling 1-6(Spec)
Total: 48 semester hours

Counseling: School Counseling
The school counseling option is designed for students with
Teacher Certification who wish to earn a School Counselor
Endorsement. Potential work settings would include: elementary
schools, middle schools, secondary schools, or K-12
schools. School Counseling graduates will meet the academic
requirements for licensure as a professional counselor (LPC)
in Michigan.
Core Courses I (3 hours)
Select one of the following:
CED 610 - Career Development and Counseling 3(3-0)
CED 611 - Developmental Career Counseling 3(2-1)
Core Courses II (30 hours)
CED 566 - Lifespan Development for Counselors 3(3-0)
CED 620 - Introduction to Multicultural Issues in Counseling 3(3-0)
CED 630 - Counseling Ethics and Professional Issues 3(3-0)
CED 640 - Standardized Tests 3(3-0)
CED 650 - Theories and Techniques of Group Counseling 3(3-0)
CED 660 - Counseling Techniques 3(3-0)
CED 667 - Theories of Counseling 3(3-0)
CED 690 - Counseling Practicum 3(1-3)
CED 695/SPE 695 - Research for Counseling and Special Education 3(3-0)
CED 765 - Professional Counseling and Consulting 3(3-0)
Additional Requirements I (6 hours)
CED 504 - Introduction to School Counseling 3(3-0)
CED 545 - School Counseling Seminar 3(3-0)
Electives (3 hours)
Select other CED courses, approved SPE courses, or approved
transfer credits to bring credit hour total to at least 48.
Plan B Requirement (6 hours)
Satisfied by CED 691 (6 hours) and Comprehensive Examination.
CED 691 - Internship in Counseling 1-6(Spec)
Total: 48 semester hours

Master of Arts (M.A.) in Special Education: The Master Teacher
Minimum Totals for Graduation: 33 hours
The Master of Arts in Special Education is designed for stu-
dents who want advanced study in special education. These
programs are designed to provide training experiences leading
to the development of those competencies specifically related
to working with persons with disabilities in a variety of public
school and community settings as a teacher or teacher consultant.

Special Education requires that a minimum of 15 semester
hours toward any graduate program be taken on campus. “On
campus” is not restricted to Mt. Pleasant. Therefore, students
should contact the department chairperson to determine whether
a course is considered “on campus.”

The Master Teacher
The Master of Arts Degree in Special Education: The Master
Teacher is conceptualized as a degree designed specifically to
build upon the strengths of certified educators. It is intended
to expand their skills and knowledge base in order to prepare
them to assume the role of what the Carnegie Institute refers
to as “The Master Teacher.”

Admission Requirements, Retention & Termination Standards
Beyond the standards of the College of Graduate Studies
admission, Special Education requires the following:
1. Prior to admission to a master’s degree program, the candidate
   must have a bachelor’s degree and a valid Michigan Elementary
   or Secondary Provisional, Permanent, or Life certificate or
   special education endorsement. If applicants do not meet
   this requirement, they should contact the EHS Center for
   Student Services (421 EHS Building, CMU, Mt. Pleasant, MI 48859, 989-774-3309).
2. Conditional Admission to the Master of Arts degree program
   in Special Education requires an undergraduate cumulative
   grade point average of 2.75. (Applicants below the required
   grade point average may appeal through the chairperson for
   exception.) Additionally, applicants are required to submit a
   current statement of purpose for pursuing the degree, and
   two letters of recommendation regarding the applicant’s
   performance with Special Education populations.
3. Any applicant who is not admitted to a degree program in
   Special Education may reapply to that option by following
   the same procedures for the initial application.
4. After each applicant with Conditional Admission has completed
   10 semester hours of graduate study on the program at
   Central Michigan University with a grade point average of
   3.0 or higher, he or she may petition for reclassification for
   Regular Admission. The faculty will then determine whether
   Regular Admission will be granted. An Authorization of Degree
   Program form must be filed at this time by students granted
   Regular Admission.

Prerequisites:
Special Education endorsement OR the following courses
within the last ten years.
SPE 126 - Introduction to Special Education 3(3-0)
SPE 550 - Teaching Culturally Diverse Students 3(3-0)

Retention and Termination Standards
These graduate programs lead to a Master of Arts degree in
Special Education. The degree is based upon satisfactory comple-
tion of a minimum of 33 semester hours of graduate work and
satisfactory demonstration of the competencies identified within
the stated objectives and activities of the program.

(Continued)
Degree Requirements

Core Courses (15 hours)
SPE 600 - Current Issues in Special Education 3(3-0)
SPE 679 - Behavioral and Curricular Interventions for Individuals with Mild Disabilities 3(3-0)
SPE 695/CED 695 - Research for Counseling and Special Education 3(3-0)
SPE 750 - Consultant Skills for Special Educators and Counselors 3(3-0)
SPE 785 - Assessment in Special Education 3(3-0)

Additional Requirements (15 hours)
Required classes to be selected in consultation with an advisor.

Plan B Requirement (3 hours)
SPE 790 - Seminar: Investigations and Solutions in Special Education 3(3-0)

AND

Comprehensive Examination

Total: 33 semester hours

Graduate Certificate in Autism

Minimum Totals for Graduation: 18 hours

The 18 credit hour certificate is designed for graduate students who seek advanced training in the field of autism. This program is designed to provide multidisciplinary training experience in developing competencies to work effectively with individuals with autism in a variety of educational and community settings. Students can choose to pursue this certificate alone, or may potentially incorporate it into various master's programs. Credits successfully earned within this graduate certificate program can be transferred toward the Master Teacher program.

Admission Requirements, Retention & Termination Standards

Admission is through the College of Graduate Studies. Students pursuing this certificate should have a background in education, psychology, communication disorders or another related discipline and have met the graduate admission requirements for non-degree seeking students. Students pursuing the autism program in conjunction with the Master Teacher program or other graduate program must adhere to the corresponding admission requirements for that graduate program.

Required Courses (15 hours)
CDO 550 - Communication Assessment and Intervention in Children with Autism 3(3-0)
PSY 586 - Applied Behavioral Analysis in Education 3(3-0)
PSY 682/EDU 682 - Psychology of Child Development 3(3-0)
SPE 530/PSY 575 - Autism Spectrum Disorder: Characteristics and Etiology 3(3-0)
SPE 531 - Autism Spectrum Disorder: Educational Implications 3(3-0)

Focus
Select one of the following:

Communication Disorders Focus (3 hours)
Those pursuing a graduate certificate with a Communication Disorders focus must also take:
CDO 749 - Clinical Practicum in Speech-Language Pathology or Audiology 1-5(Spec)

Psychology Focus (3 hours)
Those pursuing a graduate certificate with a psychology focus must also take:
PSY 792 - Supplemental Supervision 1-3(Spec)

Special Education Focus (3 hours)
Those pursuing a graduate certificate with a Special Education focus must also take:
SPE 536 - Field Experience: Autism 3(Spec)

Total: 18 semester hours

Course Descriptions: CED

CED 502 Student Development in Higher Education 3(3-1)
The college student personnel movement, its social, psychological, and cultural foundations. Student development functions; career program models; legal, ethical, and professional considerations; role of professionals. This course is approved for offering in a distance learning format. Prerequisites: Junior standing or graduate status.

CED 503 Introduction to Community Agency Counseling 3(3-0)
An overview of issues and trends in community agency counseling. Topics include: history, professional orientation, philosophy, finance, administration, community resources and special concerns. This course is approved for offering in a distance learning format. Prerequisites: Junior standing or graduate status.

CED 504 Introduction to School Counseling 3(3-0)
History and philosophy of school counseling programs. Role and function of school counselors. Prerequisites: Minimum of 56 credit hours completed or graduate status.

CED 505 Orientation to the Counseling Profession 1(1-0)
Orientation to the profession by examining history, identity, and process of becoming a professional counselor in a diverse society. This course is approved for offering in a distance learning format. Prerequisites: Senior standing or graduate status.

CED 515 Basic Group Participation 1(Spec)
Facilitated group counseling where students experience being in the role of client/group participant. CR/NC only. Prerequisite: Junior standing or graduate status.

CED 520 Personal Growth and Development 2(Spec)
Personal growth group to help participants increase awareness and acceptance of self and others. Prerequisites: Junior standing or graduate status.

CED 540 Counseling for Addictions 3(3-0)
Presentation and application of basic theories, techniques and resources for dealing with a broad range of addictive behavior, both substance related and behaviorally focused. Prerequisites: Senior or graduate status.

CED 545 School Counseling Seminar 3(3-0)
Discussion and individual investigation into topics and critical incidents germane to schools. Recommendations and solutions by professionals in the field are reviewed. Prerequisites: CED 504.

CED 551 Counseling with Children 3(3-0)
Survey of specialized skills for counseling with children. Emphasis upon the modification of counseling interventions to meet the needs of elementary aged children. Prerequisite: Junior or graduate status.

CED 555 Human Relations Skills 3(3-1)
An introduction to skills utilized in developing helping relationships, emphasizing the person-to-person, day-to-day relationships. This class will be conducted through cognitive and experiential approaches. This course is approved for offering in a distance learning format. Prerequisites: Senior standing or graduate status.

CED 566 Lifespan Development for Counselors 3(3-0)
Course will address the influence of developmental and environmental factors on human behavior, including physical, social, and psychological aspects, and implications for counselors. Prerequisites: Minimum of 56 credit hours completed or graduate status.

CED 580 Seminar: Professional Topics 1-12(Spec)
Special topics that are germane to the field of counseling. This course is approved for offering in a distance learning format. Prerequisites: Junior standing or graduate status.

CED 583 Counseling Aspects of Sexuality 3(3-0)
An introduction to the dynamics of human sexual dysfunctions and the counseling appropriate for therapeutic intervention. Prerequisites: Junior standing or graduate status.
CED 605 The Marriage and Family Therapist 3(3-0)
Study of professional and ethical responsibilities; role of professional organizations, licensure and certification; legal responsibilities and liabilities; intra-professional cooperation; and development of professional identity.

CED 608 Understanding and Working with Couples and Families 3(3-0)
Introduction to theories and skills for working with couples and families and understanding how relationships influence individual behavior. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.

CED 610 Career Development and Counseling 3(3-0)
Critical survey of career development theories. Practical application of career counseling programs. Use of tools and information in career counseling. This course is approved for offering in a distance learning format.

CED 611 Developmental Career Counseling 3(2-1)
Critical survey of career development theories. Application of concepts and strategies of career exploration. Students participate in a supervised experience in teaching career exploration techniques. Prerequisite: Graduate status. Recommended: Completion of, or concurrent enrollment in, CED 650.

CED 612 Work and Career in a Global Society 3(3-0)
Orient students to work and career in a global society by examining past, present and future issues in the workplace. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.

CED 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

CED 620 Introduction to Multicultural Issues in Counseling 3(3-0)
An examination of research and practice issues relating to counseling culturally specific groups. Special emphasis on the client/counselor relationship.

CED 621 Orientation to a Culturally Diverse Society 3(3-0)
Orient students to the process of developing competence to live and relate in a culturally diverse society. Prerequisites: Graduate status.

CED 630 Counseling Ethics and Professional Issues 3(3-0)
Supervised discussion of legal and ethical issues that most affect the practice of counseling and related helping professions. This course is approved for offering in an online or hybrid format. Prerequisites: Admission to the M.A. in Counseling.

CED 640 Standardized Tests 3(3-0)
Selection, evaluation, functions, and interpretation of tests in intelligence, achievement, aptitude, personality, and interests. Emphasis on tests appropriate to the students’ future work settings. This course is approved for offering in a distance learning format. Prerequisite: Admission to counseling program.

CED 650 Theories and Techniques of Group Counseling 3(3-0)
The application of group theories and techniques, interpersonal communication skills, and the assessment of group counseling interventions. Prerequisite: Regular admission to the M.A. in Counseling. Pre/Co-requisite: CED 660.

CED 660 Counseling Techniques 3(3-0)
Systematic study of the counseling process: stages, intervention strategies and related issues. Both cognitive and experiential approaches will be used. Prerequisites: CED 677; Regular Admission to the M.A. in Counseling.

CED 668 Theory and Process of Family Therapy 3(3-0)
Introduction to the specific theories of marriage and family counseling and examination of the processes involved with each.

CED 670 Independent Study 1-12(Spec)
Study and/or investigation of a special problem with the guidance of a staff member. Prerequisites: Admission to the M.A in Counseling.

CED 677 Theories of Counseling 3(3-0)
An examination of psychological foundations with counseling theories and approaches. Designed to aid students’ development of a personal counseling theory as a guide to practice. Prerequisites: Admission to the M.A. in Counseling.

CED 680 Seminar: Professional Topics 1-12(Spec)
Special topics that are germane to the field of counseling. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.

CED 684 Grief, Loss and Trauma 3(3-0)
An examination of grief, loss and trauma, the impact they have on individuals and systems, and how helping professionals can mitigate their effects. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.

CED 685 Counseling Aspects of Grief and Loss 3(3-0)
An introduction to the dynamics of grief and loss and the counseling procedures appropriate for therapeutic intervention. This course may be offered in an online or hybrid format.

CED 690 Counseling Practicum 3(1-3)
Supervised counseling of individuals, families, couples and children. Observation and critique of peer counseling sessions. NOTE: Prior application by the posted deadline and approval required. Prerequisites: Regular Admission to the M.A. in Counseling; a grade of B or better in CED 660.

CED 691 Internship in Counseling 1-6(Spec)
On-the-scene work in selected settings under the supervision of experienced practitioners. Practical experience, observation, and opportunity for relating the theoretical and the actual. NOTE: application to register for this course must be filed during the semester prior to registration for approval. CR/NC only. Prerequisites: grade of B or better in CED 690.

CED 695 Research for Counseling and Special Education 3(3-0)
Presentation and application of designs and procedures pertinent to conducting research in human services. Includes writing a research proposal and manuscript, implementing mini-research project. Identical to SPE 695. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: Regular Admission to the M.A. in Counseling or Special Education; completion of 15 hours or more toward the M.A. in Counseling or Special Education.

CED 696 Independent Research 3(Spec)
Completion of research project under the supervision of a faculty advisor. Prerequisite: Successful completion of CED 695 or graduate research methods course.

CED 698 Thesis 1-6(Spec)
CR/NC only. For Master’s degree candidates. Prerequisites: CED 695.

CED 750 Advanced Group Facilitation 3(3-1)
Survey of differing styles of group facilitation. Elements in the helping relationship which improve the quality of interpersonal relationships. “Self-in-therapeutic-interaction” incorporated into a supervised experience. Prerequisites: Regular admission to the M.A. in Counseling; CED 650; permission of instructor.

CED 751 Facilitation of Play Therapy Sessions 3(3-1)
Systematic inquiry into the use of play therapy and its relevance to the growth and development of children. Theoretical positions compared and appraised. Supervised experience. Prerequisites: Regular admission to the M.A. in Counseling; permission of instructor.
CED 765 Professional Counseling and Consulting 3(3-0)
Focuses on specific knowledge and skills used by professional counselors in a variety of settings. Includes consultation, supervision, diagnostics, and other topics. This course is approved for offering in a distance learning format. Prerequisites: Admission to Counseling program; CED 677.

CED 780 Seminar: Professional Topics 1-12(Spec)
Special topics that are germane to the field of counseling. This course is approved for offering in a distance learning format. Prerequisite: 15 hours of graduate level counseling coursework.

CED 790 Advanced Counseling Practicum 3(1-3)
A continuation of CED 690. Application to register for this course must be filed by the posted deadline prior to registration for approval. Prerequisite: CED 690.

CED 791 Advanced Internship in Counseling 3(Spec)
Internship with selected professionals. Opportunity to confirm professional effectiveness in helping professions. NOTE: Application to register must be filed and approved during the semester prior to registration. CR/NC only. Prerequisites: Grade of B or better in CED 690; permission of instructor.

Course Descriptions: SPE

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 290 or graduate status.

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. 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; PSY 310; 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, SPE 324, SPE 519 and SPE 521 with grades of C+ or better; admission to Teacher Education; PSY 310.

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)
This course will review the behavioral and educational characteristics of students with autism spectrum disorders. 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 for 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 561 Career Development and Transition 3(3-0)
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 is approved for offering in a distance learning format. Prerequisites: SPE 126 with a grade of C or better; SPE 322 and 323 with grades of C+ or better; PSY 310; 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, SPE 323 with grades of C+ or better; PSY 310; 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, SPE 323, SPE 324, SPE 578, and SPE 579 with grades of C+ or better; admission to Teacher Education; PSY 310.

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. Prerequisites: HDF 100 or PSY 220 or EDU 280; junior standing; or graduate status.

SPE 600 Current Issues in Special Education 3(3-0)
Concentrated study of current special education problems with particular attention to program implementation and development resulting from recent legislation and research. This course may be offered in an online or hybrid format. Prerequisite: admission to a master's program in Special Education.

SPE 619 Continuing Registration for Final Research Project 1(1-0)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

SPE 640 Administration of Special Education 3(3-0)
Organization and administration of educational programs for exceptional children. Prerequisite: SPE 126. Identical to EDL 675. Credit may not be earned in more than one of these courses.

SPE 645 Special Education Workshop 1-6(Spec)
Study of trends, alternative approaches, and innovative curriculum in planning for individuals with disabilities. Specifically for in-service training. This course may be offered in an online or hybrid format. Prerequisite: permission of instructor.

SPE 665 Independent Study 1-3(Spec)
Individual research or project dealing with a problem in special education. Prerequisite: Approval of department chairperson.

SPE 675 Teaching the Student with Learning Disabilities 3(3-0)
Methods and materials used in teaching students with specific learning disabilities. This course may be offered in an online or hybrid format. Prerequisite: SPE 577.

SPE 678 Education of Students with Severe Emotional Impairment 3(3-0)
Study of children with severe emotional impairment with particular attention to the underlying theories and intervention programs implemented by school personnel and parents. Prerequisites: major in Teachers of Students with Emotional Impairment.

SPE 679 Behavioral and Curricular Interventions for Individuals with Mild Disabilities 3(3-0)
The relationship between behaviors and curriculum in the education of individuals with mild disabilities, focusing on the techniques and practices of various interventions. This course may be offered in an online or hybrid format. Prerequisites: SPE 600; admission to a master's degree program.

SPE 685 Innovative Cognitive Techniques in Special Education 3(3-0)
A study of instructional techniques which have been shown to be effective in enhancing the cognitive skills of special education students. Prerequisites: SPE 577, PSY 667, SPE 675.

SPE 689 Graduate Practicum in Special Education 3-6(Spec)
Provide students the opportunity to develop and demonstrate competencies required for working with students with cognitive impairment or emotional impairment or specific learning disabilities. This course may be offered in an online or hybrid format. Prerequisites: Cognitive Impairment focus: SPE 519, SPE 521, SPE 522. Emotional Impairment focus: SPE 578, SPE 579, SPE 581. Specific Learning Disabilities focus: PSY 667, SPE 675, SPE 685. Permission of instructor and application to register for this course must be filed during the semester prior to registration for approval.

SPE 695 Research for Counseling and Special Education 3(3-0)
Presentation and application of designs and procedures pertinent to conducting research in human services. Includes writing a research proposal and manuscript, implementing mini-research project. Identical to CED 695. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: Regular Admission to the M.A. in Counseling or Special Education; completion of 15 hours or more toward the M.A. in Counseling or Special Education.

SPE 720 Seminar: Teaching Students with Severe Cognitive Impairment 3(3-0)
Study and research of selected topics that reflect total education programming for individuals with severe cognitive impairment. This course may be offered in an online or hybrid format. Prerequisite: major in Teachers of Students with Cognitive Impairment.

SPE 741 Seminar: Administration of Special Education 2(2-0)
Provides interaction among special educators to discuss current issues and problems in implementing programs in accordance with special education code and guidelines. This course may be offered in an online or hybrid format. Prerequisites: SPE 640 and background in research methods.

SPE 750 Consultant Skills for Special Educators and Counselors 3(3-0)
The skills, competencies, responsibilities, priorities, and evaluative processes appropriate in a special education teacher/ counselor/consultant role are analyzed. This course may be offered in an online or hybrid format. Prerequisites: SPE 600, SPE 679, SPE 785; admission to a master's degree program.

SPE 775 Seminar: Learning Disabilities 3(3-0)
Discussion and research of major issues and current topics in the field of learning disabilities. Prerequisites: SPE 577, SPE 675.

SPE 785 Assessment in Special Education 3(3-0)
Selection, evaluation, administration, and interpretation of tests used in special education. This course may be offered in an online or hybrid format. Prerequisites: SPE 600, SPE 679; admission to a master's program in special education.

SPE 790 Seminar: Investigations and Solutions in Special Education 3(3-0)
Completion of Plan B paper or project under the supervision of a faculty advisor. This course may be offered in an online or hybrid format. Prerequisites: SPE 600, SPE 679, SPE 785, SPE/CED 695; admission to a master's program; permission of instructor.

SPE 798 Thesis 1-6(Spec)
Design of a master's thesis. CR/NC only. Prerequisite: Approval of Committee chairperson.
**DEPARTMENT OF EARTH AND ATMOSPHERIC SCIENCES**

(GEL, MET)

*College of Science and Technology*

(formerly the Department of Geology and Meteorology)

Leigh Orf, Chairperson
314 Brooks Hall, (989) 774-3179
https://www.cmich.edu/academics/sci_tech/earth_atmos

Martin Baxter, Ph.D., Synoptic Meteorology
Kathleen C. Benison, Ph.D., Sedimentology, Stratigraphy
Patrick Kinnicut, Ph.D., Science Informatics
Daria Kluver, Ph.D., Snowfall Prediction and Climate
Deric Learman, Ph.D., Biogeochemistry
Jane M. Matty, Ph.D., Aqueous Geochemistry, Hydrogeology
Sven Morgan, Ph.D., Structural Geology
R. Neil Mower, Ph.D., Tropical Meteorology
Leigh Orf, Ph.D., Mesoscale Meteorology
Jodi Ryder, Ph.D., Contaminant Hydrogeology
Mona Sirbescu, Ph.D., Mineralogy
Reed Wicander, Ph.D., Paleontology

**Course Descriptions: GEL**

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.

GEL 650 Geology for Science Teachers 3(2-2)
Study of geologic topics treated in the primary and secondary school curricula according to state benchmarks. Developing and writing new field and classroom hands-on activities. This course may be offered in an online or hybrid format. Prerequisites: GEL 102 and 101 or 105, or GEL 100 or 130; GEL 201; admission to the MAT or MA in Education program.

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**DEPARTMENT OF ECONOMICS**

(ECO)

*College of Business Administration*

Paul Natke, Chairperson
321 Sloan Hall, (989) 774-3870

Vikesh Amin, Ph.D., Royal Holloway University of London; Labor, Education Economics

Bharati Basu, Ph.D., University of Rochester; International Trade, Economic Development

Lawrence Brunner, Ph.D., Johns Hopkins University; Public Finance, Urban Economics

A. Aydin Cecen, Ph.D., Indiana University; International Trade, Mathematical Economics

Debasish Chakraborty, Ph.D., University of Pittsburgh; International Trade, Monetary Theory, Economic Development

Gregory A. Falls, Ph.D., Purdue University; Econometrics, Macroeconomics

James Richard Hill, Ph.D., University of Kentucky; Labor, Sports Economics

James R. Irwin, Ph.D., University of Rochester; Economic History, International Trade, Monetary Theory, Econometrics

Aparna Lhila, Ph.D., Cornell University; Health Economics, Household Economics

Catherine L. McDevitt, Ph.D., University of Rochester; Macroeconomics, Monetary Theory, Public Finance

Paul Natke, Ph.D., University of Notre Dame; Monetary Theory, Managerial Economics

Samuel Raisanen, Ph.D., University of Colorado; Industrial Organization, Applied Game Theory

Jason E. Taylor, Ph.D., University of Georgia; Economic History, Industrial Organization

Linlan Xiao, Ph.D., University of Western Ontario; Econometrics, Mathematical Models

**The Program**

The Department of Economics at Central Michigan University offers a program leading to the degree of master of arts in economics. The program is designed for two types of students: those who wish to gain marketable skills in applied economics and those who wish to strengthen their preparation in order to continue work toward a doctorate in economics.

Graduate assistantships, which involve the student in either teaching or research, are available on a competitive basis from the Economics Department. Currently, most of the economics graduate students are from countries other than the United States.

The program is designed to meet the needs of the individual student, and students may choose to write a thesis or may select a non-thesis option. The M.A. program is designed so that it can be completed in one calendar year but normally requires three semesters.

Graduate courses in economics may be selected as elective or cognate courses on various graduate curricula including the following: business administration, geography, history, mathematics, political science, statistics.

Requirements of the interdisciplinary curriculum for the Master of Science in Administration are stated in the section on Interdisciplinary Degrees.
Master of Arts (M.A.) in Economics

Minimum Totals for Graduation: 30 hours

Degree requirements will be satisfied by completing the common core and the Plan A or Plan B alternative. Candidates may not offer more than six hours of cognate courses for this 30-hour program. All cognate courses must be selected in consultation with the candidate’s advisor.

Admission Requirements, Retention & Termination Standards

There are no specific undergraduate requirements for admission to the Master of Arts degree program in economics. Students who, in the opinion of the Graduate Coordinator, are deficient in background will be advised to take additional courses. Students who do not meet the graduate school requirements may apply for nondegree admission. A maximum of 15 credits earned during non-degree status may be applied toward a graduate degree in Economics.

Core Courses (12 hours)
ECO 535 - Fundamentals of Mathematical Economics 3(3-0)
ECO 585 - Econometrics 3(3-0)
ECO 616 - Advanced Microeconomic Theory 3(3-0)
ECO 620 - Advanced Macroeconomic Theory 3(3-0)

Additional Requirement (18 hours)
Choose one of the following plans:

Plan A: Thesis
12 hours of courses approved by an advisor, inclusive of cognate courses.
ECO 798 - Thesis 1-6(Spec)

Plan B: Non-thesis
1. Courses approved by advisor, inclusive of cognate courses - 18 hours.
2. Research paper under the direction of a faculty member.

Total: 30 credit hours

ACCELERATED MASTER OF ARTS IN ECONOMICS

Students admitted to the Accelerated Master’s Degree Program may earn up to twelve hours of graduate credit toward the MA in Economics for courses taken during their senior year. These courses will count both toward their undergraduate degree and toward their MA degree in Economics. The student will need, first, to be admitted to the program and, second, to have completed the agreed-to plan of study.

Admission Requirements

Within 30 credit hours of graduating with a BS or BS in BA with a GPA of 3.25. In addition, the student should have completed the University competency requirements and ECO 365, ECO 370, MTH 217, and ECO 285 or STA 282.

Plan of Study

Courses to be counted toward both the undergraduate degree and the MA in Economics when taken during the senior year by a student admitted to the Accelerated Master’s Degree Program prior to the senior year and completing the courses during the senior year.

Fall Semester: ECO 585 (3 hours); ECO elective (3 hours)
Spring Semester: ECO 685 (3 hours); ECO elective (3 hours)

The electives must be at the 500 level and above and be approved by the graduate coordinator of Economics.

Course Descriptions: ECO

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 375.

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 370.

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. Prerequisite: STA 580.

ECO 590 Seminar Readings 1-3(Spec)
Elective honors course for majors or minors in economics. Recommended: 12 hours of economics with B 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 material of special interest to both undergraduates and graduates not covered by courses in the regular curriculum. Prerequisite: permission of instructor.

ECO 600 Introduction to Advanced Economic Analysis 3(3-0)
Provides the analytical tools necessary for graduate study in economics; firms, households, pricing, wages, distribution, market failure, income determination, and economic growth. Not open to Economics graduate students or undergraduate majors or minors.

ECO 601 Advanced Environmental Economics 3(3-0)
The use of price theory and benefit cost analysis to understand environmental problems and policies. Examination of property rights, regulations, taxes, and subsidies.

ECO 603 Economic Effects of Urbanization and Technology 3(3-0)
Analysis of the economic effects of the urbanization process, emphasizing solutions to the problems of urbanization and side effects of policy actions.

ECO 606 Seminar in Economic History 3(3-0)
Diverse economic experiences of advanced nations since Industrial Revolution. Applies theoretical and institutional approaches to economic history.

ECO 610 Seminar in Economic Thought 3(3-0)
Evolution of economic thought during the past 25 centuries.

ECO 614 Seminar in Labor Economics 3(3-0)
Operation of labor markets in utilizing and allocating manpower. Government measure to facilitate such utilization and allocation. Influence of discrimination.
ECO 616 Advanced Microeconomic Theory 3(3-0)
  Theories of consumer behavior; cost; optimum decision-making, prices, welfare economics, general equilibrium, and income distribution.

ECO 619 Continuing Registration for Final Research Project 1(1-0)
  An non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

ECO 620 Advanced Macroeconomic Theory 3(3-0)
  Analysis of the aggregative economic framework, and application of Keynesian and post-Keynesian macroeconomic theories to the determination of income, employment, and prices.

ECO 622 Seminar in Economic Growth and Development 3(3-0)
  Selected topics in growth and development. Topics may include growth and development theory, rationality, population, labor, public economics and trade.

ECO 625 Firm Behavior and Game Theory 3(3-0)
  Advanced studies of the theory of the firm and modeling strategic behavior. Topics may include transactions costs, collusion, mergers, advertising, brand names, and asymmetric information. Prerequisites: Graduate standing in Economics.

ECO 630 Comparative Economic Systems 3(3-0)
  A systematic analysis of different types of economic systems with respect to the way basic economic problems of resource allocation and income distribution are solved.

ECO 640 Special Topics in Economic Issues 3-6(Spec)
  A course organized by individual instructors on the basis of their specialized or experimental interests. Topics will vary from semester to semester.

ECO 650 American Financial Institutions 3(3-0)
  Interrelationships among commercial banks, savings and loan associations, finance companies, securities markets, and federal credit institutions; developments, problems, and trends in money markets.

ECO 655 Seminar in International Economics 3(3-0)
  Recent developments in trade theories and problems in trade policy; foreign exchange market; national income and balance of payments; and international financial policies.

ECO 657 Advanced Investment Analysis 3(3-0)
  Analysis of the principles, techniques, and other factors that determine the values of individual securities and investment portfolios.

ECO 660 Public Finance and Fiscal Policy 3(3-0)
  Analyzes fiscal policy and theory of taxation affecting economic welfare and delivery of public goods and services. Includes economic stabilization and fiscal reform considerations. Prerequisites: Graduate admission in economics or permission of the Graduate Coordinator is required of students who enroll in courses at the 600 or 700 level.

ECO 670 Research Methods in Economics 3(3-0)
  Thorough comparative analysis of economic methodology and research methods. Prerequisites: ECO 585.

ECO 685 Econometric Applications 3(3-0)
  Economic applications and empirical implementation and interpretation of econometric techniques. Prerequisites: ECO 585.

ECO 690 Independent Research 1-3(Spec)
  Prerequisite: Graduate standing in Economics.

ECO 798 Thesis 1-6(Spec)
  CR/NC only.

EDUCATION

(See Teacher Education and Professional Development)
or the Ed.D. in Educational Leadership. Admission is through the College of Graduate Studies. Students pursuing this certificate program may come from a variety of disciplinary backgrounds. Courses eligible for the certificate program include an assortment of topics relevant to teaching in higher education such as student background (adult learners and traditionally-aged students), classroom teaching theory and strategies, distance education, the faculty role, and an internship in college teaching. Students may utilize certificate courses to meet program requirements for other degrees within the department, allowing for a concurrent awarding of both a degree and an earned certificate. Students must be accepted into both a degree program and the certificate option to obtain both options. Students may also enroll in the certificate option alone. Courses already applied to an earned degree, however, will not count toward the certificate credits.

Students enrolled in the Graduate Certificate in College Teaching will take 15 credit hours, selected with their advisor from the courses listed below. Students with little or no teaching experience will be highly encouraged to complete an internship in college teaching (EDL 699). Courses do not have to be taken in sequential order.

**Admission Requirements, Retention & Termination Standards**

1. Applicants must meet the requirements for admission to the College of Graduate Studies.
2. Applicants must send a current resume identifying training, experience, and professional accomplishments to the Department of Educational Leadership. A cover page should indicate this is intended for the Graduate Certificate for College Teaching. Send to edlead@cmich.edu or fax to 989-774-4374.

   It is advantageous for the applicant to submit the admission portfolio as early as possible. Applicants must submit a complete admission's packet, and it must be approved before a student is granted regular admission.

**Required Courses (15 hours)**

Select from the following:

- EDL 626 - The Adult Learner 3(3-0)
- EDL 677 - The American College Student 3(3-0)
- EDL 680 - Teaching in Higher Education Settings 3(3-0)
- EDL 699 - Leadership Internship 1-15(Spec)
- EDL 763 - The Academic Profession 3(3-0)
- EDU 708 - Distance Education 3(3-0)

**Total: 15 semester hours**

**Master of Arts (M.A.) in Higher Education Administration**

**Minimum Totals for Graduation: 36 hours**

The Higher Education Administration program is most flexible in terms of allowing students to design their own programs in consultation with their advisor. The program is designed for those seeking leadership positions in colleges and universities. We offer an online cohort option for the MA in Higher Education Administration. Check with the department office to determine scheduling and emphasis focus.

**Admission Requirements, Retention & Termination Standards**

1. Applicants must meet the requirements for admission to the College of Graduate Studies.
2. Regular admission in the program requires an undergraduate grade point average of at least 3.0 (on a 4-point scale).
3. 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. a department application form (https://centrallink.cmich.edu/academics/educ_humanservices/edu_leadership/Pages/Apply.aspx);
   b. a current resume identifying training, experience, and professional accomplishments;
   c. a 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;
   d. a two-page statement incorporating how the applicant's program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
      - Vision for student success and achievement;
      - Involvement of all stakeholders;
      - Leadership for a diverse and complex society; and
      - Demonstration of ethical behavior.
   e. 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.

4. Regular admission will be granted only after the admission portfolio has been reviewed and deemed acceptable by a committee of Educational Leadership faculty. Acceptability will be judged on the appropriateness of the contents of the admission portfolio relative to the degree program to which application is being made. The applicant’s statements about beliefs, professional goals, and activities must show evidence of thoughtfulness, thoroughness, and congruence with the degree program to which the application is directed.

   It is advantageous for the applicant to submit the admission portfolio as early as possible. Applicants must submit a complete admission packet, and it must be approved before a student is granted regular admission.

**Core Courses (21 hours)**

- **Higher Education Administration**
  - EDL 600 - Research for Educational Leadership 3(3-0)
  - EDL 636 - Higher Education Law 3(3-0)
  - EDL 677 - The American College Student 3(3-0)
  - EDL 757 - Student Development Theory 3(3-0)
  - EDL 764 - Financing of Higher Education 3(3-0)
  - EDL 776 - Administration of Higher Education 3(3-0)
  - EDL 777 - Student Affairs Administration 3(3-0)

**Electives (9 hours)**

Select in consultation with an advisor.

**Capstone Project (6 hours)**

All students earning a M.A. in Higher Education Administration will take a written comprehensive exam during their last semester of enrollment in the M.A. program.

**Plan B**

- EDL 698 - Master's Colloquium 3(3-0)
- EDL 699 - Leadership Internship 1-15(Spec)

**Total: 36 semester hours**
Master of Arts in School Principalship

Minimum Totals for Graduation: 33 hours

The Master of Arts in School Principalship program prepares students with the knowledge and skills needed to effectively lead schools and meet the needs of 21st Century learners. The purpose of this degree is to provide an academic foundation for school leadership and develop the skills and abilities of educational leaders through performance-based learning. Applicants selecting this program are educators who would like to broaden their career options to include school administration. Students completing this program can apply to the Michigan Department of Education and receive initial administrative certification. This certification is a state requirement for school principals.

The Master of Arts in School Principalship is a nationally accredited program by the Teacher Education Accreditation Council (TEAC).

Admission Requirements, Retention & Termination Standards

1. Applicants must meet the requirements for admission to the College of Graduate Studies.
2. Regular admission in the program requires an undergraduate grade point average of at least 3.0 (on a 4-point scale).
3. 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. a department application form (https://centrallink.cmich.edu/academics/educ_humanservices/edu_leadership/Pages/Apply.aspx);
   b. a current resume identifying training, experience, and professional accomplishments;
   c. a 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;
   d. a two page statement incorporating how the applicant's program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
      1. Vision for student success and achievement,
      2. Involvement of all stakeholders,
      3. Leadership for a diverse and complex society, and
      4. Demonstration of ethical behavior
   e. Identification of at least two significant activities which 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.
3. Regular admission will be granted only after the admission portfolio has been reviewed and deemed acceptable by a committee of Educational Leadership faculty. Acceptability will be judged on the appropriateness of the contents of the admission portfolio relative to the degree program to which application is being made. The applicant's statements about beliefs, professional goals, and activities must show evidence of thoughtfulness, thoroughness, and congruence with the degree program to which the application is directed.

Additional Admission Requirements - Must have either a valid teaching certificate and three years of experience or three years of other qualifying experience.

It is advantageous for the applicant to submit the admission portfolio as early as possible. Applicants must submit a complete admission packet and it must be approved before a student is granted regular admission.

Required Courses I (21 hours)
- EDL 600 - Research for Educational Leadership 3(3-0)
- EDL 615 - Educational Technology for Administrators 3(3-0)
- EDL 656 - Public School Law 3(3-0)
- EDL 660 - Principles of Educational Administration 3(3-0)
- EDL 662 - School Business Administration & Facilities Management 3(3-0)
- EDL 663 - Human Resources Administration 3(3-0)
- EDL 699 - Leadership Internship 1-15(Spec)

Note: 3 hours of EDL 699.

Required Courses II (3 hours)
- Select one of the following:
  - EDL 620 - Administration Within Diverse Populations 3(3-0)
  - EDL 661 - School and Community Relations 3(3-0)
  - EDL 675/SPE 640 - Administration of Special Education 3(3-0)

Emphasis Area (9 hours)

Select one of the following emphasis areas:
- Emphasis Area I - Site-Based Leadership
  - EDL 670 - School-Site Administration 3(3-0)
  - EDL 690 - Administration of School Curriculum 3(3-0)
  - EDL 773 - Instructional Supervision for Educational Leaders 3(3-0)
- Emphasis Area II - Charter School Leadership
  - EDL 645 - Charter School Leadership 3(3-0)
  - EDL 651 - Program Review and Evaluation 3(3-0)
  - EDL 698 - Master's Colloquium 3(3-0)

Professional Portfolio

Plan B requirements are met with a Professional Portfolio that consists of additional evidence of significant scholarship and ability relating to competence in administration and leadership. Portfolios are reviewed and assessed during an exit interview.

Total: 33 semester hours

Master of Arts in Teacher Leadership

Minimum Totals for Graduation: 33 hours

The Teacher Leadership degree program prepares teachers to be leaders who strive for school improvement and increased student learning. The Master of Arts in Teacher Leadership is a nationally accredited program by the Teacher Education Accreditation Council (TEAC).

Students enrolled in this program will take 33 credit hours, selected with their advisor, from the courses listed below:

Admission Requirements, Retention & Termination Standards

1. Applicants must meet the requirements for admission to the College of Graduate Studies.
2. Regular admission in the program requires an undergraduate grade point average of at least 3.0 (on a 4-point scale).
3. Applicants must provide evidence of promise as a teacher leader 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:

Minimum Totals for Graduation: 33 hours
a. a department application form (https://centrallink.cmich.edu/academics/educ_humanservices/edu_leadership/Pages/Apply.aspx);

b. a current resume identifying training, experience, and professional accomplishments;

c. a minimum of two letters of reference (dated and submitted on organizational letterhead) from individuals who can appropriately address the applicant's potential as a teacher leader and attest to the applicant's potential for success in the program;

d. a two-page statement incorporating how the applicant's program goals and beliefs about leadership connect to the Educational Leadership program and these principles:
   - Vision for student success and achievement,
   - Involvement of all stakeholders,
   - Leadership for a diverse and complex society, and
   - Demonstration of ethical behavior

e. identification of at least two significant activities which 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.

4. Regular admission will be granted only after the admission portfolio has been reviewed and deemed acceptable by a committee of Educational Leadership faculty. Acceptability will be judged on the appropriateness of the contents of the admission portfolio relative to the degree program to which application is being made. The applicant's statements about beliefs, professional goals, and activities must show evidence of thoughtfulness, thoroughness, and congruence with the degree program to which the application is directed.

Additional Admission Requirements - Must have either a valid teaching certificate and three years of experience or three years of other qualifying experience.

It is advantageous for the applicant to submit the admission portfolio as early as possible. Applicants must submit a complete admission packet and it must be approved before a student is granted regular admission.

Core Courses (9 hours)
EDL 600 - Research for Educational Leadership 3(3-0)
EDL 651 - Program Review and Evaluation 3(3-0)
EDL 660 - Principles of Educational Administration 3(3-0)

Emphasis Area (18 hours)
To be selected in conjunction with the student’s advisor.
EDL 620 - Administration Within Diverse Populations 3(3-0)
EDL 650 - Professional Studies: Special Topics 1-6(Spec)
EDL 690 - Administration of School Curriculum 3(3-0)
EDL 765 - Organizational Change in Educational Institutions 3(3-0)
EDL 773 - Instructional Supervision for Educational Leaders 3(3-0)
EDU 540 - Literacy Education: Theory and Practice 3(3-0)
EDU 590/SP 510 - Advanced Technology in Education 3(2-3)
EDU 602 - Strategies and Techniques for Teaching 3(3-0)
EDU 613/MLE 613 - Current Educational Issues 3(3-0)
EDU 642 - Instructional Multimedia 3(3-0)
EDU 662 - Applied Educational Measurement and Evaluation 3(3-0)

Capstone Experience (6 hours)
Students earning a degree in Teacher Leadership will meet Plan B requirements by completing a Professional Portfolio that consists of additional evidence of significant scholarship and ability relating to competence in teacher leadership. Materials for the portfolio will be compiled throughout the program and will be submitted and assessed during EDL 698 Master’s Colloquium.
EDL 698 - Master’s Colloquium 3(3-0)
EDL 699 - Leadership Internship 1-15(Spec)

Total: 33 semester hours

Specialist in Education (Ed.S.)
In General Educational Administration

Minimum Totals for Graduation: 33 hours
The specialist in Education (Ed.S.) in General Education Administration is an advanced degree program that prepares professional educators with instructional and leadership skills beyond the master’s level of competence. The purpose of this degree is to extend the academic foundation, skills, and abilities of educational leaders and to build leadership capacity in a variety of educational settings. The Ed.S. degree is based upon the satisfactory completion of 33 semester hours of graduate-level coursework. Applicants may choose one of four concentrations (Administrative Leadership K-12; Instructional Leadership K-12; Higher Education Administration; and Educational Technology). The program is aligned to state standards and is approved by the state of Michigan. Applicants who complete the Administrative Leadership K-12 concentration may apply to the Michigan Department of Education for administrative certification which is now required by the state for building and district leadership positions.

Admission Requirements; Retention & Termination Standards
Applicants for the Educational Specialist degree must have three years of experience in an education or other human service organization.

Admission Requirements for Specialist in Education Candidates
1. Applicants must meet the requirements for admission to the College of Graduate Studies.
2. Applicants must have completed a master’s degree in education or equivalent field.
3. 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. a department application form (https://centrallink.cmich.edu/academics/educ_humanservices/edu_leadership/Pages/Apply.aspx)
   b. a current resume identifying training, experience, and professional accomplishments;
   c. a 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;
   d. a one-page reflective statement addressing the applicant’s beliefs about educational leadership;
   e. a one-page reflective statement of professional goals and actions the applicant intends to take to achieve the identified goals;

(Continued)
Doctor of Education (Ed.D.) in Educational Leadership

Minimum Totals for Graduation: 63 – 66 hours

The Ed.D. degree in Educational Leadership is designed to provide in-depth knowledge and skills to educational leaders who seek to develop and refine their knowledge and skills to help transform through practice the educational institution. The program emphasizes the application of scholarship (theory) to the improvement of educational practice. It is intended for individuals in educational leadership careers. Students accepted into the program will be part of a cohort. The Ed.S. degree program was also designed for a seamless transition into the Doctor of Education (Ed.D.) in Educational Leadership program if the applicant meets department requirements. Students entering the Doctor of Education program, who have an earned Specialist in Education degree in Educational Leadership from an approved institution, may receive up to a maximum of 27 credits toward the Doctor of Education. Remaining Doctor of Education requirements must be completed at Central Michigan University.

Admission Requirements, Retention & Termination Standards

Admission. In order to be considered for admission to the program, an applicant must have completed a master's degree with a minimum grade point average of 3.5 and must have completed three years of professional education experience. (Preference will be given to those with leadership experience.)

There are two application deadlines, April 1 and July 1. Preference will be given to April 1 applicants. Admission will continue until the cohort is filled. A completed application packet will include the following materials:

To the College of Graduate Studies:
1. Graduate Application
2. Application Fee
3. Official transcript(s) pertaining to all previous undergraduate and graduate coursework

To the Department of Educational Leadership:
1. Three Recommendations: Use the EdD Letter of Recommendation Form (found on EDL website) and submit recommendations from three individuals familiar with your academic and scholarly work.
2. Personal Statement: A two- or three-page typewritten statement describing your educational and professional goals as they relate to pursuing the Doctor of Education at Central Michigan University.
3. GRE Score: An official score report from the Graduate Record Examination (GRE) earned within the last five years.
4. TOEFL Score: If your native language is not English, submit an official score report from the Test of English as a Foreign Language (TOEFL). The TOEFL is required of all non-native speakers unless they have completed two years of university-level coursework in an English-language institution.
5. Current Resume or Vita
6. Signed Declaration of Commitment (found on EDL website)
7. Participation in Doctor of Education Interview/Group Process

The Doctoral Program Committee will make all decisions regarding admissions, selecting the cohort from those interviewed. Preference will be given to those applicants who have a demonstrated history of educational leadership and who have career goals consistent with the expectations of this program. The total application package will be evaluated holistically.

Program Requirements. Progress through the program is based upon obtaining satisfactory grades (a 3.25 GPA average overall), passing written and oral comprehensive exams, and completing a doctoral dissertation. Students who have an earned Educational Specialist degree may be able to waive some program requirements.
Research Requirements (9 hours)
The research component encompasses both quantitative and qualitative research methods. The competencies to be developed are essential to interpreting and evaluating research studies to be encountered in all course work as well as to completing the dissertation requirement.
EDL 700 - Advanced Administrative Research 3(3-0)
EDL 800 - Qualitative Research in Educational Leadership 3(3-0)
EDL 801 - Quantitative Analysis in Educational Leadership 3(3-0)

Academic Core (15 hours)
The academic core component includes all of the critical areas of study for future educational leaders: foundations, organizational and leadership analyses, and the issues which change and dominate over time. The courses are designed to provide students with the underpinnings to understand and to act effectively upon the challenges confronting the educational organization.
EDL 815 - Ethical Leadership 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 899 - Doctoral Seminar 3-6(Spec)

Concentration (12 hours)
There are four choices from which students may select a concentration, based upon their needs assessment. The specific courses will be determined in consultation between the student and the academic advisor.

Concentration I
K-12 Leadership
EDL 775 - Educational Policy Analysis 3(3-0)

Concentration II
K-12 Curriculum
EDL 773 - Instructional Supervision for Educational Leaders 3(3-0)

Concentration III
Higher Education Leadership
EDL 876 - Higher Education Policy 3(3-0)

Concentration IV
Educational Technology
EDU 707 - Seminar: Issues in Educational Technology 3(3-0)

Cognate (9 hours)
The cognate, to be determined jointly by the student and advisor, can be completed in one academic discipline or by taking a combination of courses from more than one academic discipline.

Field-Based Experience (3-6 hours)
This internship experience will assist students in strengthening their leadership competencies. The number of credit hours required will be determined with the student’s advisor based upon the student’s past professional experience and personal career objectives. Forty-five contact hours will be required for each credit earned. A letter of understanding will be developed between the student, district, and university supervisor as to the responsibilities and expectations for the experience.
EDL 880 - Doctoral Internship 3-6(Spec)

Comprehensive Exams
Students will be expected to take written qualifying exams upon the completion of their academic core classes. Qualifying exams will be administered in the fall and spring of each year. Comprehensive review of all program materials is completed with the successful defense of a student’s dissertation proposal. At this point, students are advanced to candidacy.

Dissertation (15 hours)
The student will complete three steps in the dissertation process:
1. the proposal review stage in which there is a formal defense of the dissertation proposal;
2. conducting the research, analyzing the results, and writing the final document;
3. an oral defense of the dissertation.

Total: 63-66 semester hours
Note: Students with an earned Ed.S. may be eligible for fewer than the maximum total program credits indicated if they meet university requirements.

Course Descriptions: EDL
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.
EDL 600 Research for Educational Leadership 3(3-0)
Research concepts focused on the needs of educational leaders. Prerequisites: graduate status. This course is approved for offering in a distance learning format.
EDL 609 Administration of Volunteer Programs 3(3-0)
Develops skills necessary to organize a volunteer program or agency. Content includes recruitment, training, supervision, evaluation of volunteers and the development of community partnership programs. This course may be offered in an online or hybrid format.
EDL 610 Grants and Fund Procurement 3(3-0)
Grantsmanship skills for public and private funding. Students will explore funding sources, concept development, evaluation plans, budget preparation, proposal submission, and reviewer practices. This course may be offered in an online or hybrid format.
EDL 615 Educational Technology for Administrators 3(3-0)
The development of knowledge, philosophy, skills and practical applications regarding technology for administrators. This course may be offered in an online or hybrid format.
EDL 619 Continuing Registration for Final Research Project 1(1-0)
An on-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.
EDL 620 Administration Within Diverse Populations 3(3-0)
Examination of critical issues, trends, and practices relative to cultural diversity that influences the organization and administration of school and other human service organizations. This course is approved for offering in a distance learning format.
EDL 622 Adult Literacy and Society 3(3-0)
A study of the theories of language and literacy and their relationship to the practices of adult education. This course may be offered in an online or hybrid format.
EDL 624 Planning for Instruction in Nontraditional Settings 3(3-0)
Analyze problems and issues in administration of learning programs for students located in non-traditional settings including prisons, malls, churches, factories, and other workplace situations. Prerequisites: graduate status.
EDL 626 The Adult Learner 3(3-0)
A study of learning in adulthood, how to facilitate that learning, and the characteristics of adult learners.

EDL 636 Higher Education Law 3(3-0)
An introduction to the law as it relates to higher education, including student personnel problems, collective bargaining, finance, liability, personnel, and malpractice.

EDL 645 Charter School Leadership 3(3-0)
Application of leadership and systems theories to the administration of charter schools. This course is approved for offering in a distance learning format.

EDL 650 Professional Studies: Special Topics 1-6(Spec)
Investigation and in-depth study of new knowledge or current problem areas. This course may be offered in an online or hybrid format.

EDL 651 Program Review and Evaluation 3(3-0)
An introduction to program evaluation theory, design, development, and implementation is provided. Content will cover evaluation strategies to plan an applied research study. This course may be offered in an online or hybrid format.

EDL 652 Global Education Studies 3-12(Spec)
Study of educational systems in an international context. Trip destinations will vary. This course may be repeated up to 12 credits if course content is different. Prerequisites: Graduate status.

EDL 656 Public School Law 3(3-0)
The law as it relates to education. This course is approved for offering in a distance learning format.

EDL 660 Principles of Educational Administration 3(3-0)
Philosophy and principles underlying the organization and operation of education in the United States. This course is approved for offering in a distance learning format.

EDL 661 School and Community Relations 3(3-0)
Public relations responsibilities of school board and staff members. This course is approved for offering in a distance learning format.

EDL 662 School Business Administration & Facilities Management 3(3-0)
An exploration of school business administration and facilities management concepts, with emphasis on school-site administration. This course may be offered in an online or hybrid format.

EDL 663 Human Resources Administration 3(3-0)
The determination of need, satisfaction of need, and means of securing efficient human resource service. Emphasis on environmental factors essential to efficiency. This course is approved for offering in a distance learning format. Prerequisites: See Schedule.

EDL 667 Administration of Community Education 3(3-0)
Identification of community needs, and organization and management of new and ongoing programs. This course may be offered in an online or hybrid format.

EDL 670 School-Site Administration 3(3-0)
Current theories, principles, and practices relative to the organization, administration, and operation of schools. This course may be offered in an online or hybrid format.

EDL 675 Administration of Special Education 3(3-0)
Organization and administration of education programs for exceptional children. Identical with SPE 640. Credit may not be earned in more than one of these courses.

EDL 676 Administration of Community Colleges 3(3-0)
Structure, organization, and management of community colleges. This course may be offered in an online or hybrid format.

EDL 677 The American College Student 3(3-0)
A review of who attends American colleges, how campus environments affect students’ collegiate experiences, and how these cultural experiences affect students.

EDL 680 Teaching in Higher Education Settings 3(3-0)
Study of classroom teaching methods and practices in college environments. Review of active learning techniques, curriculum construction, and student-learning assessment. This course may be offered in an online or hybrid format.

EDL 685 Introduction to Problem Solving in Educational Leadership 3(3-0)
Introductory examination of the knowledge and skills needed to communicate with organizational members to solve problems and resolve conflict in educational situations and organizations.

EDL 687 Independent Study 1-6(Spec)
Independent study. This course may be offered in an online or hybrid format. Prerequisite: permission of advisor.

EDL 688 Independent Study 1-6(Spec)
Independent study. This course may be offered in an online or hybrid format. Prerequisite: permission of advisor.

EDL 690 Administration of School Curriculum 3(3-0)
Study, analysis, and application of administrative principles to the development, implementation, and evaluation of the school curriculum. This course may be offered in an online or hybrid format.

EDL 695 Readings in Education 1-2(Spec)
Prerequisite: Permission to register from the unit coordinator during the semester prior to the one in which the student wishes to enroll.

EDL 697 College Teaching Internship 3(3-6)
Under the direct supervision of a practicing college or university teaching mentor, student develops skills applicable to college-based teaching. CR/NC only. This course may be offered in an online or hybrid format. Pre-requisites: Permission of Instructor, approval of internship application.

EDL 698 Master’s Colloquium 3(3-0)
Capstone seminar to synthesize master’s coursework. Students will apply theory to practice in designing and implementing a project. Prerequisites: To be taken in the last semester of the MA in Educational Leadership program. This course is approved for offering in a distance learning format.

EDL 699 Leadership Internship 1-15(Spec)
A period of time spent working with and under the direct supervision of a practicing educational leader. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: Regular admission to master’s or specialist program in Department of Educational Leadership. Approval of an internship application and permission of instructor.

EDL 700 Advanced Administrative Research 3(3-0)
The practical application of quantitative, qualitative, mixed methods and action research inquiry are examined to promote empirical decision-making in a variety of educational settings. This course may be offered in an online or hybrid format. Prerequisites: admission to Ed.S. program, EDL 600.

EDL 731 Strategic Planning 3(3-0)
Identification of planning processes to set goals, establish implementation procedures, and evaluate processes and results. Prerequisite: Graduate Status.

EDL 745 Administration of the School District 3(3-0)
Study of the functions of school district management with special emphasis on the role of the superintendent and other administrators with district-wide responsibilities.

EDL 750 Professional Studies Topics 1-6(Spec)
Investigation and in-depth study of a current problem area or the introduction of new knowledge. Prerequisite: department permission (generally limited to Ed.S. candidates).
EDL 757 Student Development Theory 3(3-0)
Introduction of student development theories regarding social identity, intellectual and moral development of college students; review of learning and personality theories for understanding student differences. This course may be offered in an online or hybrid format.

EDL 760 Leadership Theory and Practice 3(3-0)
Current management theories and systems as applied to the administration of educational programs. Prerequisite: admission to Educational Specialist program.

EDL 763 The Academic Profession 3(3-0)
Emphasizes the organization and function of academic affairs within a college or university. Topics include new faculty issues, academic leadership, curriculum development, and academic socialization.

EDL 764 Financing of Higher Education 3(3-0)
An analysis of the funding of higher education and the complex relationship between finance and other aspects of higher education administration.

EDL 765 Organizational Change in Educational Institutions 3(3-0)
Fundamental concepts, processes, and procedures concerning the change process. Focus will be on leading, implementing, and sustaining change in educational organizations. This course may be offered in an online or hybrid format.

EDL 766 Advanced Educational Law 3(3-0)
In-depth study of current legal problems. Prerequisite: EDL 656.

EDL 767 Public School Finance 3(3-0)
A short history and consideration of problems relating to taxation, the budget, local millage, school building bond issues and state aid.

EDL 769 Negotiations in Education 3(3-0)
Theory and practice of collective bargaining as it relates to education. Prerequisite: Graduate Status.

EDL 770 Advanced Administration of Elementary Schools 3(3-0)
Skills and perceptions essential to advanced leadership of elementary education programs. Prerequisite: EDL 670 and admission to Educational Specialist program.

EDL 772 Advanced Administration of Secondary Schools 3(3-0)
Study of current management skills and procedures necessary for operating a secondary school. Prerequisites: EDL 672 and admission to Educational Specialist program.

EDL 773 Instructional Supervision for Educational Leaders 3(3-0)
Development of supervisory policies and guidelines for the management of the instructional program in a school. Methods of evaluation, selection, and implementation of new curricula. This course is approved for offering in a distance learning format. Prerequisite: Graduate Status.

EDL 774 Women in Educational Leadership 3(3-0)
Study of women’s roles both as students and administrators in educational settings. Emphasis is on the identification and study of current issues and gender theories. Prerequisites: EDL 600; Graduate status.

EDL 775 Educational Policy Analysis 3(3-0)
Identification and analysis of source, function, and effect of policies affecting K-12 education. This course may be offered in an online or hybrid format.

EDL 776 Administration of Higher Education 3(3-0)
Study of the organization and management of colleges and universities.

EDL 777 Student Affairs Administration 3(3-0)
A study of the organization, structure, management, programs, and functions of student affairs administration in post-secondary education. This course may be offered in an online or hybrid format.

EDL 778 Contemporary Issues in Higher Education 3(3-0)
Study of contemporary issues confronting higher education. Emphasis is on the identification, definition, and study of issues and how educational leaders might address them.

EDL 790 Critical Issues: Administration of Elementary Schools 3(3-0)
Analysis of current problems affecting the administration of elementary schools and the development of appropriate alternatives. Prerequisites: EDL 670 or EDL 770 and admission to Educational Specialist program.

EDL 792 Critical Issues: Administration of Secondary Schools 3(3-0)
Analysis of current problems, regulations, laws, and pressures confronting the secondary school principal. Course stresses conflict management and crisis intervention techniques. Prerequisites: EDL 672 or EDL 772 and admission to Educational Specialist program.

EDL 794 Field Study 1-6(Spec)
An extensive study of a specific leadership practice, and a report of appropriate recommendations. Students cannot enroll for both EDL 794 and 798 to fulfill the requirements of a single degree. This course may be offered in an online or hybrid format. CR/NC only.

EDL 796 Thesis 1-6(Spec)
Students cannot enroll for both EDL 796 and EDL 798 to fulfill the requirements of a single degree. CR/NC only.

EDL 800 Qualitative Research in Educational Leadership 3(3-0)
This course enables students to apply qualitative research theories, methods and data analysis procedures. Students will practice a variety of applied field-based techniques. This course may be offered in an online or hybrid format. Prerequisites: EDL 600 and EDL 700. Admission to doctoral program in Educational Leadership.

EDL 801 Quantitative Analysis in Educational Leadership 3(3-0)
Study, analysis, and application of quantitative analytical principles to the development, implementation, and evaluation of educational practices and programs. This course may be offered in an online or hybrid format. Prerequisites: EDL 600 and EDL 700; admission to doctoral program in Educational Leadership.

EDL 815 Ethical Leadership 3(3-0)
Examination of major leadership and ethical decision making theories. Emphasis is placed on moral leadership practice. This course may be offered in an online or hybrid format. Prerequisites: EDL 600 and EDL 700. Admission to doctoral program in educational leadership.

EDL 825 Culture of Educational Organizations 3(3-0)
Examination of organizational culture, and the implications for leadership and organizational effectiveness. This course may be offered in an online or hybrid format.

EDL 855 Organizational Culture and Change in Educational Institutions 3(3-0)
Examination of organizational culture and implication on behavior and educational practices. Fundamental concepts, processes, and procedures concerning the change process. This course may be offered in an online or hybrid format. Prerequisites: Admission to the doctoral program in educational leadership.
EDL 860 Organizational Theory in Educational Institutions 3(3-0)
Focus will be upon the historical development of educational institutions with an emphasis upon organizational theory, systems theory, organizational behavior, motivation, and leadership. This course may be offered in an online or hybrid format. Prerequisites: admission to the doctoral program in Educational Leadership.

EDL 870 Issues in Educational Leadership 3(3-0)
Study of issues confronting educational leaders. The course provides opportunity to integrate learning as well as explore contemporary issues facing K-12 administrators. Prerequisites: admission to the doctoral program in Educational Leadership.

EDL 876 Higher Education Policy 3(3-0)
Review of higher education policy practices. Integration and synthesis of organizational theory and leadership used to address policy issues. Prerequisites: Admission to the doctoral program in Educational Leadership.

EDL 880 Doctoral Internship 3-6(Spec)
Real and simulated activities related to preparing for advanced positions of educational leadership under the supervision of a practicing administrator. CR/NC only. Prerequisites: Admission to the doctoral program in Educational Leadership; consultation and approval of learning plan by internship coordinator.

EDL 886 Advanced Problem Solving in Educational Leadership 3(3-0)
An advanced seminar in problem-solving skills to assist educational leaders with interaction strategies. Prerequisite: EDL 885.

EDL 887 Dissertation Colloquium 3(3-0)
Development of a doctoral-level dissertation proposal. CR/NC only. Prerequisites: completion of doctoral coursework.

EDL 898 Dissertation 1-15(Spec)
Design and complete the dissertation including data collection, analysis, written report, and oral defense. CR/NC only. Prerequisites: permission of instructor.

EDL 899 Doctoral Seminar 3-6(Spec)
Orientation to doctoral studies, program procedures, and dissertation issues. Critical review of education foundations and history. Prerequisites: Admission to the doctoral program in educational leadership.

EDL 900 Advanced Qualitative Analysis in Educational Leadership 3(3-0)
This course provides advanced instruction in qualitative research analysis for doctoral students. Students will work with their own research data using analysis software. This course may be offered in an online or hybrid format. Prerequisite: EDL 800. Recommended: Admission to a doctoral program.

EDL 901 Advanced Quantitative Analysis in Educational Leadership 3(3-0)
Study, analysis and application of advanced quantitative analytical principles to the development, implementation, and evaluation of educational practices and programs. This course may be offered in an online or hybrid format. Prerequisites: EDL 801. Recommended: Admission to a doctoral program.

SCHOOL OF ENGINEERING AND TECHNOLOGY (EGR, IET, TEC)
College of Science and Technology

Mohamad Qatu, Director
100 ET Building, (989) 774-3033
https://centrallink.cmich.edu/academics/sci_tech/Engi_Tech

Daniel Chen, Ph.D., Mechanical Engineering/CAD & CAE
Frank Cheng, Ph.D., Industrial Robotics, Automation Manufacturing
Brian DeJong, Ph.D., Mechanical Engineering
Qin Hu, Ph.D., Electrical Engineering
Tolga Kaya, Ph.D., Electrical Engineering, MEMS
David Kelley, Ph.D., Computer Aided Design
Joseph Langenderfer, Ph.D., Mechanical Engineering
Kristina Lemmer, Ph.D., Mechanical Engineering, plasma propulsion systems
Terry Lerch, Ph.D., Mechanical Engineering, mechanics
David Lopez, Ph.D., Manufacturing Management, Quality
Adam Mock, Ph.D., Electrical Engineering, photonics and electromagnetics
Molu Olumolade, Ph.D., Manufacturing Systems
Alan Papendick, M. A., Graphic Arts
Albert Peng, Ph.D., Electrical Engineering/Electronics
Mohamad Qatu, Ph.d., Mechanical Engineering, Composite structures, automotive engineering, vibrations, engineering design
Dru Wilson, Ph.D., Industrial Technology/Plastics
Kumar Yelamarthi, Ph.D., Electrical Engineering, circuit design

The Engineering and Technology Building contains 30 state-of-the-art laboratories and support spaces. Facilities are provided for research and development, automotive technology, plastics technology, mechanical/energy technology, robotics, materials testing, metal fabrication, computer-aided design, manufacturing systems, construction/wood technology, graphic arts, industrial education, safety, electronics instrumentation and design, and engineering design graphics. An auditorium and classrooms are also included in the building.

Since students need a balance of knowledge and applied experience to succeed in today's industrial environment, ample learning opportunities are provided in CMU's laboratories. Selected resources of the university are available for special projects. Contacts with industry are maintained in a variety of ways.

The interaction between E&T faculty and students is continuous. A well-qualified faculty member counsels and advises each student. E&T faculty not only have appropriate academic credentials, many also have technical certificates, professional state engineering registrations, and other forms of recognition for technical applications expertise.
Master of Arts (M.A.) in Industrial Management and Technology

Minimum Totals for Graduation: 30 hours

The Master of Arts in Industrial Management and Technology is designed to provide opportunities for initial or continued professional development for individuals in the occupational areas of industrial supervision, industrial management, industrial production, or industrial technology.

Admission Requirements, Retention & Termination Standards

To be admitted to study on this degree, the student must meet the general requirements for admission to the College of Graduate Studies. This program is open to students with undergraduate degrees in all related fields.

Degree Requirements

Required Courses I (9 hours)
IET 500 - Production Concepts 3(3-0)
IET 502 - Computer Applications in Industry 3(3-0)
plus three hours of graduate statistics.

Required Courses II (2-6 hours)

Select one of the following:
IET 791 - Independent Research 2-6(Spec)
IET 798 - Thesis 1-6(Spec)

The student must write a thesis or two graduate file papers.

In addition, courses should be selected in consultation with the advisor from Required Courses III, IV and V:

Required Courses III (4-10 hours)

Industry
IET 502 - Computer Applications in Industry 3(3-0)
IET 524 - Technology and Environment 3(3-0)
IET 597 - Special Studies 1-6(Spec)
IET 625 - Industrial Internship 2-6(Spec)
IET 694 - Problems in Management and Technology 1-6(Spec)
IET 697 - Special Studies 1-6(Spec)

Required Courses IV (6-10 hours)

Management & Supervision
IET 500 - Production Concepts 3(3-0)
IET 501 - Application of Industrial Management Principles 3(3-0)
IET 597 - Special Studies 1-6(Spec)
IET 636 - Leadership Internship 2-6(Spec)
IET 694 - Problems in Management and Technology 1-6(Spec)
IET 697 - Special Studies 1-6(Spec)

Required Courses V (3-11 hours)

Research
IET 597 - Special Studies 1-6(Spec)
IET 694 - Problems in Management and Technology 1-6(Spec)
IET 697 - Special Studies 1-6(Spec)
IET 791 - Independent Research 2-6(Spec)
IET 798 - Thesis 1-6(Spec)

plus three hours of graduate statistics.

Specialization (2-12 hours)

Courses selected should focus on the student's specialty.

Electives (0-15 hours)

Students can take courses outside the School of Engineering and Technology which strengthen their degree program. Courses may be selected from such academic areas as business, mathematics, computer science, industrial psychology or sociology. Students must receive approval from an IET advisor prior to taking departmental or nondepartmental courses for their graduate degree program.

Total: 30 semester hours

Course Descriptions: IET

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. Prerequisite: 12 IET credit hours.

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. Prerequisite: 12 IET credit hours.

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. Asystems approach is utilized to examine the optimization of technology within environmental constraints. Prerequisite: 12 IET credit hours.

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; or senior/graduate standing and permission of instructor.

IET 526 Industrial Ergonomics 3(2-2)
The study of human characteristics, capacities and limitations for the design of productive, safe, and comfortable workspaces, tools, equipment, tasks, and facilities. Prerequisites: IET 327; or senior/graduate standing and permission of instructor.

IET 527 Industrial Safety Management 3(3-0)
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 utilizing 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, partially 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)
IET 602 Current Concepts of Industrial Education 2(2-0)
For teachers and administrators who are interested in the role of industrial education. Problems and controversial issues are discussed.

IET 610 Advanced Quality Management 3(3-0)
Applications of quality concepts and the utilization of statistics in manufacturing and industrial settings. Includes quality concepts applied to conceptual design, detailed design, and production. Prerequisite: STA 580.

IET 619 Continuing Registration for Final Research Project 1(1-0)
An non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

IET 620 Advanced Materials 3(2-2)
This course covers advanced topics in industrial materials. Topics include material properties, material selection, material testing and nanotechnology. This course may be offered in an online or hybrid format. Prerequisite: IET 501 or IET 550.

IET 625 Industrial Internship 2-6(Spec)
Experience in industry covering its general functions and/or specific experiences in a technical area. CR/NC only. Prerequisite: departmental permission.

IET 633 Seminar: Industrial Education 3(3-0)
Review current philosophies, concepts, and trends in industrial education programs related to career awareness, exploration, and preparation opportunities for students, including those with special needs.

IET 634 Advanced Safety Management 3(3-0)
This course covers advanced topics in occupational safety and worker’s health protection. Prerequisite: IET 527.

IET 635 Curriculum Development: Industrial Education 3(3-0)
Develop curriculum and instructional materials designed to maximize teaching effectiveness, enhance cooperative teaching relationships, and individualize instruction for all students including those with special needs.

IET 636 Leadership Internship 2-6(Spec)
Supervised professional experiences in association with successful practitioners in a given area or field. CR/NC only. Prerequisite: coordinator’s permission.

IET 650 Project Management 3(3-0)
Modern project management showing basic phases of a project, conceptual and detailed design, efficient completion within budget and schedule. Prerequisite: IET 501 or Graduate Status.

IET 670 Lean Manufacturing & Six Sigma Quality 3(3-0)
This course develops and presents the material related to lean manufacturing and six sigma quality related to product, process, and manufacturing operations. Prerequisites: IET 500, STA 580.

IET 680 Sustainability and Green Technology 3(3-0)
This course seeks to apply the concepts of engineering and technology utilizing the framework of sustainability related to green energy technology. Prerequisite: IET 524.

IET 694 Problems in Management and Technology 1-6(Spec)
Individual investigation and research in industrial management or technology. Emphasis is placed on acquisition of knowledge and/or skills. CR/NC only.

IET 695 Independent Study 2-6(Spec)
Individual investigation and research in an area of industrial education. CR/NC only. Prerequisite: departmental permission.

IET 697 Special Studies 1-6(Spec)
Individual investigation and research to increase one’s technical competency.

IET 733 Practicum: Industrial Education/Special Education 3(Spec)
Cooperative involvement of industrial education and special education teachers in exploring career awareness, exploration, and preparation programs for all students, including those with special needs. Prerequisites: IET 633, IET 635, SPE elective, and permission of the professor.

IET 791 Independent Research 2-6(Spec)
CR/NC only. Prerequisites: EDU 581 or EDU 660 and departmental permission.

IET 798 Thesis 1-6(Spec)
CR/NC only. Prerequisites: EDU 581 or EDU 660 and approval of advisor.

Course Descriptions: EGR

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 previously studied is not duplicated. Prerequisite: Permission of instructor.

Course Descriptions: TEC

TEC 600 Introduction to Technology 3(3-0)
The study of technology with an emphasis on the technical and sociocultural dimensions of energy, transportation, communication, and production systems.

TEC 700 Readings in Technology 3(3-0)
A critical analysis of the literature addressing the nature and construct of technology as a major discipline and area of human inquiry. Prerequisite: TEC 600.

UNV 697 Prior Learning 1-10(Spec)
DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE
(ENG)

College of Humanities and Social & Behavioral Sciences

William Wandless, Chairperson
215 Anspach Hall, (989) 774-3171

Jeffrey Weinstock, Coordinator of Graduate Studies
Anne Alton, Ph.D., Children's Literature, British Literature
Jeffrey Bean, M.F.A., Creative Writing and Poetry
Ari Berk, Ph.D., Myth, Folklore, Native American Literature
William Brevida, Ph.D., American Literature
Elizabeth Brockman, Ph.D., English Education, Composition
Mary Ann Crawford, Ph.D., Writing Center Director, Linguistics
Darrin Doyle, Ph.D., Creative Writing, Fiction
Maureen Eke, Ph.D., African-American Literature and World Literature
Robert Fanning, M.F.A., Creative Writing and Poetry
Amy Carpenter Ford, Ph.D., English Education
Richard Forest, Ph.D., Linguistics
Mark Freed, Ph.D., Literary Theory
Pamela Gates, Ph.D., Children's Literature, English Education
Susan Griffith, Ph.D., English Education, Children's Literature
Desmond Harding, Ph.D., British Literature
Nate Smith, Ph.D., English Education
Cathy Hicks-Kennard, Ph.D., Linguistics
Melinda Kreth, Ph.D., Technical Writing
Kristen McDermott, Ph.D., British Literature
Gretchen Papazian, Ph.D., Children Literature, American Literature
Daniel Patterson, Ph.D., American Literature
John R. Pfeiffer, Ph.D., Bibliography, English Literature
Ronald Primeau, Ph.D., Rhetoric, Romantic Literature
Matthew Roberson, Ph.D., Creative Writing, Fiction
Susan Schiller, Ph.D., Composition, Rhetoric
Troy Hicks, Ph.D., English Education
Rick Husted, Ph.D., American Literature
Nicole Sparling, Ph.D., Latin American and World Literature
William Spruill, Ph.D., Linguistics
Susan Stan, Ph.D., Children's Literature
Marcy Taylor, Ph.D., Composition, English Education
William Wandless, Ph.D., British Literature
Jeffrey Weinstock, Ph.D., American Literature

The Department of English at Central Michigan University offers three graduate degrees: a Master of Arts in English Language and Literature, a Master of Arts in Language and Literature with an concentration in Creative Writing, a Master of Arts in English Language and Literature with a concentration in Children's/Young Adult Literature, a Master of Arts in English Composition and Communication, and a Master of Arts in TESOL (Teaching English to Speakers of Other Languages). A description of each degree program follows.

Graduate classes are small and provide the student with ample opportunity for interaction with professors and other graduate students. Graduate-level classes are offered in the late afternoons and evenings.

Master of Arts (M.A.) in English Language and Literature

Minimum Totals for Graduation: 30 hours

This program is designed to meet the needs of students who wish to teach English at a community college, for students seeking preparation for advanced study at the doctoral level at another university, or for students teaching English at the secondary level who wish to pursue more study in the discipline.

Students must complete at least 15 of their total semester hours at or above the 600 level. At the advisor's discretion up to six hours from other departments may be included.

Admission Requirements, Retention & Termination Standards
To become a candidate for the degree of Master of Arts in English Language and Literature, a student normally will be expected to have had an undergraduate major or minor in English with a grade point average of at least 3.0 on a four point scale and a cumulative grade point average of at least 3.0. For applicants whose native language is not English, a TOEFL score of 550 (213 CBT) and a TWE of at least 5, or a MELAB of 85, are required for admission. All students applying for admission to the Language and Literature program must submit a 7-10 page sample of analytical writing that shows an aptitude to do graduate-level work in English.

Required Courses I (3 hours)

Literal Criticism
Select one of the following:
ENG 535 - History of Literary Criticism 3(3-0)
ENG 636 - Seminar in Critical Problems 3(3-0)

Required Courses II (3 hours)

Language or Linguistics
Select one of the following:
ENG 545 - Chaucer 3(3-0)
ENG 570 - Old English 3(3-0)
ENG 672 - Applied Linguistics in Written Communication 3(3-0)

Required Courses III (3 hours)

Professional Methodologies
ENG 602 - Research Materials and Methods 3(3-0)

Required Courses IV (6 hours)

Two 600-level seminars in literature

Capstone Project (15 hours)
Choose one of the following plans:

Plan A
9 additional hours of course work authorized by the advisor and planned with the student, plus thesis (6 hours) and oral examination over thesis.
ENG 799 - Thesis 1-6(Spec)

Plan B
15 additional hours of course work, authorized by the advisor and planned with the student, plus a scholarly paper.

Total: 30 semester hours
Master of Arts (M.A.) in English Language and Literature: Creative Writing Concentration

Minimum Totals for Graduation: 30 hours
This program is designed to meet the needs of students who wish to teach English at a community college, for students seeking preparation for advanced study at the doctoral level at another university, or for students teaching English at the secondary level who wish to pursue more study in the discipline.

Admission Requirements, Retention & Termination Standards
To become a candidate for the degree of Master of Arts in English Language and Literature, a student normally will be expected to have had an undergraduate major or minor in English with a grade point average of at least 3.0 on a four point scale and a cumulative grade point average of at least 3.0. For applicants whose native language is not English, a TOEFL score of 550 (213 CBT) and a TWE of at least 5, or a MELAB of 85, are required for admission.

The student must submit a portfolio of original poetry or fiction for approval before selecting this concentration.

Required Courses I (3 hours)
Literary Criticism
Select one of the following:
ENG 535 - History of Literary Criticism 3(3-0)
ENG 636 - Seminar in Critical Problems 3(3-0)

Required Courses II (3 hours)
Language or Linguistics
Select one of the following:
ENG 545 - Chaucer 3(3-0)
ENG 570 - Old English 3(3-0)
ENG 672 - Applied Linguistics in Written Communication 3(3-0)

Required Courses III (3 hours)
Professional Methodologies
Select one of the following:
ENG 601 - Graduate Composition 3(3-0)
ENG 602 - Research Materials and Methods 3(3-0)

Required Courses IV (6 hours)
Two 600-level seminars in literature

Thesis Requirement (6 hours)
ENG 799 - Thesis 1-6(Spec)

Other Requirements (6 hours)
Select one of the following:
ENG 691 - Seminar Writing Fiction 3-6(Spec)
ENG 692 - Seminar in Writing Poetry 3-6(Spec)

Electives (3 hours)
Hours authorized by the advisor and planned with the student.

Total: 30 semester hours

Master of Arts (M.A.) in English Language and Literature: Children’s/Young Adult Literature

Minimum Totals for Graduation: 30 hours

Admission Requirements, Retention & Termination Standards
To become a candidate for the degree of Master of Arts in English Language and Literature, a student normally will be expected to have had an undergraduate major or minor in English with a grade point average of at least 3.0 on a four point scale and a cumulative grade point average of at least 3.0. For applicants whose native language is not English, a TOEFL score of 550 (213 CBT) and a TWE of at least 5, or a MELAB of 85, are required for admission.

Required Courses I (3 hours)
Literary Criticism
Select one of the following:
ENG 535 - History of Literary Criticism 3(3-0)
ENG 636 - Seminar in Critical Problems 3(3-0)

Required Courses II (3 hours)
Language or Linguistics
Select one of the following:
ENG 545 - Chaucer 3(3-0)
ENG 570 - Old English 3(3-0)
ENG 672 - Applied Linguistics in Written Communication 3(3-0)

Required Courses III (3 hours)
Professional Methodologies
ENG 602 - Research Materials and Methods 3(3-0)

Required Courses IV (6 hours)
Two 600-level seminars in literature

Required Courses V (3 hours)
ENG 681 - Seminar in Children’s Literature 3-9(Spec)

Required Courses VI (6 hours)
Children’s Literature
Select two of the following:
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)
ENG 681 - Seminar in Children’s Literature 3-9(Spec)

Note: If the student selects ENG 681 for Required Courses VI, the topic of the seminar must differ from that taken to fulfill Required Courses V.

Capstone Project (6 hours)
Choose one of the following plans:
Plan A (6 hours)
Thesis (6 hours) and oral examination over thesis.
ENG 799 - Thesis 1-6(Spec)

Plan B (6 hours)
6 additional hours of course work, authorized by the advisor and planned with the student, plus a scholarly paper.

Total: 30 semester hours
Master of Arts (M.A.) in English Composition and Communication

Minimum Totals for Graduation: 30 hours

The Master of Arts degree in English Composition and Communication is a program of courses centering on theory and practice in non-fiction forms of writing. It prepares graduate students to be career writers composing in disciplines other than English, professional writers composing within their own disciplines, creative writers composing in non-fiction forms, or teachers specializing in non-fiction forms. It allows for breadth of background and experience in composition as well as concentration in a selected area of interest. Required courses ground students in writing, editing, and rhetorical analysis, while elective courses give the opportunity to focus on creative, professional and pedagogical development. Students in this program will have priority access to designated English Department computer facilities throughout their course of study.

Admission Requirements, Retention & Termination Standards

To become a candidate for the degree of Master of Arts in English Composition and Communication, a student normally will be expected to have a grade point average of at least 3.0 on a four point scale and a cumulative grade point average of at least 3.0, or demonstrate equivalent academic or professional experience. All candidates for admission to this program must submit a portfolio of representative writing. Students should contact the Graduate Coordinator for a description of what this portfolio should contain and how it should be put together. For applicants whose native language is not English, a TOEFL score of 550 (213 CBT) and a TWE of at least 5, or a MELAB of 85, are required for admission.

Students must complete at least 15 of their total semester hours at or above the 600 level.

Required Courses (9 hours)
ENG 601 - Graduate Composition 3(3-0)
ENG 637 - Seminar in Rhetoric and Composition 3-6(Spec)
ENG 638 - Seminar in Textual Analysis and Editing 3(3-0)

Other Requirement (6 hours)
Select a thesis or internship as follows:
ENG 718 - Internship: Teaching 6(Spec)
ENG 719 - Internship: Professional Communication 6(Spec)
ENG 799 - Thesis 1-6(Spec)

Restricted Electives (9 hours)
Advanced courses from among any of the following chosen in consultation with an advisor:
ENG 510 - Writing Center Practicum 1-3(Spec)
ENG 514 - Language and Media Discourse 3(3-0)
ENG 517 - Reading and the English Classroom 3(3-0)
ENG 519 - Teaching of Composition 3(3-0)
ENG 539 - Seminar in Major Nonfiction Writers 3-9(Spec)
ENG 571 - Teaching of English to Speakers of Other Languages 3(3-0)
ENG 575 - Seminar in English Linguistics 3-9(3-0)
ENG 578 - Applied Sociolinguistics 3(3-0)
ENG 615 - Problems in Teaching English 3(3-0)
ENG 618 - Empirical Research Methods in English 3(3-0)
ENG 672 - Applied Linguistics in Written Communication 3(3-0)
ENG 673 - English Phonology for Language Teachers 3(3-0)
ENG 674 - English Grammar for Language Teachers 3(3-0)
ENG 675 - Seminar in English Linguistics 3-9(3-0)
ENG 690 - Practicum in TESOL 1-3(Spec)

Note: 3 hours of ENG 675 is required. The remaining 3-6 credits for ENG 675 may be taken as elective course credits.

Electives (6 hours)
ENG 510 - Writing Center Practicum 1-3(Spec)
ENG 517 - Reading and the English Classroom 3(3-0)
ENG 573 - Linguistics and Reading 3(3-0)
ENG 578 - Applied Sociolinguistics 3(3-0)
ENG 574 - TESOL Materials, Assessment, Curriculum 3(3-0)
ENG 577 - Introduction to Second Language Acquisition 3(3-0)
ENG 615 - Problems in Teaching English 3(3-0)
ENG 618 - Empirical Research Methods in English 3(3-0)
ENG 675 - Seminar in English Linguistics 3-9(3-0)
ENG 674 - English Grammar for Language Teachers 3(3-0)
ENG 799 - Thesis 1-6(Spec)

Total: 30 semester hours

Electives (6 hours)
ENG 510 - Writing Center Practicum 1-3(Spec)
ENG 514 - Language and Media Discourse 3(3-0)
ENG 517 - Reading and the English Classroom 3(3-0)
ENG 519 - Teaching of Composition 3(3-0)
ENG 539 - Seminar in Major Nonfiction Writers 3-9(Spec)
ENG 571 - Teaching of English to Speakers of Other Languages 3(3-0)
ENG 575 - Seminar in English Linguistics 3-9(3-0)
ENG 578 - Applied Sociolinguistics 3(3-0)
ENG 615 - Problems in Teaching English 3(3-0)
ENG 618 - Empirical Research Methods in English 3(3-0)
ENG 672 - Applied Linguistics in Written Communication 3(3-0)
ENG 673 - English Phonology for Language Teachers 3(3-0)
ENG 674 - English Grammar for Language Teachers 3(3-0)
ENG 675 - Seminar in English Linguistics 3-9(3-0)
ENG 690 - Practicum in TESOL 1-3(Spec)

Total: 30 semester hours

Course Descriptions: ENG

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. Prerequisites: Enrolled by instructor permission only.

ENG 513 Special Topics 1-6(Spec)

ENG 514 Language and Media Discourse 3(3-0)
Rhetorical theory and techniques in print and non-print media.

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 535 History of Literary Criticism 3(3-0)
Review of critical attitudes and approaches of enduring significance. Prerequisite: 6 hours of literature.

Master of Arts (M.A.) in TESOL

Teaching English to Speakers of Other Languages

Minimum Totals for Graduation: 30 hours

Admission Requirements, Retention & Termination Standards

To be admitted into the M.A. TESOL program, a student normally should have an undergraduate major or minor in English, linguistics, language arts, reading or a foreign language, with a grade point average of at least 3.0 in his or her major or minor and a cumulative average of at least 3.0. Applicants with majors in areas not related to language will be considered on an individual basis. In addition, two years of college foreign language study (or its equivalent) are required.

For applicants whose native language is not English, a TOEFL score of 550 (213 CBT) and a TWE of at least 5, or a MELAB of 85, are required for admission.

Degree Requirements

Required Courses (24 hours)
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 672 - Applied Linguistics in Written Communication 3(3-0)
ENG 673 - English Phonology for Language Teachers 3(3-0)
ENG 674 - English Grammar for Language Teachers 3(3-0)
ENG 675 - Seminar in English Linguistics 3-9(3-0)
ENG 690 - Practicum in TESOL 1-3(Spec)

Note: 3 hours of ENG 675 is required. The remaining 3-6 credits for ENG 675 may be taken as elective course credits.

Electives (6 hours)
ENG 510 - Writing Center Practicum 1-3(Spec)
ENG 514 - Language and Media Discourse 3(3-0)
ENG 517 - Reading and the English Classroom 3(3-0)
ENG 573 - Linguistics and Reading 3(3-0)
ENG 578 - Applied Sociolinguistics 3(3-0)
ENG 615 - Problems in Teaching English 3(3-0)
ENG 618 - Empirical Research Methods in English 3(3-0)
ENG 675 - Seminar in English Linguistics 3-9(3-0)
ENG 674 - English Grammar for Language Teachers 3(3-0)
ENG 799 - Thesis 1-6(Spec)

Total: 30 semester hours

Note: Students must pass a comprehensive examination. A Plan B paper is required.
ENG 539 Seminar in Major Nonfiction Writers 3-9(Spec)
Creative and critical approaches to the study of representative works by selected major writers of literary or creative nonfiction. May be repeated to a maximum of 9 hours. Prerequisites: Graduate status; or ENG 101 or ENG 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.

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: Tragedy and Problem Plays 3(3-0)
Examination of the development of Shakespearean tragedy and the final plays. Prerequisite: a previous university course in Shakespeare (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 234. Recommended: Six 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. Prerequisite: 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 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 acquisitions. Prerequisites: Graduate status or the following: ENG 201 with a grade of C or better; ENG 375.

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 literary 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 Cultural Pluralism in Young Adult and Children’s Literature 3(3-0)
An exploration of the literature and heritage of diverse American cultures, primarily through folk literature, fiction, and biography. Prerequisite: 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 234 or 381. (University Program Group IV-C)

ENG 583 The Heroic Tradition in Children’s Literature 3(3-0)
Study of the hero in epic, myth, folks tale, and legend; including modern examples. 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 or ENG 381.

ENG 601 Graduate Composition 3(3-0)
Applications of various approaches to writing nonfiction for teaching and nonteaching majors who wish to perfect their own writing.

ENG 602 Research Materials and Methods 3(3-0)
Instruction in materials and methods for research in language and literature. Prerequisites: Admission to Graduate Program in English.

ENG 603 Seminar in Technical & Professional Communication 3-6(Spec)
Advanced study of the theory and practice of professional and technical communication. May be repeated to a maximum of six hours. This course may be offered in an online or hybrid format. Recommended: ENG 303, 503, and/or 504 or previous work-related experience with a professional/technical communication focus.

ENG 614 Practicum in Teaching College Composition 3(3-0)
Study and practice of the theories, methods, and materials of teaching first-year college composition. Prerequisites: Open to English teaching assistants.

ENG 615 Problems in Teaching English 3(3-0)
An analysis of the issues, methods, and techniques of teaching English.

ENG 616 The Teaching of Creative Writing 3(Spec)
Theory and practice of teaching creative writing. Prerequisite: Accepted into the MFA program.

ENG 618 Empirical Research Methods in English 3(3-0)
How to design and evaluate empirical research in English; emphasis on the teaching and learning of writing, literature, and English as a second language. Recommended: ENG 601 and/or 602.
ENG 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

ENG 621 Seminar in Contemporary Poetry 3(3-0)
A study of selected contemporary poets in the context of major developments in the poetry of the twentieth century. Recommended: 6 hours of literature at the graduate or undergraduate level.

ENG 622 Seminar in Contemporary Fiction 3(3-0)
Study of significant and influential fiction from 1945 to the present. Prerequisites: Graduate status.

ENG 635 Seminar in English Literature 3-9(Spec)
A study of English literature from one of four historical periods: prior to 1650, from 1650-1800, from 1800-1900, or from 1900 to the present. Prerequisite: Admission to the graduate program. Recommended: Six hours of English Literature. May be repeated to a maximum of 9 hours.

ENG 636 Seminar in Critical Problems 3(3-0)
A study of the major theories and theorists in contemporary literary studies and selected critical problems generated by them. Recommended: 6 hours of literature.

ENG 637 Seminar in Rhetoric and Composition 3-6(Spec)
Theoretical issues, practices, history, texts, applications in Rhetoric and Composition. May be repeated to maximum of 6 hours.

ENG 638 Seminar in Textual Analysis and Editing 3(3-0)
A course designed to prepare students for editing responsibilities found in a variety of fields, including education and scholarly publications.

ENG 656 Seminar in American Literature 3-9(Spec)
The role of nature, frontier, or other factors in American literature of one of the following periods: A. Pre-Romantic Period; B. Romantic Period; C. Realistic and Naturalistic Periods; D. Modern Period. Recommended: 6 hours of American literature. May be repeated to a maximum of 9 hours.

ENG 665 Seminar in World Literature 3-9(Spec)
The tracing of ideas through World Literatures from one of the following periods: A. Classical literature; B. Medieval and Renaissance literature; C. 18th and 19th Century literature; D. Modern literature. Recommended: 6 hours of world literature. May be repeated to a maximum of 9 hours.

ENG 672 Applied Linguistics in Written Communication 3(3-0)
Linguistic approaches to textual analysis and the application of research findings in teaching written standard English.

ENG 673 English Phonology for Language Teachers 3(3-0)
Basic elements of English pronunciation, including segmental phonology, general articulation features, rhythm, and intonation. Involves analysis of pronunciation of native and non-native English speakers. Prerequisite: ENG 375.

ENG 674 English Grammar for Language Teachers 3(3-0)
A functional approach to English grammar, examining the uses of the major grammatical constructions. Includes analysis of language of native and non-native speakers of English. Recommended: ENG 571, ENG 574.

ENG 675 Seminar in English Linguistics 3-9(3-0)
Problems in sociolinguistics, discourse, bilingualism, historical grammar, the applications of modern linguistic theory to the teaching of English or foreign languages. May be repeated to a maximum of nine credit hours. Prerequisites: ENG 375 or equivalent and some foreign language study recommended.

ENG 681 Seminar in Children’s Literature 3-9(Spec)
Current issues in Children’s Literature Studies. This 3 credit course may be taken up to three times.

ENG 690 Practicum in TESOL 1-3(Spec)
An examination and application of methods, materials, and classroom management techniques necessary to teach English effectively to speakers of other languages. May be repeated to a maximum of three hours. Prerequisites: Final one-credit unit requires completion of ENG 571 or 577.

ENG 691 Seminar Writing Fiction 3-6(Spec)
Workshop in fiction writing. May be repeated up to 6 hours. Prerequisite: Admission to M.A. Creative Writing Concentration.

ENG 692 Seminar in Writing Poetry 3-6(Spec)
Workshop in poetry writing. May be repeated up to 6 hours. Prerequisites: Admission to M.A. Program in English Language and Literature: Creative Writing Concentration.

ENG 693 Seminar in Writing Nonfiction 3-6(Spec)
Workshop in contemporary approaches to nonfiction writing. This is a 3 credit course which may be taken twice.

ENG 695 The Craft of Poetry 3(3-0)
Poetic techniques, practices, theories, and approaches as exemplified in the works of notable poets and as examined in prosody and poetic forms. Prerequisites: Admission to the English department graduate program in Creative Writing or permission of the instructor.

ENG 696 The Craft of Creative Nonfiction 3(3-0)
Creative Nonfiction techniques, practices, theories, and approaches as exemplified in the works of noted authors and as examined in the genres of creative nonfiction. Prerequisite: Acceptance to any of the English department’s MA programs.

ENG 697 Independent Study 3-6(Spec)
Explorations of special problems in language and literature individually agreed upon by student and instructor. May be repeated a maximum of six hours. Prerequisites: Approval by instructor and department chairperson required before registration.

ENG 718 Internship: Teaching 6(Spec)
Supervised teaching experience in community college for pre-service teachers in Master of Arts in Composition and Communication Program. Prerequisites: 21 credit hours of MAECC graduate work, including the following specific courses: ENG 519, 601, 637, and 638; permission of instructor.

ENG 719 Internship: Professional Communication 6(Spec)
Supervised workplace experience in writing, editing and/or similar technical or professional communication activity for students in the Master of Arts in Composition and Communication Program. Prerequisites: 21 credit hours of MAECC graduate work, including: ENG 601, 603, 637, and 638; permission of Internship Advisor.

ENG 799 Thesis 1-6(Spec)
An in-depth, research-oriented study on a topic or a creative work completed in consultation with the thesis advisor as a capstone demonstration of the student’s learning. CR/NC only.
Department of Finance and Law (BLR, FIN)

College of Business Administration

James Felton, Chairperson
332 Sloan, 989-774-3362

Thomas Anthony, J.D., Law and Public Policy
Bruce Benet, Ph.D., Finance
Vigdis Boasson, Ph.D., Finance
Elizabeth Campbell, J.D., Law and Public Policy
Wan-Juin Paul Chiou, Ph.D., Finance
Adam Epstein, J.D., Law and Public Policy
James Felton, Ph.D., Finance
John B. Mitchell, D.B.A., Finance
Kenneth J. Sanney, J.D., Law and Public Policy
Daniel E. Vetter, Ph.D., Finance
Nancy White, J.D., Law and Public Policy

Course Descriptions: BLR

BLR 521 Environmental Law and Policy 3(3-0)
A 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 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.

BLR 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: 56 semester hours completed; admission to Professional Business Studies or listed on a signed major or minor.

BLR 600 Legal and Social Environment of Business 3(3-0)
Basic concepts concerning the interrelationship of business and its external environments. Managerial participation in and response to public policy issues and their resolution. Not available for credit toward the M.B.A. or M.S.A. degree.

BLR 631 Public Policy and Regulated Industries 3(3-0)
Analysis of the procedural and substantive aspects of the regulatory environment which affect the administration of the energy, communications, transportation and similar industries. Prerequisite: admission to M.B.A.

Course Descriptions: FIN

FIN 573 International Finance 3(3-0)
Role of financial manager in international corporations. Environmental problems of foreign exchange. 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 topics 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.

FIN 671 Financial Derivatives 3(3-0)
Advanced treatment of futures, options, and swaps. Emphasis is on how to use derivatives to manage risk as well as more advanced derivative pricing models. Prerequisites: MBA 669, admission to MBA, or permission of MBA director.

FIN 674 Short Term Financial Management 3(3-0)
Cash budgeting, working capital management; short and intermediate term financing. Prerequisite: MBA 669, admission to MBA, or permission of MBA director.

FIN 676 Investment Strategy 3(3-0)
Analysis of various theories and techniques available to achieve superior selection and management of securities. Prerequisites: MBA 669, admission to MBA.

FIN 678 Long Term Financial Policies 3(3-0)
Factors involved in formulation of long-term financial policies; corporate goals and objectives and the applications in capital budgeting decisions and financing. Prerequisite: MBA 669, admission to MBA, or permission of MBA director.

FIN 791 Independent Studies 1-6(Spec)
Directed reading or research on an approved topic. Prerequisite: permission of instructor and department chairperson and 15 hours of graduate credit in MBA program.

FIN 797 Special Topics 3-6(Spec)
Enables students to take various topics under the same number. Specific topic will be listed on the student’s transcript. Prerequisites: graduate status and permission of instructor.

FIN 798 Thesis 1-6(Spec)
An approved thesis in finance. Thesis is directed by a committee in conformity with the Regulations and Directions for the Writing of the Master’s Thesis. CR/NC only.
DEPARTMENT OF FOREIGN LANGUAGES, LITERATURES, AND CULTURES (FLN, FRN, GER, SPN)

College of Humanities and Social & Behavioral Sciences

N. Christine Brookes, Ph.D., Chairperson
305 Pearce Hall, (989) 774-3786

Isabel Alvarez-Sancho, Ph.D., Spanish
Leila Ennaili, Ph.D., French
Luz Marcela Hurtado, Ph.D., Spanish
Mary-Garland Jackson, Ph.D., Spanish
James Jones, Ph.D., German
Susan Knight, Ph.D., Spanish
Krzysztof Kulawik, Ph.D., Polish
Keith Palka, Ph.D., French
Rafael Ponce-Cordero, Ph.D., Spanish
Amy Ransom, Ph.D., French
Alejandra Rengifo, Ph.D., Spanish
Norma Richardson, Ph.D., Spanish
Daniela Richter, Ph.D., German

Students may earn a Master of Arts in Spanish or they may earn a concentration in French, German, or Spanish in the Master of Arts curricula in secondary education, offered through the Department of Teacher Education and Professional Development. To be admitted to this program, a student must have a background in the specific (relevant) foreign language that includes a minimum of 24 semester hours of course work beyond the 100 level, with an acceptable grade point average in the foreign language of concentration.

Master of Arts (M.A.) in Spanish

Minimum Totals for Graduation: 30 hours

The M.A. in Spanish provides students with a unique program that is designed to enhance fluency in the language, foster interaction with Hispanic cultures, broaden knowledge, and promote professional development. Students in this program will achieve a high level of proficiency in the Spanish language and will become more deeply and personally acquainted with Hispanic cultures. The program has a variety of course options from Saturday classes on campus and midweek seminars, to hybrid on-line and study abroad. Its interdisciplinary and multicultural bases will enhance the learning of a wide variety of students, including (but not limited to) teachers of Spanish. The faculty, comprised of experts in linguistics, literature, and cultural studies, strive to provide each student with individual attention. Students will also gain a sense of community and common purpose, especially through participation in the study abroad portions of the program.

At the end of the program, the student will be able to:
1. work effortlessly in all four communication areas (speaking, listening, reading, and writing) of Hispanic societies;
2. synthesize current political and social happenings, and interpret these syntheses to speakers of the non-Hispanic world;
3. interact with ease at all social levels by identifying the historical differences that distinguish Hispanic societies from other societies;
4. explain to persons from the non-Hispanic world the similarities and distinctions within the different Hispanic societies;
5. understand differences between English and Spanish linguistic aspects such as the sound system, morphemics, and syntax; and
6. analyze literary texts within their cultural context.

Note: When the student begins the M.A., she or he will write an essay (500 words), on a topic chosen by the Spanish faculty, and will engage in a brief oral interview with two members of the Spanish faculty. The purposes of the essay and initial interview are to aid in advising and to establish the student's entering proficiency level.

Admission Requirements, Retention & Termination Standards

In addition to general university requirements for regular admission status, students seeking admission to the master's program in Spanish must:
1. have completed an undergraduate major in Spanish with a grade point average of at least 2.7 in their undergraduate Spanish courses (beyond the 100-level);
2. have at least a grade point average of 2.7 in their undergraduate coursework;
3. submit letters of reference from three persons who are well acquainted with them and can provide information about their Spanish language skills and prospects for success in this graduate program. The letters are to be sent directly to the Spanish Graduate Coordinator.

Note: Per university policy, conditional admission may be considered for applicants with background or grade point average deficiencies. Courses taken to make up admission deficiencies cannot be counted toward graduate degree requirements. Regular admission status should be requested upon completion of all deficiencies.

Degree Requirements

Required Courses at CMU (24 hours)

Students must complete 24 credit hours from the following courses:
SPN 610 - Studies in U.S. Latino Cultures 3-6(3-0)
SPN 620 - Cultures and Literatures of Spanish America 3-9(Spec)
SPN 630 - Culture and Literature of Spain 3-9(Spec)
SPN 640 - History of the Spanish Language 3(3-0)
SPN 650 - Stylistics 3(3-0)
SPN 660 - Spanish Phonology 3(3-0)

Note: The following courses may be taken more than once if the same content is not repeated: SPN 610, 620, and 630.

Required Courses in Latin America or Spain (6 hours)

All students must have one study abroad experience of 6 hours in a Department-designated site. Select from the following:
Courses in Latin America (6 hours)
Take one course on Spanish-American Cultural Issues (3 credits) and one course in Language or Linguistics (3 credits)
SPN 670 - Study Abroad: Latin America 3-6(Spec)

Courses in Spain (6 hours)
Take one course on Spanish Culture (3 credits) and one course in Language or Linguistics (3 credits)
SPN 680 - Study Abroad: Spain 3-6(Spec)

Other Requirements

Comprehensive Written Exam
To assess the student's knowledge in the subject areas studied, the student must pass a written comprehensive exam that is based on a reading list provided by the faculty.

Oral Interview
To assess the student's oral proficiency in Spanish upon completion of the program, the student must pass an oral interview with a committee of graduate faculty in Spanish at CMU. This oral interview will assess:
1. the student's ability to converse, describe, evaluate, synthesize, and state opinions;
2. the student's accent and pronunciation;
3. the scope of the student's active vocabulary;
4. the student's mastery of grammar.

Total: 30 semester hours

(Continued)
ACCELERATED M.A. IN SPANISH

Eligibility Standards:
Students who meet the following criteria are eligible to apply to the accelerated program:
1. Signed major in Spanish.
2. Enrolled in the semester in which the student expects to have completed at least 86 credits.
3. Completed at least one SPN 400-level class and the undergraduate study abroad requirement.

Admission Requirements:
Students must apply for admission to the College of Graduate Studies during the semester in which the student expects to have completed at least 86 credits. Students must meet the requirements for admission to the Master of Arts in Spanish degree program and to the College of Graduate Studies. In addition, students should also have completed university competency requirements. If admitted, graduate status is conferred in the senior year after the student has completed at least 86 undergraduate credit hours with a cumulative undergraduate grade point average of at least 3.25 and a grade point average of 3.25 in Spanish coursework.

Program Requirements:
Three to twelve (3-12) hours of graduate SPN credit (500 and 600 level courses) leading to an MA degree in SPN may be taken in the final year of undergraduate work. No course may count for both undergraduate and graduate degrees.

Course Descriptions: FLN
FN 297 Special Topics 1-8(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.

Course Descriptions: FRN
FRN 510 Study Abroad 1-12(Spec)
Intended for advanced undergraduate and graduate students studying abroad. Prerequisites: 6 hours at the 400 level; permission of instructor.

FRN 531 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 Studies in French Culture 1-6(Spec)
Topics of immediate interest in French literature and civilization. Credit hours vary, depending on the subject chosen. Recommended: FRN 202.

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.

Course Descriptions: GER
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 312.

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.

Course Descriptions: SPN
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 591 Special Topics in Spanish 1-9(Spec)
Recommended: Three (3) credits in Spanish at the 400 level.

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.

SPN 610 Studies in U.S. Latino Cultures 3-6(3-0)
Analysis of Latino culture in the United States in terms of a given topic/genre. The works selected for each topic/genre will be examined in the light of their historical, social, and economic context. This course is approved for offering in a distance learning format. Prerequisites: admission to the M.A. program in Spanish. A student may take this course twice, for 3 hours of credit each time, but must choose a different topic/genre for the second 3 hours.

SPN 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

SPN 620 Cultures and Literatures of Spanish America 3-9(Spec)
An examination of the historical, social, and economic context of the Spanish-American experience through the analysis of different cultural representations including film, media, arts, music, and literature. A student may take this course up to three times, for 3 credits each time, when content previously studied is not duplicated. Prerequisites: Admission to the M.A. program in Spanish.

SPN 630 Culture and Literature of Spain 3-9(Spec)
An examination of the historical, social, and economic context of the Peninsular Spanish experience through analysis of different cultural representations including film, media, arts, music, literature. A student may take this course up to three times, for 3 credits each time, when content previously studied is not duplicated. This course is approved for offering in a distance learning format. Prerequisites: Admission to the M.A. program in Spanish.

SPN 640 History of the Spanish Language 3(3-0)
Examines the external and internal history of the Spanish language from its Indo-European origins to the modern period, with special emphasis on the evolution of phonology, morphology, lexis, and semantics. Prerequisite: admission to the M.A. program in Spanish.

SPN 650 Stylistics 3(3-0)
This course is designed to enable the student to deal with complexities of written Spanish at different levels of the language giving consideration to the fundamental aspects of morpho-syntax or orthography. This course may be offered in a hybrid format. Prerequisite: admission to the M.A. program in Spanish.

SPN 660 Spanish Phonology 3(3-0)
This course is designed to provide an understanding of Spanish articulatory phonetics in itself, and as contrasting with English articulatory phonetics, and to analyze the phonological system of the Spanish language. Prerequisite: admission to the M.A. program in Spanish.

SPN 670 Study Abroad: Latin America 3-6(Spec)
Courses offered at a site in Latin America selected by the department. Students will take one course in Spanish American Cultural Issues and one in Language or Linguistics, as approved by the advisor. Prerequisite: admission to the M.A. program in Spanish.

SPN 680 Study Abroad: Spain 3-6(Spec)
Courses offered at a site in Spain selected by the department. Students will take one course in Spanish Culture and one in Language or Linguistics, as approved by the advisor. Prerequisite: admission to the M.A. program in Spanish.

SPN 697 Independent Study 1-3(Spec)
The in-depth study of a topic under the direction of a graduate faculty member who together with a student, designs the format of the study. Prerequisites: completion of SPN 670 and SPN 680.
DEPARTMENT OF GEOGRAPHY
(ESC, GEO)
College of Science and Technology

Dave Patton, Chairperson
296B Dow Science
(989) 774-1165
https://www.cmich.edu/academics/sci_tech/Geography

David Patton, Director, M.S.GISci Program, Ph.D., Cartography and GIS, (989) 774-2798
Brian Becker, Ph.D., Remote Sensing
Matthew Leisch, Ph.D., Rural Economic Development
Bin Li, Ph.D., Geographic Information Systems
David Patton, Ph.D., Cartography and GIS
Yong Tian, Ph.D., Geo-computation and Environmental Modeling
Xiaoguang Wang, Ph.D., Land-use and Transportational Planning
Tao Zheng, Ph.D., Remote Sensing

Master of Science (M.S.) Degree in Geographic Information Sciences (GISci)

Minimum Totals for Graduation: 33 hours

The M.S. program in Geographic Information Sciences (GISci) provides advanced course work and applied research in cartography, geographic information systems (GIS) and remote sensing. Each student will complete a thesis or research project that applies GISci techniques to economic, environmental, or other issues that require spatial data processing and analysis. Graduates will develop skills that will qualify them for a variety of spatial data processing positions that make up a rapidly growing field in the information technology industry.

The M.S. in GISci is a 33 credit hour program available either through a Plan A option (thesis) or Plan B option (non-thesis). Under Plan A, six credits of thesis work (GEO 798) is required. Under Plan B, three credits of a directed research project (GEO 797) is required. The thesis or research project must apply GISci techniques to economic, environmental or other problems that require spatial data analysis. More detailed information is available in the department office.

Admission Requirements, Retention & Termination Standards

All applicants must submit scores for the general GRE. To receive full consideration for financial support beginning in a fall semester, all application materials must be received in the Department of Geography no later than March 1. Applicants should allow approximately one month for materials submitted to the College of Graduate Studies to be processed and forwarded to the department. Details regarding the application process and the program may be found at http://www.cmich.edu/academics/sci_tech/Geography.

Students entering the M.S. GISci program are required to have a sound knowledge of the fundamental concepts of cartography, GIS, and remote sensing. It is also expected that M.S. GISci students have a basic knowledge of a computer language, calculus, and statistics as these are skills necessary to understand, manipulate, and develop the analytical methods and algorithms that are the foundations of advance training in Geographic Information Science. A minimum 3.0 GPA in the student’s undergraduate major is required.

Computer Programming

One course in a current programming language (CMU equivalent: CPS 110 or CPS 180) with minimum grade of B.

Mathematics and Statistics

One course in Calculus (CMU equivalent: MTH 132) and one course in Statistics (CMU equivalent: STA 282 or STA 382)

Fundamental Courses in Geographic Information Sciences

At least, one course in Cartography (CMU equivalent: GEO 203), one course in Introductory Geographic Information Systems (CMU equivalent: GEO 303), and one course in Introductory Remote Sensing (CMU equivalent: GEO 305). Minimum grade of B in each.

Degree Requirements

Required Courses I (15 hours)

- 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)
- GEO 701 - Contemporary Spatial Data Management 3(2-2)

Note: A student satisfying any of the required courses or their equivalents prior to entering the program may be excused from these courses. Other courses will be substituted with the approval of the advisor. Credits from these courses will be applied to the 21 hours of required courses. A student must receive a minimum grade of C in each course to have their course work approved for the graduate program.

Required Courses II (6 hours)

Select two courses from the following:

- GEO 600 - Dynamic Mapping and Visualization 3(2-2)
- GEO 603 - GIS Design and Programming 3(2-2)
- GEO 608 - Advanced Digital Remote Sensing 3(2-2)

Note: A student satisfying any of the required courses or their equivalents prior to entering the program may be excused from these courses. Other courses will be substituted with the approval of the advisor. Credits from these courses will be applied to the 21 hours of required courses. A student must receive a minimum grade of C in each course to have their course work approved for the graduate program.

Additional Requirement (3-6 hours)

Select either Plan A (Thesis) or Plan B (Directed Research)

- GEO 797 - Directed Research in Geographic Information Sciences 1-6(Spec)
- GEO 798 - Thesis 1-6(Spec)

Electives (6-9 hours)

Two or three 500 to 700 level courses in a technical or cognate field(s) in consultation with advisor.

Technical courses might include relevant Computer Science, Mathematics, and/or Statistics courses or Special Topics courses in Cartography, Geographic Information Systems, Global Positioning System (GPS), or Remote Sensing.

Cognate courses might include relevant Biology, Earth Science, Geography, Geology, Political Science, or other courses that would complement the student’s area of specialization. A student must receive a minimum grade of C in each elective course.

Total: 33 semester hours

ACCELERATED PROGRAM

Undergraduate students in Geography with a Concentration in Geographic Information Science can pursue a Master of Science degree in Geographic Information Science while still fulfilling the requirements for their Bachelor’s degree. The Accelerated Master’s Degree Program (AMDP) allows students to reduce the total number of credits to complete their undergraduate and graduate level degrees by applying up to 12 credits (500 and 600 level courses) towards graduate requirements on both degree programs.

(Continued)
Admission Criteria:

Students must have an overall undergraduate grade point average (GPA) of at least 3.25 and have completed a minimum of 86 credits towards a Bachelor's degree, including all University Program requirements (including transfer and/or AP credits) the semester that they apply for admission to the Accelerated MS program in Geographic Information Science. Students must also satisfy all other requirements for regular admission to the MS program in Geographic Information Science to be eligible for the accelerated program including the completion of GEO 203, 303 and 305, MTH 130, STA 382 and CPS 110 or 180.

During the fourth year, students will complete 12 credits of course work that will be counted towards both the undergraduate and graduate degrees. The student is responsible for fulfilling all of the requirements of the undergraduate degree and, therefore, additional credits may need to be taken to complete the Bachelor of Science degree requirements during the fourth year.

A sample curriculum for a student who has completed 94 credit hours of undergraduate course work is given below:

Year Four:

Fall
GEO 500 (3)
GEO 503 (3)
Undergraduate courses (9)
Total: 15 credits

Spring
GEO 508 (3)
GEO 512 (3)
Undergraduate courses (9)
Total: 15 credits

Year Five:

Fall
GEO 600, 603, or 608 (3)
GEO 701 (3)
Graduate Electives (6)
Total: 12 credits

Spring
GEO 600, 603 or 608 (3)
GEO 798 (Plan A) or 797 (Plan B) (6)
Total: 9 credits

Certificate in Data Mining

This is an interdepartmental graduate certificate. Please check the index for the page number.

Course Descriptions: GEO

GEO 500 Advanced Cartography 3(2-2)
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 Geographic Information Systems 3(2-2)
The techniques of computer-assisted analysis and display of spatially ordered geographic data. Students will use vector and raster GIS. Prerequisites: GEO 303, GEO 305.

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 spatial statistics. Point pattern analysis. Prerequisites: GEO 303; STA 382.

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)
To increase awareness of the complexity and unity of the Great Lakes Region. Study and application of regional concepts to the Great Lakes area. Prerequisites: 6 hours of GEO.

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 508 and STA 382.

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)
The integration of land use planning and environmental management concepts and techniques with broader regional economic and environmental planning approaches in the US and abroad. Prerequisites: 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: teacher certification.

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 MS GISci 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.

GEO 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.

GEO 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.
GEO 600 Dynamic Mapping and Visualization 3(2-2)
Study of the theory and application of advanced methods of cartographic display using dynamic mapping and visualization methods. Prerequisites: GEO 500.

GEO 603 GIS Design and Programming 3(2-2)
Design and implementation of GIS applications using component software and high level macro languages. Prerequisites: GEO 503 or admission to the MS GIS program.

GEO 608 Advanced Digital Remote Sensing 3(2-2)
Advanced image processing and data analysis techniques using contemporary operational and experimental remote sensing systems. Overview of satellite instrumentation and sensor operations. Prerequisites: GEO 508; STA 382.

GEO 615 Research Design in Geographic Information Sciences 3(3-0)
Formulating research questions, reviewing literature, designing research methodology, and communicating research results in Geographic Information Sciences. Prerequisites: Two of the following: GEO 500, 503, 508, 512.

GEO 619 Continuing Registration for Final Research Project 1(1-0)
An on-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

GEO 701 Contemporary Spatial Data Management 3(2-2)
Contemporary research and development trends in collection, management, processing and analysis of spatial data. Prerequisites: GEO 503, 508. Recommended: GEO 500, 512.

GEO 797 Directed Research in Geographic Information Sciences 1-6 Spec
Directed research on advanced topics in Geographic Information Sciences. A prospectus of the proposed research project must be approved prior to registration. Prerequisite: Arrangements must be made with supervisor or project supervisor prior to registration. CR/NC only.

GEO 798 Thesis 1-6 Spec
A written thesis and oral department seminar on the thesis research. Registration requires Plan A thesis prospectus on file in the Geography Department Office. Prerequisite: Thesis proposal must be approved by the department chairperson prior to registration. CR/NC only.

Course Descriptions: ESC

ESC 575 Special Studies in Earth Science 1-6 Spec
Various special topics offered at an advanced undergraduate and graduate level. Topics announced in Class Schedule. 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. Prerequisite: 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. Prerequisite: 12 hours of earth science credit; permission of both instructor and department chairperson before registration.

SCHOOL OF HEALTH SCIENCES
(DHA, HSC)
The Herbert H. and Grace A. Dow College of Health Professions

Jeffrey Betts, Chair
2219 Health Professions Building, (989)774-6529

Steven Berkshire, Ed.D., Health Administration

Jeffery Betts, Ph.D., Exercise Science and Physiology

Jodi Brookins-Fisher, Ph.D., Community Health Education

Mark Cwiek, J.D., Director, Health Administration Division

Naiyla DeLeRez, MPH, Health Administration, Healthcare Research

Jeffrey E. Edwards (Graduate Coordinator) Ph.D.

Salma Haider, Ph.D., Biostatistics, Epidemiology, and Environmental Health

Roger Hammer, Ph.D., Exercise Therapy

Lana Ivanitskaya, Ph.D., Health Administration

Roop Jayaraman, (Division Director) Ph.D., Exercise Science

James Johnson, Ph.D., Health Administration

Bernard Kerr, Ed.D., Health Administration

Mark Minelli, Director, Community Health Division, Ph.D., Community Health Education

Irene O’Boyle, Ph.D., Community Health Education

Paul Visich, Ph.D., Exercise Science

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 Mount Pleasant community, for a junior, senior or graduate student majoring in health education and health sciences who has earned a 3.0 or higher GPA.

Master of Arts (M.A.) in Physical Education: Exercise Science Concentration

Minimum Totals for Graduation: 30 hours
Students pursuing this degree must complete a minimum of 30 credit hours.

This option includes a required core of courses, specialization courses, and elective and cognate courses. The student must complete a required core. Credit hours in the core vary depending on whether a thesis (6 credits) or independent study (3 credits) is selected.

The Exercise Science Option is designed to prepare students to be exercise specialists or provide a foundation for additional graduate study or both. The study of the physiology of work and exercise is the main emphasis of this program.

Admission Requirements, Retention & Termination Standards
To be considered for admission to the Master of Arts in Physical Education degree program, a student must meet the general requirements for admission to the CMU College of Graduate Studies. In addition, applicants for the MA in Physical Education must submit the official GRE results and a resume along with all other application materials. Based upon the undergraduate GPA, GRE results, resume, and professional experience, the candidate may be accepted as a regular or conditional student. For regular admission, the minimum undergraduate GPA must be 3.0 or higher on a 4.0 scale.

(Continued)
To be assured consideration for admittance, all application materials must be received by the following deadlines: April 1 for fall semester, August 1 for spring semester, and February 1 for summer sessions.

To be admitted to this program, the student must present 20 or more hours of exercise science, physical education, or health-related courses.

**Degree Requirements**

**Required Courses I (13 hours)**
- BIO 590 - Cardiovascular Physiology 3(3-0)
- PES 606 - Motor Learning and Human Performance 3(3-0)
- PES 631/HSC 631 - Physiology of Exercise 4(3-2)
- PES 670/HSC 670 - Research Methods for Physical Education and Sport, Health and Recreation 3(3-0)

**Required Courses II (3 hours)**
- Select one of the following:
  - HSC 544 - Biostatistics 3(2-1)
  - PES 672 - Statistics for Physical Education and Sport, Health and Recreation 3(3-0)

**Required Courses III**
- PES 691 - Independent Study 3(Spec)
- PES 698 - Thesis 1-6(Spec)

**Electives (8-11 hours)**
- Select hours in consultation with an advisor.

**Total: 30 semester hours**

**Additional Requirements:**

1. An oral examination in the field of specialization may be given at the discretion of the department. The department reserves the right to administer a comprehensive examination after the completion of approximately 20 hours of course work as a tool to secure information to be used in counseling the student toward the completion of the selected program.

2. Students must consult with an advisor prior to taking a 500-level course.

3. Students must present 20 or more semester hours of classes at or above 600-level for this degree.

4. A maximum of six hours of credit in practicum, field study, and internship courses may be applied toward the completion of this degree program.

5. Individualized graduate programs for specific areas of interest such as Special Physical Education may be arranged in consultation with an advisor and with the Graduate Coordinator’s approval.

**Doctoral Program in Health Administration (D.H.A.)**

**Minimum Totals for Graduation: 63 hours**

Applications are accepted for admission to the Doctor of Health Administration (DHA) program for the fall cohort start. Applications must be received for the fall start by April 1. Inquire with the DHA secretary at 989-774-1351 or the DHA program director at 989-774-1640.

The program leading to the Doctor of Health Administration degree is designed to provide advanced academic, relevant, and professionally-oriented education. The DHA degree is not for individuals wishing to gain a degree to enter a field; rather, it is designed for professionals already in the field. The curricular and learning outcome objectives of this applied doctorate program are directed toward preparing individuals with the theoretical foundations, applied skills and practical expertise required for leadership positions within the healthcare industry. Emphasis will be given to imparting and advancing skills that foster life-long learning, systematic investigation and testing of practices and operational models via data/evidence-based strategies, and the public dissemination, and reporting of new findings within the field. The intent of the program is to provide advanced knowledge, skills, and abilities to practicing health professionals in a convenient, yet rigorous academic environment.

The program course of study is delivered in a sequenced manner of fifteen internet-based courses, six intensive face-to-face two and a half-day seminars, a general comprehensive examination, and an applied research dissertation. Students matriculating into this program cannot be granted prior experience credit toward semester credit hour degree requirements. Students matriculating into the DHA program may, with the approval of the program, transfer up to six (6) credits of course work taken in another regionally accredited doctoral program. The applicant must request the transfer and identify which courses he/she wishes to transfer. The DHA Program will review the request and make a determination as to the relevancy of the courses to the program, whether the courses are equivalent to any of the DHA courses, and whether the request will be granted. No transfer credits will be accepted to meet the dissertation requirement nor DHA726 or DHA728. The applicant must have earned at least a B grade on any course being requested to transfer. The applicant needs to submit a transcript showing the courses, a course description and the syllabus for the course. A new group of students will begin studies each year. Each student will be assigned an advisor for the didactic portion of the program. Using a modular format, fifteen courses and six intensive seminars during the first two years of the program comprise the didactic portion of the program. The successful completion of a comprehensive examination at the end of the didactic portion of the program will transition the student to doctoral candidate status where the doctoral candidate will begin their dissertation preparation, proposal, implementation, defense to their doctoral committee, and reporting. During the dissertation phase, each student will work closely with a dissertation advisor/major professor. The didactic portion of the program carries fifty-one (51) semester credit hours and the dissertation portion carries twelve (12) semester credit hours for a total of sixty-three (63) semester credit hours for the entire program. Students will choose between a three (3) year or five (5) year degree plan. Students choosing the three year option will enroll in two (2) courses per term and generally will complete the program in three years while those choosing the five-year option will normally enroll in one (1) course per term.

**Admission Requirements, Retention & Termination Standards**

The minimum requirements and standards for applicant admission to the program include the following criteria:

- An earned regionally accredited master’s degree in an appropriate area of study (e.g., health administration, business administration, public health, public administration) or a professional degree (e.g., M.D., D.O., D.D.S.). Other areas of graduate study at the master’s degree level will be considered by petition to the faculty. GPA will be considered in the admissions process.
- Satisfactory completion of graduate coursework or equivalent must be provided as evidence by student applicants in the areas of health economics or economics, finance, statistics, administration/management, and organizational development/behavior.
- Demonstration of at least five years of work related experience at mid-level or higher health management, administration, clinical administration, or in health policy.
- Oral and written English language proficiency. Applicants whose native language is not English will be required to submit the
results of the Test of English as a Foreign Language (TOEFL) scores or another test of English equivalency (such as the ECFMG for physicians who were foreign medical students). This requirement may be waived if prior academic experience and success in other United States colleges/universities or employment settings can be satisfactorily demonstrated;

- Submission of a career goal statement and a current curriculum vitae or resume;
- Submission of a research paper based on a premise that the DHA Program Office will provide to applicants. The instructions for how to prepare the paper will be provided at time of application inquiry.
- At least three (3) letters of recommendation from professional colleagues that speak to the applicant’s potential to do doctoral work, transcripts and other documentation customarily required for admission to the College of Graduate Studies will be required.
- Successful completion of an admission interview with the program faculty.
- Students admitted to the Program must attend the on-campus new DHA student orientation. If an admitted applicant cannot attend the orientation, he/she will need to defer to the next year.

Required Courses I (24 hours)
DHA 700 - Leadership: Foundations and Strategies for Healthcare 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 Healthcare 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)

Required Courses II (27 hours)
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)

Required Courses III (12 hours)
DHA 898 - Dissertation Design, Implementation, Defense and Reporting 1-12(Spec)

Total: 63 semester hours

Graduate Certificate in International Health

Minimum Totals for Graduation: 15 - 18 hours

The Graduate International Health Certificate is designed to provide a structured curriculum leading to knowledge, skills and abilities relevant to international health as well as provide a marketable credential for students achieving the certification. The certificate program will emphasize international travel as a key component of the curriculum, recognizing international travel as fundamental to learning about international health. The objectives of the program center on facilitating a better understanding of international health issues and opportunities, the role of cultural differences in health and wellness, comparative health systems, and cross-cultural communication. Students enrolling in the certificate program must be admitted to the university as graduate students and be in good academic standing with the College of Graduate Studies. Students interested in the program should speak with a faculty member in the Health Administration Division, School of Health Sciences for program details and advisement. The certificate curriculum is as follows:

Required Courses I (5-6 hours)
HSC 516 - Travel Course in Health Education 1-15(Spec)
HSC 552 - International Health Systems, Organizations and Policy 3(3-0)

Note: HSC 516 for Required Courses I must be different from HSC 516 listed in Required Courses II and Electives.

Required Courses II (2-3 hours)
HSC 516 - Travel Course in Health Education 1-15(Spec)

Note: This course must be different from HSC 516 listed in both Required Courses I and Electives.

Required Courses III (3 hours)
Select one of the following:
DHA 704 - Population Health 3(3-0)
DHA 728 - Comparative Health Systems 3(3-0)

Electives (3-8 hours)
Select from the following:
ANT 520 - Medical Anthropology 3(3-0)
COM 667 - Seminar in Intercultural Communication 3(3-0)
HSC 504 - International Health Education 3(3-0)
HSC 516 - Travel Course in Health Education 1-15(Spec)
IPS 597 - International Program Studies 1-36(Spec)
PSC 551 - Seminar in International Relations 3(3-0)
PSC 555 - International Law I 3(3-0)
SOC 506/ANT 506 - Comparative Cultural Systems 3(3-0)
SOC 514 - Sociology of Health and Illness 3(3-0)

Note: If chosen, the elective HSC 516 course must be different from the two required HSC 516 courses above.

Total: 15-18 semester hours

Master of Science in Administration (M.S.A.)

Concentration in Health Services Administration

The Master of Science in Administration Program requires 36 Credit Hours of graduate study. The MSA Program provides students with the fundamental principles required for successful administrative careers in the public, private, or nonprofit sectors.

The required core courses of the MSA program (15-21 Credit Hours) provide a comprehensive overview of organizational and human relationships and the administrative mechanisms through which to make sound analytical judgments and decisions.

The Health Services Administration Concentration (15-18 Credit Hours) provides the knowledge and skills required for directors, administrators, and supervisors in the health services field.

Please go to page 208 for Concentrations or to https://www.cmich.edu/MSA.
**Course Descriptions: DHA**

**DHA 700 Leadership: Foundations and Strategies for Healthcare** 3(3-0)
This course will examine the role of leaders in improving organizations and the relationship between situational leadership strategy, organizational culture, communication and performance. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

**DHA 702 Probability and Statistics for the Health Professions** 3(3-0)
This course examines statistical and quantitative techniques for problem-solving and decision-making to understand, collect, conduct and evaluate managerial, biomedical and scientific research. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

**DHA 704 Population Health** 3(3-0)
This course explores applied epidemiology in relation to population and health including standardizing information, marketing, community health technologies and monitoring health behaviors of target groups. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

**DHA 705 Seminar in Public Health** 1(1-0)
This seminar focuses on current issues in health promotion and disease prevention, applied epidemiology, community health concerns and how to positively impact health in communities. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: admission to the Doctor of Health Administration program.

**DHA 706 Quantitative Analysis in Health Organization** 3(3-0)
This course introduces statistical/quantitative techniques including general linear models, survey research methodology and research application cases, decision-making and problem-solving for health administration. Prerequisites: admission to the Doctor of Health Administration program; DHA 702. This course is approved for offering in a distance learning format.

**DHA 707 Organizational Theory and Behavior for the Health Professions** 3(3-0)
Integrating theory and concepts from organizational theory and behavior literature, this course provides applications to improve dynamic healthcare organizations throughout the continuum of care. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

**DHA 708 Seminar in Health Dynamics: Current Issues, Trends and Change** 1(1-0)
This seminar will examine current issues, trends and the change necessary to improve the health system using a variety of presentations, group interactions and discussion. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: admission to the Doctor of Health Administration Program.

**DHA 710 Qualitative Analysis in Health Care** 3(3-0)
Theory, concepts and tools used in designing and conducting qualitative health care research, informing policy analysis and facilitating decision support within the practice of health administration. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Doctor of Health Administration program.

**DHA 712 Research Methods and Practice for the Health Professions** 3(3-0)
This course provides theoretical and applied concepts, techniques, procedures and technologies used in scientific inquiry and reporting for applied clinical, health administrative and managerial research. Prerequisites: admission to the Doctor of Health Administration program; DHA 702. Recommended: DHA 706. This course is approved for offering in a distance learning format.

**DHA 713 Seminar in Health Services Research** 1(1-0)
This seminar will examine research activity and reporting in the areas of healthcare financing, organization, delivery, access and outcomes of health services. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: admission to the Doctor of Health Administration program; DHA 712.

**DHA 714 Health Systems Thinking and Practice** 3(3-0)
This class examines systems thinking and organizational effectiveness. Students will practice using a variety of systems tools as applied to different organizational problems. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

**DHA 715 Seminar in Healthcare Dynamics: Stakeholder Relations** 1(1-0)
This seminar will examine the concept of leadership style and how healthcare executives can more effectively communicate with multiple stakeholders both inside and outside the organization. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: admission to the Doctor of Health Administration program.

**DHA 716 Communication in Health Organizations** 3(3-0)
This class examines the delivery and exchange of messages within health organizations. Contexts will include conflict, negotiating, networks, channel selection, knowledge management and public relations. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

**DHA 717 Health Economics** 3(3-0)
Foundational economic and specific health economic theory, trends, market issues and applications are presented to include health insurance and payment theory, practice and applications. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

**DHA 718 Healthcare Law, Regulations and Ethics** 3(3-0)
This course explores the legal and ethical issues found in the healthcare system, and investigates the healthcare administrator as decision-maker, leader and moral agent. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

**DHA 719 Healthcare Policy and Politics** 1(1-0)
This seminar will examine the political, legislative and economic forces that influence healthcare policy and regulation development, implementation and consequences of policy and legislation. This course is approved for offering in a distance learning format. CR/NC only. Prerequisites: admission to the Doctor of Health Administration program.

**DHA 720 Health Informatics** 3(3-0)
This course focuses on the fundamental concepts and applications of managing information as a healthcare corporate asset, emphasizing converting data into information for decision support. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.
DHA 724 Fiscal Responsibility and Accountability for Health Entities 3(3-0)
This course emphasizes financial management and financial operations theory, principles and concepts as they relate to healthcare organizational decision-making and accountability. Prerequisites: admission to the Doctor of Health Administration program. Recommended: HHA 720. This course is approved for offering in a distance learning format.

DHA 725 Seminar in Strategic Planning for Health Organizations 1(1-0)
This seminar will examine the concepts, processes and integration of management information systems, financial, human resource and marketing plans into an organizational strategic planning system. This course is approved for offering in a distance learning format. CR/NC only. Prerequisites: admission to the Doctor of Health Administration program.

DHA 726 Applied Leadership 3(3-0)
Practical application of leadership principles focused on issues such as governance, decision-making, motivation, empowerment, team building, change management, conflict resolution, accountability, credibility and ethics. Prerequisites: admission to the Doctor of Health Administration program. This course is approved for offering in a distance learning format.

DHA 728 Comparative Health Systems 3(3-0)
This is a capstone course in the Doctor of Health Administration program with a specific focus on global challenges and comparative effectiveness of health systems. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Doctor of Health Administration Program.

DHA 898 Dissertation Design, Implementation, Defense and Reporting 1-12(Spec)
A description of the capstone research event, the design, implementation, defense and reporting of a doctoral dissertation is outlined. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: admission to the Doctor of Health Administration Program; successful completion of the Doctoral Program Comprehensive Examination.

Course Descriptions: HSC

HSC 500 Health Informatics 3(3-0)
Overview of the broad spectrum of healthcare informatics issues, challenges and opportunities faced by healthcare managers. Emphasis is on managing healthcare information as a corporate asset and on the relationship of health informatics to the quality, accessibility and cost of healthcare. Prerequisites: HSC 317.

HSC 503 Health Implications of Obesity 3(3-0)
Obesity and overweight will be studied with special emphasis on diet, nutrition, and exercise. Modes of prevention and treatment will also be discussed.

HSC 504 International Health Education 3(3-0)
Examines major issues in international health education, exploring the health education opportunities and challenges of addressing specific health problems of countries throughout the world. This course is approved for offering in a distance learning format. Prerequisites: Admission to the College of Graduate Studies, or Junior or Senior undergraduate standing.

HSC 505 Work Injury Prevention 3(3-0)
The study of etiology, epidemiology, treatment, management and prevention of neumuscular and musculoskeletal injuries in workplace settings. Prerequisites: HSC 211 or HSC 214.

HSC 506 Health and Physical Development in Late Life 3(3-0)
This course examines in depth the processes of normal aging as well as important issues affecting the health of older adults. Prerequisites: BIO 101.

HSC 507 Introduction to Health Service Organizations and Systems 3(3-0)
Macro level study of healthcare systems including delivery, integration, reimbursement mechanisms, multi-organizational and interorganizational arrangements, health policies, and future solutions.

HSC 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 PES 508. Credit may not be earned in more than one of these courses. Prerequisites: PES 143.

HSC 510 Independent Reading Experience 1-4(Spec)
Individual reading—an experience designed for professional enrichment. 4-hour maximum. CR/NC only. Prerequisite: Permission of Instructor.

HSC 512 Special Topics in Health Education 1-12(Spec)
In-depth consideration of relevant, pertinent health issues.

HSC 514 Biostatistics and Epidemiology 3(3-0)
This course presents biostatistical and epidemiological concepts, principles and methods as they apply to problems within community and public health environments. Prerequisites: MTH 105; HSC 317.

HSC 516 Travel Course in Health Education 1-15(Spec)
Topics scheduled to study health education, private and voluntary health care programs, museums, hospitals, health clinics, city and school health programs. Prerequisite: Permission of Instructor.

HSC 517 Drugs and the Elderly 2(2-0)
An introduction to medication practices and problems among the elderly, and study of selected drugs and their effects on the aging individual. Prerequisites: HSC 390.

HSC 519 Death Education and Suicide Prevention 3(3-0)
A holistic study of the cultural, spiritual, legal, ethical, psychological and controversial aspects of death. Emphasis will also be placed on suicide prevention. Prerequisites: must have completed a minimum of 60 semester hours of coursework.

HSC 520 Health Services Administration 3(3-0)
Analysis of organizational patterns, planning procedures, fiscal management, personnel management, and other administrative concerns. This course may be offered in an online or hybrid format.

HSC 522 Consumer Health Education 2(2-0)
Issues of consumer health related to the individual, the community, and society.

HSC 523 AIDS Education 1(1-0)
A concentrated study of Acquired Immune Deficiency Syndrome, including the origin, prevalence, spread, disease process, psychosocial aspects and implications for society. Prerequisites: HSC 106, or teaching certificate. This course is approved for offering in a distance learning format.

HSC 524 Workshop on Health Fitness 2(Spec)
Guidelines for fitness appraisals and exercise prescription for healthy and high risk adults.

HSC 525 Sexually Transmitted Disease Workshop 1(Spec)
Concentrated study of sexually transmitted diseases, modes of transmission, and role of public health agencies and schools in coping with the problem.

HSC 526 Behavioral Health 3(3-0)
Concentrated study of mental health and illness as related to home, school, and community. This course may be offered in an online or hybrid format.
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 physiological, 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. This course is approved for offering in a distance learning format.

HSC 530 Drug Abuse Workshop 1(Spec)
  Concentrated study of the effects of drugs and narcotics. Roles of home, school, and community in drug education. 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 multiculturally competent 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 so that a healthier life style is possible.

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 3(2-1)
  Computation of vital statistics’ rates and other statistical methods applicable to problems in public health.

HSC 545 Health Planning 3(3-0)
  Study of strategic and operational planning methodologies employed by administrators, educators and planners in health care facilities, community health agencies and health programs. Recommended: Junior standing.

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. Prerequisite: 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: Signed Health Fitness in Preventive and Rehabilitative Programs major or graduate status.

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: HSC 220 or 420; HSC 308; HSC 310; grade of C or better in each course; or 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)

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 520.

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: HSC 547, 550, 551 with grades of C or better; undergraduate students must have all courses in the major completed; applications for, and placement in, an internship must be approved in advance by the internship coordinator.

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: HSC 547, 550, 551 with grades of C or better; undergraduate students must have all courses in the major completed; applications for, and placement in, an internship must be approved in advance by the internship coordinator.

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; HSC 570 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 provides the capstone professional experience at a health organization and the opportunity to apply professional skills, knowledge and behaviors learned in the classroom. CR/NC only. Prerequisites: HSC 317, HSC 407, HSC 520, HSC 570, HSC 571 for undergraduates; HSC 507, HSC 520, HSC 570, HSC 571 for graduate students.

HSC 598 Nature and Dynamics of Destructive Health Habits 3(3-0)
Etiologies and recovery strategies of substance abuse, eating and sexual disorders and the detrimental health habits which undermine healthy lifestyles. Prerequisites: HSC 235.

HSC 604 Epidemiology 3(3-0)
Factors related to the manifestation of infectious and non-infectious diseases, including tracing their sources, controlling spread, and initiating measures to prevent recurrences.

HSC 612 Individualized Learning Experiences 1-10(Spec)
An advisor or an advisory board will assign health-education learning experiences based on needs, background, and projected goals. Students must have the approval of their academic advisors before registering for the course. CR/NC only. Prerequisites: Approval of the academic advisor and permission of the course advisor.

HSC 617 Community and Public Health 3(3-0)
Problems of public health, public health services available to the community, and organization of programs of local, state, and national health agencies.

HSC 619 Continuing Registration for Final Research Project 1(1-0)
An under-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

HSC 620 Adult Health Education Theory and Practice 3(3-0)
Adult learning theories and educational methods as they apply to health education and promotion, with an emphasis on theory-grounded program design, implementation, and evaluation.

HSC 630 Regional Human Anatomy 5(3-4)
A regional approach to the structure of the human body, concentrating on the interrelationships of different anatomical structures and their clinical applications. Prerequisites: HSC 214; admission to physical therapy program, physician assistant program or graduate program in exercise science.

HSC 631 Physiology of Exercise 4(3-2)
Physiological basis of human movement and its application to training and performance. Identical with PES 631. Credit may not be earned in more than one of these courses.

HSC 640 Curriculum Design in Health Education 3(3-0)
Systematic development of learning components for the health profession.

HSC 646 Methods of Instruction and Allied Health Profession 3(3-0)
A course designed to familiarize the student with the theory and application of teaching methodologies for the health professional. Not open to students with credit in HSC 346.

HSC 670 Research Methods for Health, Physical Education and Sport, Health and Recreation 3(3-0)
Basic research methods and techniques essential in performing and interpreting scientific studies. Identical with PES 670. Credit may not be earned in more than one of these courses. Recommended: 6 hours of graduate course work completed prior to enrollment.

HSC 700 Program Evaluation in the Health Fields 3(3-0)
Major concepts, issues, and methodologies concerning the evaluation of health services delivery systems will be presented. Included is design, reporting, and utilization of findings.

HSC 727 Professional Seminar 3(3-0)
The study of health education/health promotion which includes history, foundations, literature, ethics and philosophy, professional standards and practice at the state, national and international levels. Prerequisites: 20 completed hours in health education.

HSC 791 Independent Study 2-3(Spec)
Taken as 2 credits for Substance Abuse option, Counseling, Master’s. Taken as 2 credits for Health Education Master’s. Not for students taking HSC 798. CR/NC only. Prerequisite: HSC 670 or CED 695.

HSC 798 Thesis 1-6(Spec)
Complete a thesis directed by a committee in conformity with the university’s thesis guidelines. CR/NC only. Prerequisite: HSC 670 and permission of the instructor.
Department of History (HST)

College of Humanities and Social & Behavioral Sciences

Mitchell Hall, Chairperson
Powers Hall 106, (989) 774-3374

Thomas L. Benjamin, Ph.D., Latin America
Jennifer Liu Demas, Ph.D. East Asian history
Lane Demas, Ph.D., African American history
Kathleen Donohue, Ph.D., 20th century, U.S.
Carrie Euler, Ph.D., medieval and early modern England
Solomon Getahun, Ph.D., sub-Saharan Africa
Jennifer R. Green, Ph.D., Civil War and reconstruction
Mitchell Hall, Ph.D., recent U.S.
Timothy Hall, Ph.D., colonial, revolutionary U.S.
Doina Harsanyi, Ph.D., European history, France
Eric Johnson, Ph.D., modern Europe
Stephen Jones, Ph.D., African American history
Tara McCarthy, Ph.D., U.S. women and gender post 1870
William McDaid, Ph.D., Civil War
Timothy O’Neil, Ph.D., modern Europe
Benjamin Ramirez-Shkwegnaabi, Ph.D., Native American history
John Robertson, Ph.D., Ancient Near East and Egypt, Islamic and Modern Middle East
David Rutherford, Ph.D., European history
Stephen P. Scherer, Ph.D., history of ancient Mediterranean world
Gregory Smith, Ph.D., United States social history
Catherine Tobin, Ph.D., United States social history
Jonathan Truitt, Ph.D. colonial Latin American history
Benjamin Weinstein, Ph.D. modern English history

The Department of History offers a Master of Arts degree, a Joint Master of Arts degree, and a Joint Ph.D. in History. The Joint Master of Arts degree and the Joint Ph.D. are offered in association with partner institutions at Erasmus University, Rotterdam, The Netherlands; Friedrich Schiller University, Jena, Germany; the University of Strathclyde, Glasgow, Scotland; and the University of Puebla, Puebla, Mexico.

Master of Arts (M.A.) in History

Minimum Totals for Graduation: 30 hours

The Department of History offers a Master of Arts degree, with an integrated Bachelor of Arts/Master of Arts degree program option.

The Integrated B.A./M.A. degree program 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 a part of their undergraduate degree work.

Admission Requirements, Retention & Termination Standards

Traditional M.A.:

To be admitted to the M.A. program, a student must present 20 or more hours of history or historically oriented courses in related fields with a grade point average in history of 2.7 or higher.

Admission Deadlines

For the traditional M.A., students wishing a fall semester admission must apply no later than July 15. For spring semester admission the deadline is November 1.

Integrated B.A./M.A.:

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 or permission of advisor.

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 integrated program.

Degree Requirements

Required Courses

HST 600 - Historiography 3(3-0)

1. In addition to HST 600, twenty (20) or more hours in history, with fifteen (15) hours in courses at or above the 600 level.
2. Ten (10) or fewer cognate hours selected with an advisor from one or more of the following fields: anthropology, economics, education, English, geography, philosophy, political science, religion, and sociology. Other fields may be approved by the advisor.
3. At least one history colloquium at the 600 level (HST 690 will not satisfy this requirement).
4. Additional Requirement for the Integrated B.A./M.A.: Three to twelve (3-12) hours of the above (except Thesis credit) must have been taken concurrently with the student’s B.A. degree work.

Additional Requirements

A minimum of six hours of history research and writing courses earned in one of the following ways:

Plan A - Thesis

A thesis, including an oral examination in the field of the thesis.

Note for the Integrated B.A./M.A. program: The integrated plan is intended to encourage research and writing competency in a particular research field, and thus the candidate is encouraged to elect Plan A, the Thesis Option of the M.A. program.

Plan B - Seminars

Either (1) two seminars or (2) one seminar and three hours in HST 791. Students electing Plan B must submit two research papers as evidence of scholarship. These papers must be prepared in connection with a seminar, an independent research course, or a graduate-level course in the Department of History. Each paper must receive a minimum grade of B. In addition, normally after revision, each must be accepted by the professor responsible for the course as satisfactory for permanent filing. Papers must be well written and presented in a proper scholarly format. Their conclusions must rest on interpretation of a substantial body of primary sources. A minimum 6,000 words is suggested.

Total: 30 semester hours
European History Certificate
Minimum Totals for Graduation: 18 hours

This 18 credit hour certificate is designed for regularly admitted graduate students who desire advanced training in European history, but who are not seeking a master's degree at this time. Credits successfully earned with this certificate program can be transferred toward the M.A. degree. Students may substitute courses only upon approval of the History Graduate Studies Committee. Admission is through the College of Graduate Studies. Students pursuing this certification program should have some prior coursework in European history.

This certificate is granted upon completion of 18 hours within the selected area.

Required Courses (6-18 hours)
At least 6 hours must be taken at the 600-level or above, selected from the following courses:
- **HST 636**: Colloquium in Ancient History 3-6(3-0)
- **HST 650**: Colloquium in European History to 1450 3(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 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 3-6(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 759**: Seminar in Twentieth-Century European History 3-6(3-0)

Electives (0-12 hours)
All courses must be selected from the department's course offerings in European history.

Total: 18 semester hours

Modern History Certificate
Minimum Totals for Graduation: 18 hours

This 18 credit hour certificate is designed for regularly admitted graduate students who desire advanced training in modern history, but who are not seeking a master's degree at this time. Credits successfully earned with this certificate program can be transferred toward the M.A. degree. Students may substitute courses only upon approval of the History Graduate Studies Committee. Admission is through the College of Graduate Studies. Students pursuing this certification program should have some prior coursework in modern history.

This certificate is granted upon completion of 18 hours within the selected area.

Required Courses (6-18 hours)
At least 6 hours must be taken at the 600-level or above, selected from the following courses:
- **HST 603**: Colloquium in U.S. History 3-6(3-0)
- **HST 604**: Colloquium in U.S. History Since 1865 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)

Electives (0-12 hours)
All courses must be selected from the department's course offerings in United States history. No more than 3 hours may be taken below the 500-level, and then only if approved for graduate credit.

Total: 18 semester hours

United States History Certificate
Minimum Totals for Graduation: 18 hours

This 18 credit hour certificate is designed for regularly admitted graduate students who desire advanced training in United States history, but who are not seeking a master's degree at this time. Credits successfully earned with this certificate program can be transferred toward the M.A. degree. Students may substitute courses only upon approval of the History Graduate Studies Committee. Admission is through the College of Graduate Studies. Students pursuing this certification program should have some prior coursework in United States history.

This certificate is granted upon completion of 18 hours within the selected area.

Required Courses
At least 6 hours must be taken at the 600-level or above, selected from the following courses:
- **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 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)

Electives (0-12 hours)
All courses must be selected from the department's course offerings in United States history. No more than 3 hours may be taken below the 500-level, and then only if approved for graduate credit.

Total: 18 semester hours

Joint M.A. in History
Minimum Totals for Graduation: 36 hours

The Joint Master of Arts degree is offered in association with a partner institution abroad.

This degree requires two years of study. Students will complete a year's study (at least 18 credits with a minimum 3.3 GPA) at Central Michigan University and a one-year diploma sequence of courses at a partner institution. Students entering the program at a partner institution will receive one year's credit towards the Joint M.A. for completion of a final post-baccalaureate program entirely in history at a partner institution with the equivalent of a 3.3 GPA. They will then complete the requirements for the Joint M.A. at Central Michigan University with a prescribed year of study at Central Michigan University.

Certain rules govern the combined two-year program:
1. No more than 50 percent of a student's coursework may be in a single national field.
2. All students must write at least two research papers suitable for filing as evidence of scholarly achievement, 7,000-10,000 words: one completed in a research seminar at CMU and one completed at a partner institution.

It is strongly recommended that students develop a reading knowledge of at least one language other than English or an appropriate research tool such as statistics.

Admission Requirements, Retention & Termination

Standards
Successful applicants will have completed a bachelor's degree or equivalent with at least 20 hours of history or related courses with a GPA of 3.3 or higher.
Students must complete all application materials prior to January 3 for admission to the program in the upcoming fall. Admission is competitive.

**Required Courses I (18 hours)**

At Central Michigan University: 18 hours of which 12 hours must be at the 600 level or above, including 3 hours in a research seminar at the 700 level, one colloquium in transnational and comparative history (3 hours) and a second colloquium (3 hours). A maximum of 6 hours in cognate disciplines will be accepted if approved by the student’s CMU and partner institution’s advisors.

**Year at CMU**

As evidence of scholarship, students must submit a research paper for a permanent file. This paper must be prepared in connection with a research seminar, an independent research course, or a graduate-level course in the Department of History. The paper must receive a minimum grade of B. In addition and normally after revision, the paper must be accepted by the professor responsible for the course as satisfactory for permanent filing. The paper must be well written and presented in a proper scholarly format. Its conclusions must rest on interpretation of a substantial body of primary sources. A minimum length of 7,500 words is suggested. Up to 3 hours of credit may be earned for a practicum course in teaching history at the college level.

**Required Courses II (18 hours)**

At a partner institution abroad: 18 hours (equivalent) including major research paper/dissertation of 7,500 words or more (equivalent to a 700-level seminar requirement at CMU).

**Year abroad**

The student must complete courses based on the partner institution's post baccalaureate course requirements. General expectations include one course of study in historical methodology if they have not taken such a course at CMU (3-6 hours equivalent), one research seminar paper/dissertation of 7,000-10,000 words (3 hour equivalent) and 9-12 hours (equivalent) of additional course work or directed study.

Total: 36 semester hours

**Joint Ph.D. in History**

**Minimum Totals for Graduation: 90 hours**

**Admission Requirements, Retention & Termination Standards**

1. Successful applicants will ordinarily have completed a bachelor’s degree or equivalent with at least 20 hours of history or related courses with a GPA of 3.3 or higher.
2. Students in the PhD program must maintain at least a 3.3 GPA (or its equivalent at foreign institutions) after the first year of study at Central Michigan University.
3. All applications should include a personal statement of 2-3 pages (600-900 words) describing general fields of interest and proposed subjects of research; preparation for the subjects proposed, including specific coursework, languages, and other relevant training; professional goals.
4. Candidates must submit GRE scores by January 3. The subject area test in History is not required.
5. The application deadline is January 3.

**Admission to candidacy for the Ph.D. requires:**

1. Demonstration of comprehensive knowledge of appropriate fields in history (defined below), by comprehensive examinations. Students must present two major fields or one major and two minor fields.
2. Approval of dissertation prospectus.
3. Completion of language requirement for one language other than English.

Candidates for the Central Michigan University Ph.D. must pass a comprehensive examination in two major fields or one major field and two minor fields. Comprehensive examinations in the two major fields chosen or one major and two minor fields will normally be administered during the year following completion of the Joint M.A. in History. The timing of the examination may vary depending upon the candidate's need for further preparation in particular fields, either by coursework or by directed reading.

**Degree Requirements**

Students must complete the following sequence during their first two years in the Joint Program:

**Required Courses I (18 hours)**

At Central Michigan University: 18 hours of which 12 hours must be at the 600 level or above, including 3 hours in a research seminar at the 700 level, one colloquium in transnational and comparative history (3 hours) and a second colloquium (3 hours). A maximum of 6 hours in cognate disciplines will be accepted if approved by the student’s CMU and partner institution’s advisors.

**Year at CMU**

As evidence of scholarship, students must submit a research paper for a permanent file. This paper must be prepared in connection with a research seminar, an independent research course, or a graduate-level course in the Department of History. The paper must receive a minimum grade of B. In addition and normally after revision, the paper must be accepted by the professor responsible for the course as satisfactory for permanent filing. The paper must be well written and presented in a proper scholarly format. Its conclusions must rest on interpretation of a substantial body of primary sources. A minimum length of 7,500 words is suggested. Up to 3 hours of credit may be earned for a practicum course in teaching history at the college level.

**Required Courses II (18 hours)**

At a partner institution abroad: 18 hours (equivalent) including major research paper/dissertation of 7,500 words or more (equivalent to a 700-level seminar requirement at CMU).

**Year abroad**

The student must complete courses based on the partner institution's post baccalaureate course requirements. General expectations include one course of study in historical methodology if they have not taken such a course at CMU (3-6 hours equivalent), one research seminar paper/dissertation of 7,000-10,000 words (3 hour equivalent) and 9-12 hours (equivalent) of additional course work or directed study.

Total: 36 semester hours
in a program approved by the department's Graduate Studies Committee; or 4) an alternative approved by the Graduate Studies Committee. Intensive language study abroad is especially recommended by the department.

c. The successful completion of one language requirement is required prior to admission to Ph.D. candidacy.

d. Where statistics is chosen as a second non-English language, completion of the language requirement is defined as attainment of at least a B in an appropriate statistics course.

2. Candidates for the Central Michigan University Ph.D. must pass a comprehensive examination in two major fields or one major field and two minor fields.

a. The student will submit the membership of her/his examination committee to the Graduate Studies Committee for approval.

b. The examination committee will have a minimum of three members, at least two members per major field and one or two members per minor field. The examination committee will ordinarily provide the student with reading lists relevant to the examination fields, but the examination will not be limited to the lists.

c. Comprehensive examinations will be scheduled during the third year of graduate study normally the year following the "study abroad-year" except in extraordinary circumstances. Examinations will not be scheduled during summer months. The examination committee will schedule the dates of the major and minor field examinations.

d. A major field examination will not exceed eight hours and minor field examinations will not exceed four hours.

e. Comprehensive examinations will be taken on campus in a room selected by the Department of History between the hours of 8 a.m. and 12 noon, and 1 p.m. and 5 p.m. Candidates may use the department's lap-top computer, a typewriter, or may write the examination by hand.

f. A candidate may retake any failed examination within a three-to-six month period.

g. Candidates may take an examination a maximum of two times, and failure to pass after two attempts will lead to dismissal from the program.

h. Comprehensive examinations will be assessed by the candidate's examination committee as either pass or fail.

3. The Ph.D. from Central Michigan University will require a minimum of 90 hours (including 36 hours of dissertation credit) of approved graduate-level study beyond the B.A. Students who complete the requirements for the Joint M.A. (36 hours) before admission to the Ph.D. program may include their hours earned at the M.A. level within the 90 hour total required for the PhD.

4. The Ph.D. from CMU requires completion of a doctoral dissertation that makes significant contribution to knowledge, contains a significant comparative element, and is successfully defended at a formal meeting of the student's examining committee. Upon admission to candidacy, the student and the chair of the history department of the university where the student is currently in residence will select a committee of three faculty members, at least one from each university, to advise the candidate and supervise the research and writing of the dissertation. Dissertations grounded in two or more national histories will be encouraged. The examining committee for the dissertation will consist of three faculty members from the university where the majority of research has been done, at least one faculty member from the other university, and at least one external examiner. The chair of the examining committee will serve as director of the candidate's dissertation and will be responsible for making all arrangements for meetings of the committee.

Major Fields

- United States
- British Isles or Modern Continental Europe
- Early Modern Europe
- The Atlantic World: Comparative North American, European, African, and Latin American History. (Because of its scope, this meets all field requirements.)

Minor Fields

- United States*
- British Isles*
- Modern Continental Europe*
- Ancient Near East and Mediterranean
- Medieval Europe
- Early Modern Europe
- Latin America
- East Asia
- India
- Africa
- Topical Fields (must be transnational): e.g. Crime; Poverty and Social Welfare; Business; Women; Slavery; Ethnicity and Race; Minority Communities and Culture; Reform; Regionalism

*Not available for minor if chosen as major.

When possible, Ph.D. candidates will be encouraged to do some teaching in areas related to their specialization.

Because it is impossible to share the legal authority to award the Ph.D., it will be awarded to some students by Central Michigan University and to others by the partner institution upon successful completion of the shared program. In all cases, the relevant documents will say clearly that the degree results from the shared program. Regulations governing residency requirements and time limitations for completion of degrees will be those of the university granting the degrees. Student work at either university will be treated as work in residence by both the partner institution and Central Michigan University.

Total: 90 semester hours

Course Descriptions: HST

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 512 Era of the American Revolution 3(3-0)
Causes of the Revolution, its course, political, social, and cultural changes of the period, and the formation of the Federal Constitution. May be offered as Writing Intensive. Prerequisite: One of HST 110, 111, 301; 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, ideologies, decision-making, and personalities during the precarious 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, westward expansion, and 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: HST 112 or 321; or graduate status.

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 examines 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, 324; one of 112, 321, 325; 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, lab, 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)  
Using 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)  
Athenian political and social 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)  
Political, 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 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 176, HST 324, HST 341, HST 377, HST 511.

HST 576 Colonialism in Africa, 1880s-1960s 3(3-0)  
Students will explore events that led to the European colonization of Africa, the process of independence and Africa’s predicament in the post-independence period. Prerequisites: HST 176 or HST 292 or graduate status.

HST 580 Public History 3(3-0)  
An introduction to Public History in society as well as to careers in applied history. May be offered as Writing Intensive. Prerequisites: HST 301 and MSL 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 MSL 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 MSL 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)  
Students learn to apply historical knowledge through supervised work in a public history agency or institution. 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 undergraduates or graduate students. Recommended: 12 hours of HST.

HST 600 Historiography 3(3-0)
History as a discipline, studied from the works of selected historians. Recommended: 12 hours of junior, senior, or graduate-level history.

HST 601 Colloquium in Transnational and Comparative History 3(3-0)
An intensive investigation of historiographical issues in transnational and comparative history. A student may take this course twice, for three hours of credit each time, but must choose a second instructor for the second three hours. Prerequisites: Admission to one of the graduate history programs.

HST 602 Colloquium in U.S. History to 1865 3-6(3-0)
An investigation of historical interpretations and methodologies dealing with major themes in American history from 1607 to 1865. Recommended: Admission to graduate program in history. A student may take this course twice, for hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 603 Colloquium in U.S. History Since 1865 3-6(3-0)
An investigation of historical interpretations and methodologies dealing with major topics and themes in American history from 1865 to present. Recommended: Admission to the graduate program in history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 619 Continuing Registration for Final Research Project 1(1-0)
An on-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

HST 636 Colloquium in Ancient History 3-6(3-0)
An investigation of major historical issues, interpretations, and methods in the history of the ancient Near/Middle Eastern and Mediterranean regions to 600 C.E. Recommended: Admission to the graduate program in history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 650 Colloquium in European History to 1450 3(3-0)
An investigation of historians, their interpretations and methodologies on the major topics and themes in ancient and medieval history to 1450. Recommended: Admission to the graduate program in history.

HST 651 Colloquium in Early Modern European History 3-6(3-0)
An investigation of historical interpretations and methods in early modern European history (1300-1789). Recommended: Admission to graduate program in history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 652 Colloquium in Modern European History 3-6(3-0)
An analytical investigation of several historical issues, topics, and themes in modern European history (1789 to the present). Recommended: Admission to the graduate program in history. A student may take this course twice, for 3 credit hours each, but must choose a second instructor for the second 3 hours.

HST 676 Comparative History of Slavery 3-6(3-0)
A historiographical investigation of major themes, methodologies and interpretations of the history of slavery in a comparative perspective through an analysis of secondary literature. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 690 Advanced Readings 1-9(Spec)
Prerequisites: 12 hours of junior, senior, or graduate-level history and permission of the department chairperson and the instructor.

HST 695 Special Studies Abroad 3-15(Spec)
Courses on selected historical issues offered at partner institutions for students in the joint graduate program. Prerequisites: Admission to the joint graduate program in history.

HST 697 Special Studies Colloquium 3-6(3-0)
An investigation of historical interpretations and methodologies of a selected historical topic at a level suitable for graduate students. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours. Recommended: Admission to the graduate program in History.

HST 700 Practicum in College Teaching 1-6(Spec)
Training and practice in teaching history at the college level. Prerequisites: appointment as a Graduate Assistant in the Department of History.

HST 710 Seminar in Intellectual and Cultural History 3-6(3-0)
Study of a selected topic in intellectual and cultural history. Recommended: Admission to graduate program in history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 711 Seminar in Colonial and Revolutionary America 3-6(3-0)
Study of a selected topic in the history of colonial British and Revolutionary America. Preparation of a research paper based on primary sources. Recommended: HST 111, HST 511, and at least one of the following: HST 323, HST 324, HST 326, HST 330, HST 351, HST 512, HST 562, HST 602. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 713 Seminar in the History of Nineteenth Century America 3-6(3-0)
Study of a selected topic in the history of nineteenth century America. Recommended: HST 111 or HST 112 plus at least one more course in this field of American history. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 715 Seminar in the Civil War and Reconstruction 3(3-0)
Primarily devoted to research training and writing techniques, this seminar will focus on a particular phase of the Civil War era. Recommended: HST 111 and HST 112, and a 500-level course in nineteenth-century American history.

HST 717 Seminar in the History of Twentieth Century America 3-6(3-0)
Study of a selected topic in the history of the United States in the twentieth century. Recommended: HST 111 plus at least one more course in this field of American history. A student may take this course twice, for 3 credit hours each time, but must choose a second instructor for the second 3 hours.

HST 723 Seminar in American Diplomatic History 3(3-0)
Primarily devoted to research training and writing techniques, each seminar will focus on a particular phase of American diplomatic history. Recommended: HST 111 and HST 112 and one course in US history.

HST 738 Seminar in Ancient History 3-6(3-0)
Study of a selected topic from the Ancient World. Development of research skills and scholarly writing appropriate to the field. Recommended: 9 hours of pre-modern history or one year of an ancient language. A student may take this course twice, for 3 credit hours each time, but must choose a second instructor for the second 3 hours.
HST 740 Seminar in Medieval West 3(3-0)
Research training based on primary sources on topics pertinent to the medieval period. Recommended: 6 hours of history including HST 101 and one of the following: HST 200, HST 340, HST 350, HST 505, HST 650.

HST 741 Seminar in Early Modern Europe 3(3-0)
Study of a cultural, intellectual, social, political or economic issue of the period from the Renaissance in Europe through the seventeenth century. Recommended: 6 hours of history including HST 101 and one of the following: HST 340, HST 341, HST 348, HST 350, HST 351, HST 354, or HST 505.

HST 742 Seminar in Eighteenth-Century European History 3(3-0)
Study of a cultural, social, political, or economic issue of the eighteenth century. Recommended: 6 hours of modern European history, including some study of the eighteenth century.

HST 744 Seminar in Nineteenth-Century European History 3-6(3-0)
A study of a major aspect of 19th-century Europe with emphasis on historical method. Recommended: HST 102 or HST 351 plus one additional course in this general area of European history. A student may take this course twice, for 3 credit hours each time, but must choose a second instructor for the second 3 hours.

HST 758 Seminar in Twentieth-Century European History 3-6(3-0)
Study of a major aspect of 20th-century Europe with emphasis on historical method. Recommended: 6 hours of European history (at least 3 at the 500 level) including one of the following: HST 102, HST 106, HST 558. A student may take this course twice, for 3 credit hours each time, but must choose a second instructor for the second 3 hours.

HST 763 Seminar in Latin American History 3(3-0)
Study of a selected topic in Latin American history. Recommended: HST 163 or an advanced course in the field of Latin American history.

HST 766 Seminar in Asian History 3(3-0)
Topics such as developments in education, medicine, women, child care, distribution of wealth, and decision-making in China since the Cultural Revolution (1966-1969). Recommended: HST 168.

HST 776 Seminar on African Diaspora History 3-6(3-0)
Study of a selected topic in the history of the African diaspora. Preparation of research paper based on primary sources. A student may take this course twice, for 3 hours of credit each time, but must choose a second instructor for the second 3 hours.

HST 791 Graduate Research 3-6(Spec)
Prerequisites: 12 hours of junior, senior, or graduate-level history and the permission of the department chairperson and the instructor.

HST 795 Seminar Abroad 3-15(Spec)
Seminar partner institution for students in the joint graduate program. Student produces a substantial scholarly paper of 7,000-10,000 words based on primary sources. Prerequisites: Admission to the joint graduate program in History.

HST 798 Thesis 1-6(Spec)
CR/NC only. Prerequisite: Written permission of advisor and department chairperson.

HST 890 Doctoral Readings 1-9(Spec)
Advanced preparation for comprehensive examinations in selected historical topics directed by an individual instructor. Reading should reflect the fields of and culminate in the comprehensive examination. Prerequisites: Admission to the joint graduate program in History and permission of advisor or instructor.

HST 898 Dissertation 1-36(Spec)
CR/NC only. Prerequisites: successful completion of comprehensive examination for Ph.D. and written approval of dissertation proposal to take more than 3 credit hours of dissertation credit.
Master of Science (M.S.) in Apparel Product Development and Merchandising Technology

This program is designed to prepare graduates for positions in apparel and textile product design and development, CAD technology, industry research and development, as well as for careers in higher education and government. Creative solutions, cutting edge technology and real world applications are emphasized at all instructional levels.

Minimum Totals for Graduation: 33 hours

Admission Requirements, Retention & Termination Standards

Students applying for the M.S. degree should have a minimum of 12 hours of undergraduate coursework in apparel merchandising and design or closely related area.

Students accepted for the M.S. program who lack supporting coursework generally are required to make up these deficiencies by taking undergraduate course work in apparel merchandising and design. Equivalent work experience in the field may be counted as supporting coursework toward minimum admission requirements.

Admission to the graduate program in Apparel Product Development and Merchandising Technology includes meeting the following criteria:

1. Submission of the CMU application form for admission to the Graduate School, found at [https://centrallink.cmich.edu/academics/grad_studies](https://centrallink.cmich.edu/academics/grad_studies)
2. An earned baccalaureate degree from an accredited institution.
3. Three letters of recommendation, including two from faculty. If it is not possible to obtain faculty references, references should be from professionals who can address your capacity to succeed as a graduate student.
4. One official transcript (with institution’s seal) sent directly from each institution attended.
5. A minimum grade point average of 3.0 on a 4.0 scale in the last 60 hours of undergraduate course work.
6. A one-to-two page statement of objectives stating your reasons for pursuing a graduate degree in apparel merchandising and design, your career goals, and the specific area in which you would like to study.
7. Non-refundable application fee.

Degree Requirements

Foundational Courses (9 hours)

Research Methods and Statistics
AMD 604 - Scholarship in Textiles and Clothing 3(3-0)

Plus the following courses, which are to be selected in consultation with advisor:

- One graduate course (3 credits) in Research Methods
- One graduate course (3 credits) in Statistics

Required Courses (12 credit hours)

Apparel Merchandising & Design

Select from the following in consultation with advisor:
AMD 546 - Experimental CAD for Apparel 3-9(Spec)
AMD 547 - Functional Apparel Design 3(2-2)
AMD 550 - Textiles and Apparel in a Global Economy 3(3-0)
AMD 560 - Apparel Product Development 3(3-0)
AMD 640 - Anthropometrics and Apparel 3(2-2)
AMD 641 - Apparel Presentation Technology 3(2-2)
AMD 655 - Textile Product Evaluation 3(2-2)
AMD 656 - Apparel Retail Technology 3(3-0)
AMD 790 - Independent Study in Apparel Merchandising & Design 2-6(Spec)

Supporting Coursework (6 credit hours)

Courses that support the student’s career objectives or research plans that are inside or outside the Human Environmental Studies Department. Courses to be selected in consultation with advisor and may be selected from fields such as industrial engineering, health sciences, art, education, marketing and management, or apparel.

Thesis or Internship Options (6 credit hours)

Select from the following options:

Plan A - Thesis (6 hours)
AMD 798 - Thesis in Apparel Merchandising & Design 1-6(Spec)

Plan B - Internship (6 hours)
AMD 635 - Advanced Internship in Textiles & Apparel 1-6(Spec)

Total: 33 semester hours

ACCELERATED MASTER OF SCIENCE IN APPAREL PRODUCT DEVELOPMENT AND MERCHANDISING TECHNOLOGY

Advanced undergraduate students majoring in Apparel Merchandising and Design who would like to pursue advanced studies in design, merchandising, product development, and technology relating to the textiles and apparel industry complex may consider an option whereby they can complete their bachelor’s degree and a Master of Science in Apparel Product Development and Merchandising Technology in five years. The program requirements on the Accelerated Masters Degree Program are identical to those of the Master of Science in Apparel Product Development and Merchandising Technology, but allow the student to apply 9 credit hours of graduate coursework toward both their bachelor's degree and their Master of Science in Apparel Product Development and Merchandising Technology.

Admission Requirements:

Admission to the Accelerated Masters Degree Program in Apparel Product Development and Merchandising Technology includes meeting the following criteria:

1. The completion of fifteen (15) credit hours in Apparel Merchandising and Design.
2. An overall GPA of 3.5 or a 3.5 GPA in the last 60 hours of coursework.
3. Within 30 student credit hours of graduation.
4. Completion of all university competency requirements.
5. A signed Apparel Merchandising and Design major on a B.S., B.A., or B.A.A. degree.

Program of Study

Students must be fully admitted to the accelerated program prior to beginning classes that are expected to be counted towards both degrees. During their first semester of enrollment, students may take one 600-level course and one 500-level course to be counted towards both degrees. During the second semester of enrollment, students may take one 600-level course or two 500-level courses to be counted towards both degrees. Students may not take more than 6 hours per semester for dual credit.

Application Process:

Undergraduate students seeking admission to the Accelerated Masters 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. This application should be accompanied by the student’s transcripts and the applicant must also present a 2-4 page, typed, double-spaced essay that (Part I) describes how previous experiences and training have prepared and led the applicant to pursue a Master of Science degree in Apparel Product Development and Merchandising Technology (APDNT) and (Part II) identifies likely

(Continued)
professional goals and how graduate training can help accomplish
these goals. This essay replaces the written statement requested
as part of the application to the College of Graduate Studies.
Three (3) letters of recommendation are also required, includ-
ing two letters from faculty members. The third letter may be
from another faculty member or from a professional who can
address the student’s capacity to succeed as a graduate student.

Retention Standards

Upon admittance into the Accelerated Masters Degree Program
(AMDP), students have the responsibility of continuing the comple-
tion of all course requirements for the university program and
for their majors and minors on their bachelor’s degree. Upon matriculation into the AMDP, an overall GPA of at least 3.0 is
required throughout the graduate curriculum.

Sample Dual-Degree Curriculum

Year Four (Fall)
• One 500-level or one 600-level required on the APDMT program* (3)
• AMD 550* (3)
• 9 hours of undergraduate credits not counted on the APDMT (9)

Year Four (Spring)
• Two 500-level required courses required on the APDMT program (6) or one 500-level required on the APDMT program and one
600-level required on the APDMT program* (6)
• 9 hours of undergraduate credits not counted on the APDMT (9)

Year Five (Fall)
• One Graduate Elective (3)
• One 600-level required on the APDMT program (3)
• Graduate course in Research Methods (3)

Year Five (Spring)
• Graduate Course in Research Statistics (3)
• One Graduate Elective (3)

Year Five (Summer)
• AMD 798 Thesis or AMD 635 Advanced Internship (6)

*Courses that may be counted on the undergraduate and
graduate degrees.

Master of Science (M.S.) in Human Development and Family Studies

Minimum Totals for Graduation: 36 hours

This program is designed to provide new and experienced professionals with a greater understanding of human develop-
ment and family studies. Specifically, the primary objective of
this program is to expand students’ knowledge of the processes
of diverse individual and family development, thereby preparing
them for careers that focus on enhancing the quality of life for
children, adolescents, and adults of all ages and backgrounds.
Basic to the philosophy of this program is the assumption that
individual development is best understood within the context
of the family and its surrounding environments.

In fact, the interface between families and other contexts
presents many challenges, and some families need assistance
in order to cope effectively with such challenges in a way that
allows them to provide healthy environments for their children.
To that end, the course work in this program provides learning experiences that are theoretical, empirically-based, applied in
nature, and culturally sensitive. Graduates of this program will
have an educational background to work in human service areas
that provide support and intervention for persons of all ages and
their families. Some ways in which they may assist families are:
selecting and managing child and elder care services, parenting
and relationship education, promoting parental involvement in
children’s education, dealing with at-risk or conduct-disordered
youth, decision-making concerning elderly family members,
promoting conflict resolution, and providing family support and
guidance in achieving greater economic self-sufficiency. The coursework also prepares students for further graduate study
at the Ph. D. level.

Faculty in this program are committed to facilitating access
to higher education. For example, courses may be offered in
the evenings and on Saturdays in order to accommodate those
who have week-day work and family obligations. Some course
information and materials may be offered on the internet.

An Accelerated M.S. in Human Development and Family Studies
is available to advanced undergraduate students majoring in
Child Development or Family Studies. See below for Admission
Requirements, Retention and Termination Standards, and sample
curriculum.

Admission Requirements, Retention & Termination Standards

Students seeking admission to the master’s program in Human Development and Family Studies must present the following for
the March 15th deadline:

• Fifteen (15) credit hours in Human Development and Family
Studies or in a related area of competency.

• An undergraduate grade point average of at least 3.0 in the
last 60 semester hours of course work.

• A 2-4 page, typed, double-spaced essay is required that:
  • describes how your previous professional and volunteer
    experiences and training have prepared and led you to
    pursue a degree in Human Development and Family Studies;
  • identifies likely professional goals and areas of interest
    including HDFS faculty who share similar interests;
  • describes how HDFS graduate training will help you
    accomplish these goals.

This essay replaces the written statement requested as part of
the application to the College of Graduate Studies and is
weighted heavily in the application review process.

• Three (3) letters of recommendation are required, includ-
ing at least two from faculty. If it is not possible to obtain
references from two faculty, references should be from
professionals who can address your capacity to succeed as
a graduate student.

• Evidence of successful completion (a grade of C or better)
of an undergraduate statistics or research methods course is
strongly recommended.

• General Graduate Record Examination (GRE) scores are
optional. Applicants who do not meet the minimum GPA
requirement for admission may substitute GRE test results.
The GRE scores will be used as a supplementary screening
device to determine potential for graduate school success.

• Current resume.

Per university policy, conditional admission may be considered
for applicants with background or grade point deficiencies. Courses
taken to make up admission deficiencies cannot be counted toward
graduate degree requirements. Regular admission status should
be requested upon completion of all deficiencies.

Core Courses - HDFS (9 hours)

HDF 600 - Professional Seminar I - Introduction to HDFS (1-0)
HDF 602 - Professional Seminar II - Diversity in HDFS (1-0)
HDF 604 - Professional Seminar III - Grant Writing in HDFS (1-0)
HDF 609 - Application of Theory and Research in Human
Development 3(3-0)
HDF 615 - Application of Theory and Research in Family
Development 3(3-0)

Required Courses I - Professional Methods (6 hours)

HDF 630 - Applied Research Methods 3(3-0)
PSY 511 - Statistics in Psychology 3(3-1)
Required Courses II - Practice (9 hours)
HDF 640 - Practice in Human Services 3(3-0)
HDF 642 - Program Development and Evaluation in Human Services 3(3-0)
HDF 686 - Practicum I in HDFS 3(Spec)

Electives (6 hours)
Electives to be chosen in consultation with an advisor.

Additional Requirement (6 hours)
Select one of the following plans:

Plan A: Thesis
HDF 798 - Thesis in Human Development & Family Studies 1-6(Spec)
plus an oral examination on materials on the thesis topic.

Note: HDF 798 is a variable credit course. Students in this program are required to take 6 hours.

Plan B: Non-Thesis
HDF 688 - Practicum II in HDFS 3(Spec)
HDF 799 - Plan B Project in Human Development and Family Studies 3(3-0)

Total: 36 semester hours

Accelerated Master of Science in Human Development and Family Studies

Admission Requirements
1. The completion of fifteen (15) credit hours on either the Child Development or Family Studies Major, including completion of the following 15 hours of specified coursework:
   - HDF 100 - Lifespan Development 3(3-0)
   - HDF 307 - Parent-Child Relations 3(3-0)
   - HDF 219 - Fieldwork 3(3-0)
   - and six hours of additional course requirements on the student's major or on the Gerontology Minor.

OR
The completion of fifteen (15) credit hours on the Early Childhood Development and Learning Major, including completion of the following 15 hours specified coursework:
   - HDF 100 - Lifespan Development 3(3-0)
   - HDF 200 - Constructivism as a Tool for Learning 2(2-0)
   - HDF 309 - Families, Schools and Communities 3(3-0)
   - and seven hours of additional course requirements on the student's major or on the Gerontology Minor.

2. An overall GPA of 3.5 or a 3.5 GPA in the last 45 hours of coursework.
3. Within 30 student credit hours of graduation.
4. Completion of all university competency requirements.
5. A signed Child Development or Family Studies Major on a B.S., B.A., or B.A.A. degree.

Program of Study
Students in their first year on the Accelerated Master's Degree Program (who have not completed their undergraduate degree) may not take over 16 total credit hours per semester. During their first year of enrollment, students may take one professional seminar, one additional 600-level course and one 500-level course per semester to be counted toward both degrees.

Required Graduate Courses that may not be counted on the Undergraduate Degree:
- HDF 686 - Practicum I in HDFS 3(Spec);
- PSY 511 - Statistics in Psychology 3(3-1)
- HDF 798 - Plan A: Thesis in HDFS OR HDF 799 Plan B Project in HDFS.
All other required graduate courses can be counted on both degree programs.

Application Process
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 one year prior to graduation from their undergraduate program. This application should be accompanied by the student’s transcripts and the applicant must also present a 2-4 page, typed, double-spaced essay that (Part I) describes how previous experiences and training have prepared and led the applicant to pursue a master's degree in Human Development and Family Studies (HDFS) and (Part II) identifies likely professional goals and areas of interest, including HDFS faculty who share similar interests, and (Part III) how HDFS graduate training can help accomplish these goals. This essay replaces the written statement requested as part of the application to the College of Graduate Studies. Three letters of recommendation are also required, including two letters from faculty members. The third letter may be from another faculty member or from a professional who can address the student’s capacity to succeed as a graduate student.

Retention Standards
Upon admittance into the Accelerated Master's Degree Program (AMDP), students have the responsibility of continuing the completion of all requirements for the University Program and for their majors and minors on their bachelor's degree. Upon matriculation into the accelerated program, an overall GPA of at least 3.0 is required throughout the graduate curriculum.

Sample Curriculum for the Accelerated M.S. in HDFS

Year Four - Fall
HDF 600* (1 hour)
One of the following courses*: HDF 609, 615, or 640 (3 hours)
One 500-level graduate elective* (3 hours)
Undergraduate credits not counted on the AMDP (9 hours)

Year Four - Spring
HDF 602* (1 hour)
One of the following courses*: HDF 609, 615 or 640 (3 hours)
HDF 630 - Applied Research Methods (3 hours)
Undergraduate credits not counted on the AMDP (9 hours)

Year Five - Fall
Graduate Requirements:
HDF 604 (1 hour)
One of the following courses: HDF 609, 615, or 642 (3 hours)
One of the following courses*: HDF 609, 615 or 640 (3 hours)
One Graduate Elective (3 hours)

Year Five - Summer
Either HDF 798 - Thesis (6 hours) OR HDF 799 - Plan B Project in HDFS and HDF 688 - Practicum II in HDFS (6 hours)
*Courses that may be counted on the undergraduate and graduate degrees.

Master of Science (M.S.) in Nutrition and Dietetics

Minimum Totals for Graduation: 31 - 37 hours

The M.S. in Nutrition and Dietetics is designed to provide advanced training in nutritional sciences for new and experienced professionals. Its objectives are to enhance the graduate’s knowledge base and expertise in the continually advancing field of nutrition and clinical dietetics and to provide graduates with the quantitative and methodological knowledge necessary to better interpret the scientific literature and nutritional research.

The M.S. in Nutrition and Dietetics Program course work can be completed entirely through distance and distributed learning. The program utilizes web-based technology to provide course content.

This degree program has three options:
- Option I - Plan A Thesis Option;
- Option II - Plan B Internship Option;
- Option III - Plan C Course Work Option.

(Continued)
Admission Requirements, Retention & Termination Standards

1. An undergraduate grade point average of at least 3.0 (on a 4-point scale) in the last 60 semester hours of course work.
2. Successful completion of the requirements for dietetic registration by the American Dietetic Association or fulfillment of the minimum academic requirements of the Didactic Program in Dietetics approved by the American Dietetic Association's Commission on Accreditation/Approval for Dietetics Education or successful completion of at least two courses in nutrition, one being at the advanced level; and one course in each of the following: biochemistry; physiology; microbiology; and organic chemistry.

3. An essay (2-3 pages, double-spaced) including a discussion of the applicant's goals and how completion of the program will facilitate his or her achievement of those goals. A portion of this essay should focus upon the unique qualifications the student will bring to the degree program. In addition, the essay must include the student's choice of options (I, II, or III, see program course listing). Also the student will provide a generalized description of the subject matter of the thesis (Plan A) if Option I is chosen or for Options II or III a description of the significant scholarship (e.g. project, extensive paper) the student intends to perform to meet the requirements for Plan B. This essay replaces the written statement requested as part of the application to the College of Graduate Studies. This essay replaces the written statement requested as part of the application to the College of Graduate Studies. This essay replaces the written statement requested as part of the application to the College of Graduate Studies.

4. Three (3) letters of recommendation from former professors or professionals in the field of nutrition and dietetics or other health-related professional.

5. Evidence of successful completion of an undergraduate statistics course is strongly recommended.

6. Per University policy, conditional admission may be considered for applicants with backgrounds or grade point average deficiencies. Courses taken to make up admission deficiencies may not be counted toward graduate degree requirements. Regular admission status should be requested upon completion of all deficiencies.

7. Up to 15 semester hours of graduate credit may be transferred in from another institution with approval of advisor.

8. Up to a total of 15 credit hours can be applied to the MS in Nutrition and Dietetics Program through Credit by Examination or transfer of course credits from another accredited institution pending approval of coursework.

Options

Select one of the following plans:

Option I - Plan A: Thesis Option (31 hours)
FNS 661 - Macronutrients 3(3-0)
FNS 662 - Micronutrients 3(3-0)
FNS 670 - Seminar: Nutrition 1-3(Spec)
FNS 672 - Advanced Clinical Nutrition 3(3-0)
FNS 673 - Advanced Nutritional Assessment 3(3-0)
FNS 677 - Nutritional Epidemiology 3(3-0)
FNS 678 - Research Methods in Nutrition 3(3-0)
FNS 798 - Thesis in Dietetics 1-6(Spec)

Plus an oral exam on the thesis topic and 6 additional hours of electives selected with the approval of the student's academic advisor.

Note: FNS 670 and FNS 798 are variable credit courses. Students on this option are required to take 1 credit hour of FNS 670 and 6 credit hours of 798.

Option II - Plan B: Internship Option (37 hours)
FNS 661 - Macronutrients 3(3-0)
FNS 662 - Micronutrients 3(3-0)
FNS 670 - Seminar: Nutrition 1-3(Spec)
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 790 - Independent Study in Dietetics 2-6(Spec)

Plus oral examination over course work and 9 additional hours of electives selected with the approval of the student's academic advisor.

Note: FNS 670 and FNS 790 are variable credit courses. Students on this option are required to take 1 credit hour of FNS 670 and 3 credit hours of FNS 790.

In some cases, twelve credits may be earned through examination to substitute for the dietetic internship experience. Students must be eligible and must pass the examination to earn the twelve credits. Contact the Department of Human Environmental Studies for the policy on Credit by Examination for Dietetic Internship Experience.

Option III - Plan C: Course Work Option (33 hours)
FNS 661 - Macronutrients 3(3-0)
FNS 662 - Micronutrients 3(3-0)
FNS 670 - Seminar: Nutrition 1-3(Spec)
FNS 672 - Advanced Clinical Nutrition 3(3-0)
FNS 673 - Advanced Nutritional Assessment 3(3-0)
FNS 674 - Dietetic Internship: Foodservice Administration Experience 5(Spec)
FNS 675 - Dietetic Internship: Summary Experience 2(Spec)
FNS 676 - Dietetic Internship: Foodservice Administration Experience 5(Spec)
FNS 677 - Nutritional Epidemiology 3(3-0)
FNS 678 - Research Methods in Nutrition 3(3-0)
FNS 790 - Independent Study in Dietetics 2-6(Spec)

Plus oral examination over course work and 9 additional hours of electives selected with the approval of the student's academic advisor.

Note: FNS 670 and FNS 790 are variable credit courses. Students in this program MUST enroll in FNS 670 three times (1 hour each) under different subject themes. For FNS 790, students are required to take 3 credit hours.

Total: 31-37 semester hours

Graduate Certificate in Nutrition and Dietetics

Minimum Totals for Graduation: 16 hours

Note: This certificate program is offered through CMU Online (CMU Global Campus) only.

The Graduate Certificate in Nutrition and Dietetics is designed to provide advanced training in clinical nutrition for new and experienced professionals. Its objectives are to enhance the graduate's knowledge base and expertise in the continually advancing field of nutrition and clinical dietetics, to provide graduates with the knowledge necessary to better interpret the scientific literature in nutrition, and incorporate nutritional constructs into their professional practice. The Certificate in Nutrition and Dietetics program course work can be completed entirely through distance and distributed learning.

The program utilizes web-based technology to provide course content.
Graduate Certificate in Gerontology

Minimum Totals for Graduation: 18 hours

Gerontology is the holistic study of aging. The 18-credit graduate certificate is designed to provide a basic foundation in theory, research, and practice specific to late life. The program includes two required courses. The remainder of the credits is selected from three groupings of courses: Psychological; Physical Health and Administrative; and Family, Culture and Society. The courses are offered by an array of departments throughout the campus, reflecting the interdisciplinary nature of gerontology.

The certificate is designed to complement students' major course of study. It addresses career trajectories in which students enter professions serving clienteles that include significant numbers of older adults and need expertise in aging.

Students seeking the certificate must be accepted into the College of Graduate Studies at CMU. Although the program can be completed in three semesters, a student-paced approach to the certificate is equally suitable. The advisor for the certificate is located in the Department of Human Environmental Studies.

Core Courses (6 hours)

GRN 631 · Gerontology: Theory and Practice 3(3-0)
GRN 632 · Public Policy and Aging 3(3-0)

Required Courses I · Psychological Group (3 hours)

Select from the following:

GRN 535 · Dementia Care: Diagnosis, Treatment and Prevention 3(3-0)
PSY 724 · Psychology of Aging 3(3-0)

Required Courses II · Physical Health and Administration Group (3 hours)

Select from the following:

CDO 638 · Seminar: Adult and Pediatric Swallowing and Feeding Disorders 3(3-0)
FNS 575/GRN 575 · Geriatric Nutrition 3(3-0)
FNS 671 · Advanced Topics in Nutrition: Geriatrics 3(3-0)
HSC 506 · Health and Physical Development in Late Life 3(3-0)
HSC 517 · Drugs and the Elderly 2(2-0)
HSC 591 · Legal & Regulatory Aspects of Long-Term Care 3(3-0)
HSC 592 · Administration Issues in Long-Term Care 3(3-0)
HSC 593 · Resident Care Issues in Long-Term Care Administration 3(3-0)
HSC 620 · Adult Health Education Theory and Practice 3(3-0)

Required Courses III: Family, Culture and Society Group (3 hours)

Select from the following:

CED 685 · Counseling Aspects of Grief and Loss 3(3-0)
GRN 597 · Special Topics 1-4(Spec)
HDF 618 · The Family Life Cycle: The Older Adult 3(3-0)

Required Courses IV (3 hours)

Select hours from any one of the three groups above.

Total: 18 semester hours

Course Descriptions: AMD

AMD 545 Introduction to Draping 3(2-2)
Interpretation of garment designs developed through the draping on dress forms. Prerequisites: AMD 241 and AMD 345 or graduate status.

AMD 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.

AMD 547 Functional Apparel Design 3(2-2)
A systematic approach to apparel design integrating knowledge of the needs and functions of the wearer, the structural properties of textiles and apparel design. Prerequisites: AMD 241, AMD 345, AMD 355.

AMD 550 Textiles and Apparel in a Global Economy 3(3-0)
Examination of issues related to the globalization of the textile/apparel industry, theories of international development and expansion, and the distribution of fashion goods. Prerequisites: 56 semester hours with at least 12 hours in apparel merchandising and design courses including AMD 407.

AMD 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: AMD 246, 345, 355, 401; Pre/Co-requisite AMD 550. For Apparel Merchandising Concentration: AMD 246, 355, 358, 401; Pre/Co-requisite AMD 550. Or admission to College of Graduate Studies. Co-requisites: AMD 550.

AMD 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: AMD 141, 256, minimum GPA of 2.5, and permission of instructor. Recommended: AMD 140.

AMD 597 Special Topics in Apparel Merchandising & Design 1-15(Spec)
Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student’s transcript. Prerequisite: See Class Schedule.

AMD 604 Scholarship in Textiles and Clothing 3(3-0)
Overview of research in textiles and clothing with emphasis on current future directions of the field. Prerequisite: Enrollment in the Apparel Product Development and Merchandising Technology graduate program.

AMD 635 Advanced Internship in Textiles & Apparel 1-6(Spec)
A structured internship experience that fosters the application of advanced technology and creative skills in a textile/apparel professional setting. Prerequisites: 12 hours of graduate coursework in Apparel Product Development and Merchandising Technology.
AMD 640 Anthropometrics and Apparel 3(2-2)
Examination of human factors and their relationship to designed products. Quantification of body sizes and human variation using body scanning technology. Prerequisite: Admission to the Apparel Product Development and Merchandising Technology graduate program.

AMD 641 Apparel Presentation Technology 3(2-2)
Software applications specific to apparel presentation in retail and virtual environments. Emphasis on creation of planograms for product display. Prerequisites: AMD 246. Admission to the Apparel Product Development and Merchandising Technology graduate program.

AMD 655 Textile Product Evaluation 3(2-2)
Appropriate selection, use, and adaptation of standardized tests for textile product evaluation, familiarity with technological advances; and exploration of innovative use of textiles. Prerequisites: Admission to the Apparel Product Development and Merchandising Technology graduate program.

AMD 656 Apparel Retail Technology 3(3-0)
In-depth study of the principal apparel retail technologies and systems currently being developed and used for internal retail management and for global supply chain management. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Apparel Product Development and Merchandising Technology graduate program.

AMD 697 Special Topics in Apparel Merchandising & Design 1-15(Spec)
Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student’s transcript.

AMD 790 Independent Study in Apparel Merchandising & Design 2-6(Spec)
Student-initiated study in an area not covered in regular courses guided by faculty or faculty committee. Prerequisites: Permission of instructor.

AMD 797 Special Topics in Apparel Merchandising & Design 1-15(Spec)
Topics of special interest which are not normally included in existing courses. Specific topic will be listed on student’s transcript.

AMD 798 Thesis in Apparel Merchandising & Design 1-6(Spec)
Individual research or creative endeavor culminating in a written thesis and/or exhibition of work. CR/NC only. Prerequisites: Permission of instructor.

Course Descriptions: FNS

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-Requisite: 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 Class Schedule.

FNS 661 Macronutrients 3(3-0)
Advanced study of nutrition, metabolism, and function of proteins, carbohydrates and lipids as related to human health and disease. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 662 Micronutrients 3(3-0)
Advanced study of the nutrition, metabolism, and function of vitamins and minerals as related to human health and disease. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 670 Seminar: Nutrition 1-3(Spec)
Student review and presentation of specific topics of current research in nutrition. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 671 Advanced Topics in Nutrition: Geriatrics 3(3-0)
Presents key concepts in geriatric nutrition. Provides students with skills needed to evaluate and utilize information regarding nutrition in health and disease among the elderly. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 672 Advanced Clinical Nutrition 3(3-0)
Advanced concepts of diet therapy and care for a variety of clinical disorders with nutritional implications. Includes coverage of enteral and parental nutrition. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 673 Advanced Nutritional Assessment 3(3-0)
Presents techniques for nutritional assessment of individuals and groups: evaluation of dietary intake, anthropometry, nutritional analysis software, and biochemical, and clinical indices. This course is approved for offering in a distance learning format. Prerequisites: Admission to the Master of Science in Nutrition and Dietetics or permission of instructor.

FNS 674 Dietetic Internship: Clinical Experience 5(Spec)
Application of dietary principles to human pathophysiologic status through documenting and counseling individuals, assessing, educating groups, and planning in an acute care environment. Prerequisites: registration is restricted to students accepted into the Central Michigan University Dietetic Internship and the College of Graduate Studies. In some cases, 12 credits may be earned through examination to substitute for the dietetic internship experience.

FNS 675 Dietetic Internship: Foodservice Administration Experience 5(Spec)
Application of administrative principles (budget decisions, cost containment, personnel management, leadership) involved in the production, distribution, and service of food in hospitals and schools. Prerequisites: Registration is restricted to students accepted into the Central Michigan University Dietetic Internship and the College of Graduate Studies. In some cases, 12 credits may be earned through examination to substitute for the dietetic internship experience.

FNS 676 Dietetic Internship: Summary Experience 2(Spec)
Integration and application of clinical, foodservice, and community nutrition principles and their implementation in acute care settings. Prerequisites: FNS 674 and FNS 675; registration is restricted to students accepted into the Central Michigan University Dietetic Internship and the College of Graduate Studies. In some cases, 12 credits may be earned through examination to substitute for the dietetic internship experience.
Course Descriptions: GRN
GRN 535 Dementia Care: Diagnosis, Treatment and Prevention 3(3-0)
This course provides a foundation in normal aging and then addresses the individual, family and institutional challenges of diagnosis, treatment and prevention of dementing illnesses. Prerequisites: GRN 247 or PSY 325 or HPR 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.

GRN 631 Gerontology: Theory and Practice 3(3-0)

GRN 632 Public Policy and Aging 3(3-0)
Course addresses the development of social policy in the context of population aging. Emphasizes analysis of current and long-term implications on policy decisions. Prerequisite: graduate status.

GRN 635 Geographic Information Systems for the Elderly 3(3-0)
The course teaches students how to locate, develop, and write grants applicable to research, non-profit agencies, and programs. Prerequisites: GRN 602, 630.
HDF 606 Human Growth and Development: Issues in Adolescent Development 3(3-0)
Research and theory relating to the adolescent as a member of family and society. Prerequisite: HDF 306.

HDF 609 Application of Theory and Research in Human Development 3(3-0)
This course explores contemporary issues and theory to understand and explain human development with an emphasis on the diversity of humans across the lifespan. Prerequisite: HDF 600.

HDF 615 Application of Theory and Research in Family Studies 3(3-0)
This course explores core issues in family studies and presents historical and contemporary theoretical frameworks used to understand and explain family life.

HDF 618 The Family Life Cycle: The Older Adult 3(3-0)
Study of the older adult in terms of the nutritional, social, consumer and familial aspects of development.

HDF 619 Continuing Registration for Final Research Project 1(1-0)
An non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

HDF 630 Applied Research Methods 3(3-0)
This course introduces students to the quantitative, qualitative, and mixed methods used when conducting research within an interdisciplinary context in the human services. Prerequisite: Graduate standing. Recommended: An undergraduate course in research methods; an undergraduate course in statistics.

HDF 635 Skill Mentorship in HDFS: Teaching 1(Spec)
Applied directed study course in which students work closely with a faculty mentor. Mentorship focuses on the development of teaching skills. Prerequisite: Admission to the graduate program in Human Development and Family Studies.

HDF 636 Skill Mentorship in HDFS: Research 1(Spec)
Applied directed study course in which students work closely with a faculty mentor. Mentorship focuses on the development of research skills. Prerequisite: Admission to the graduate program in Human Development and Family Studies.

HDF 637 Skill Mentorship in HDFS: Practice 1(Spec)
Applied directed study course in which students work closely with a faculty mentor. Mentorship focuses on the development of professional practice skills. Prerequisite: Admission to the graduate program in Human Development and Family Studies.

HDF 640 Practice in Human Services 3(3-0)
This course presents a review and analysis of historical and contemporary services for children, adults, and families with a particular emphasis on skills and ethics. Prerequisite: Admission to the HDFS graduate program.

HDF 642 Program Development and Evaluation in Human Services 3(3-0)
This course addresses advanced components of program development and evaluation in the human services field. Prerequisite: Admission to the HDFS graduate program.

HDF 686 Occupational Field Experience 3(Spec)
Internship in one human development and family related occupation with supervision by individual faculty. CR/NC only. Prerequisite: HDF 600, 9 hours of graduate level course credit and permission of instructor.

HDF 786 Practicum I in HDFS 3(Spec)
This course is an initial practicum in the HDFS Master’s Program and is a human services related occupational experience with supervision by individual faculty. Prerequisites: HDF 600, completion of at least 12 credits in the HDFS graduate program.

HDF 788 Practicum II in HDFS 3(Spec)
This course is an advanced practicum in the HDFS Master’s Program and is a human services related occupational experience with supervision by individual faculty. Prerequisite: HDF 686.

HEV 790 Independent Study 2-6(Spec)
Student-initiated study in an area not covered in regular courses guided by faculty or faculty committee. Prerequisites: Admission to College of Graduate Studies and permission of instructor.

HEV 798 Thesis 1-6(Spec)
Individual research or creative endeavor culminating in a written thesis and/or exhibition of work. CR/NC only.
**Department of Journalism (JRN)**  
*College of Communication and Fine Arts*

Maria Marron, Chairperson  
454 Moore Hall, (989) 774-3196

Sean Baker, Ph.D., Visual/Digital Communication, Research  
Doug Berry, B.A., Advertising

Tim Boudreau, Ph.D., Press and Society, Research  
Lori F. Brost, Ph.D., Press and Society, New Media, Electronic Media, Pop Culture, Research  
Elina Erzikova, Ph.D., Public Relations, Research  
John K. Hartman, Ph.D., Press and Society, Research, Advertising, Public Relations  
Sara Kubik, Ph.D., Visual/Digital Communication, Electronic Media, Research  
Maria Marron, Ph.D., Press and Society, Research  
Kenneth McDonald, B.A., Graphic Design, Visual Communication  
Carol McGinnis, M.A., Advertising, Multimedia, Press and Society, Research  
Kent Miller, M.A., Photojournalism  
Edgar Simpson, Ph.D., Public Affairs Reporting, Research  
Johnny Sparks, Ph.D., Advertising, Research  
Alice A. Tait, Ph.D., AHANA (African American, Hispanics, Asians, Native Americans)/Women and Mass Media, Mass Communication Theory and Research, Interpersonal and Public Communication  
James Wojcik, M.A., Public Relations  
Jiafei Yin, Ph.D., News Editorial, Media History and International Communications, Research

Graduate-level courses offered by the Department of Journalism may be appropriate as electives on various graduate degree curricula.

**Course Descriptions: JRN**

**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. Prerequisite: JRN 312.

**JRN 519 News Editorial 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.

**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)**  
Emphasis on interaction of public relations with society, with individual case studies. Prerequisites: JRN 350.

**JRN 559 Public Relations Internship 1-4(Spec)**  
Experience in public relations under professional and faculty supervision. May be applied toward journalism major or 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.

**JRN 670 Public Relations Management 3(3-0)**  
Organization and management of the public relations function in business, industry, various institutions and public relations firms: counseling, planning, budgeting, personnel management. This course is approved for offering in a distance learning format.
Department of Management
(MGT)

College of Business Administration

Mahmood S. Bahae, Chairperson
200 Smith Hall, (989) 774-3450

Mahmood S. Bahae, Ph.D., Management and Business Policy
Lawrence O. Jenicke, Ph.D., Management Science, Production/Operations Management
Hyungu Kang, Ph.D., Management Policy and Strategy
Kevin G. Love, Ph.D., Human Resource Management
Van Miller, Ph.D., International Business
Shanthakumar Palaniswami, Ph.D., Management Science, Production/Operations Management
Michael J. Pisani, Ph.D., Management and Production Planning, Management Science
Luis A. Perez-Batres, Ph.D., Strategic Management, International Business
Syed Shahabuddin, Ph.D., Production/Operations Management, and Management Science
Herman A. Theeke, Ph.D., Human Resource Management

Course Descriptions: MGT

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 planning 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 or permission of the MBA Director.

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/ MGT 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 545 Operations Strategy 3(3-0)
The treatment of strategic planning and competitive issues in operations management in a domestic and global environment. Prerequisites: MGT 303/MKT 303 or MGT 340; 86 semester hours completed; admission to Professional Business Studies or listed on signed major or minor or graduate standing.

MGT 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 transcripts. Prerequisites: 56 semester hours completed; admission to Professional Business Studies or listed on signed major or minor.

MGT 600 Principles of Management Science/Management Information Systems 3(3-0)
Quantitative techniques in production and operations management and resource planning. Basic concepts of management information systems and decision support systems. Prerequisites: admission to MBA or permission of MBA director and STA 282.

MGT 633 Human Resource Management 2(2-0)
The theory and problems of human resource management as they relate to the various levels of management. Credit cannot be earned in both MGT 633 and MGT 643. Prerequisites: admission to MBA or permission of MBA director.

MGT 635 Employee Compensation Practice and Process 2(2-0)
Procedures and methods for exploring employee compensation programs. Credit cannot be earned in both MGT 635 and MGT 645. Prerequisites: MGT 633, statistics, and admission to MBA or permission of MBA director.

MGT 636 Seminar in Labor Relations 2(2-0)
Theoretical and applied analysis of major issues in labor relations. Public sector, private sector, and international issues are considered. Credit cannot be earned in both MGT 636 and MGT 646. Prerequisites: MGT 320, and admission to MBA or permission of MBA director.

MGT 637 Personnel Selection and Evaluation 2(2-0)
Analysis of the functions of employee selection and performance management in organizational settings, with emphasis on quantitative and qualitative techniques, and in the context of workplace diversity. Credit cannot be earned in both MGT 637 and MGT 647. Prerequisites: STA 282, and MGT 320 or MGT 633, and admission to MBA or permission of MBA director.

MGT 642 Human Resources Management 3(3-0)
Theories, systems, practices, problems, and solutions of human resource management in organizations. Credit cannot be earned in both MGT 633 and 642. This course is approved for offering in a distance learning format. Prerequisites: Admission to graduate program or permission of the Department Chairperson.

MGT 645 Personnel Compensation Practice and Process 3(3-0)
Procedures and methods for developing and delivering employee compensation programs. Credit cannot be earned in both MGT 635 and MGT 645. This course is approved for offering in a distance learning format. Prerequisites: MGT 643, or 633; STA 282 or 382 or statistics competency; admission to graduate program.
MGT 646 Labor Relations Issues 3(3-0)
exploration of the public sector, private sector, and international issues in labor relations. Credit cannot be earned in both MGT 636 and MGT 646. Prerequisite: MGT 320, admission to graduate program.

MGT 647 Employee Selection and Evaluation 3(3-0)
In-depth analysis of the functions of employee selection and performance appraisal in organizational settings, with emphasis on quantitative techniques. This course is approved for offering in a distance learning format. Credit cannot be earned in both MGT 647 and MGT 637. Prerequisites: STA 282 or 382 or statistics competency; MGT 320 or 633 or 643; admission to graduate program.

MGT 649 Seminar in Organizational Development 3(3-0)
The processes, tools and techniques of organization change. Organization Development (OD) is the study of planned change in order to improve firms’ effectiveness and efficiency. This course is approved for offering in a distance learning format. Prerequisites: admission to MBA or permission of MBA director.

MGT 657 International Management 2(2-0)
From a contemporary perspective, the course deals with managing subsidiaries and affiliates in different country-and cultural-context. Credit cannot be earned in both MGT 657 and MGT 667. Prerequisites: admission to the MBA Program or permission of the MBA director.

MGT 667 International Business 3(3-0)
This course deals with operating subsidiaries and affiliates in different country-and cultural-contexts. Credit cannot be earned in both MGT 667 and MGT 667. Prerequisites: admission to graduate program.

MGT 791 Independent Studies 1-6(Spec)
Directed reading or research on an approved topic. Prerequisites: permission of instructor and department chairperson and 15 hours of graduate credit in MBA program.

MGT 797 Special Topics 3-6(Spec)
Enables students to take various topics under the same number. Specific topic will be listed on the student’s transcript. Prerequisite: graduate status and permission of instructor.

MGT 798 Thesis 1-6(Spec)

Department of Marketing and Hospitality Services Administration (HSA, MKT)

College of Business Administration

Richard Divine, Chairperson
100 Smith Hall (989) 774-3701

Bruce Allen, Ph.D., Marketing
Robert L. Cook, Ph.D., Marketing
Richard L. Divine, Ph.D., Marketing
Michael S. Garver, Ph.D., Marketing
Deborah Gray, Ph.D., Marketing
Lawrence R. Lepisto, Ph.D., Marketing
Concha Neeley, Ph.D., Marketing
Patrick A. Okonkwo, Ph.D., Marketing
Yae Sock Roh, Ph.D., Hospitality
Samuel Spralis III, Ph.D., Marketing
Crina Tarasi, Ph.D., Marketing
Zachary Williams, Ph.D., Marketing
J. Holton Wilson, D.B.A., Marketing and Analysis

Course Descriptions: MKT

MKT 555 Market and Sales Forecasting 3(3-0)
Develops familiarity with methods most commonly used in market and sales forecasting. Both qualitative and quantitative methods are included with emphasis on the latter. This course is approved for offering in a distance learning format. Prerequisites: one course in MKT; one course in statistics or MKT 450; admission to Professional Business Studies; 86 semester hours completed.

MKT 560 International Marketing 3(3-0)
Policies and practices employed in international business. Considers problems of international payments, trade and investment with special emphasis on integrating managerial dimensions with related economic principles. Prerequisites: MKT 300 or MKT 304; admission to Professional Business Studies; senior standing; 86 semester hours completed. This course is approved for offering in a distance learning format.

MKT 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: MKT 300 or MKT 304; admission to Professional Business Studies; senior standing; 86 semester hours completed.

MKT 599 Humanitarian Logistics Project 3(Spec)
Provide students the opportunity to work on a large-scale service-learning humanitarian logistics project supervised by a faculty member. Prerequisites: Completion of 86 credit hours, Recommended: MKT 300 or 304.

MKT 631 Lean Logistics Operations 3(3-0)
Understanding and applying lean principles to logistics operations by examining and improving the order fulfillment process including; order, inventory, warehousing and transport operations. This course is approved for offering in a distance learning format. Prerequisite: Admission to the MBA program or permission of MBA director.

MKT 632 Integrated Logistics Strategy 3(3-0)
Current best practices and strategies for designing and managing integrated logistics systems. This course is approved for offering in a distance learning format. Prerequisites: Admission to the MBA program or permission of the MBA director.
MKT 633 Risk-based Logistics Networks 3(3-0)
Current best practices and strategies for assessing and designing risk-based logistics networks with emphasis on risk management including logistics network security and green initiatives. This course is approved for offering in a distance learning format.

MKT 650 Marketing Research: Managerial Applications 2(2-0)
Survey of what managers need to know about marketing research. Includes questionnaire design, evaluation; sampling and sample size issues, and basic methods of data analysis. Prerequisites: MKT 300 and admission to the MBA program or graduate status and permission of the MBA director.

MKT 663 Product Management 2(2-0)
Development and introduction of new products and services in a dynamic environment. Prerequisites: regular admission to the MBA program or permission of the MBA Director.

MKT 664 Promotional Strategy 2(2-0)
Promotional strategy is designed to present the relevant concepts of the marketing communication process and their applications within a managerial framework. Prerequisite: regular admission to the MBA program or permission of the MBA director.

MKT 698 The Logistics Project 4(4-0)
The capstone experience where skills and competencies are applied to actual logistics management problems. Students develop logistics solutions with the guidance of a faculty advisor. This course may be offered in an online or hybrid format.

MKT 699 Independent Studies 1-6(Spec)
Directed reading or research on an approved topic. Prerequisites: permission of instructor and department chairperson and 15 hours of graduate credit in M.B.A. program.

MKT 797 Special Topics 3-6(Spec)
Enables students to take various topics under the same number. Specific topic will be listed on the student’s transcript. Prerequisites: graduate status and permission of instructor.

MKT 798 Thesis 1-6(Spec)
An acceptable thesis in business administration. The thesis is directed by a committee in conformity with the “Regulations and Directions for the Writing of the Master’s Thesis.” CR/NC only.

Course Descriptions: HSA

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.

HSA 791 Independent Studies 1-6(Spec)
Directed reading or research on an approved topic. Prerequisites: permission of instructor and department chairperson and 15 hours of graduate credit in MBA program.

HSA 797 Special Topics 3-6(Spec)
Enables students to take various topics under the same number. Specific topic will be listed on the student’s transcript. Prerequisites: graduate status and permission of instructor.

HSA 798 Thesis 1-6(Spec)
CR/NC only.

Department of Mathematics

(Math, STA)

College of Science and Technology

En-Bing Lin, Chairperson
214 Pearce Hall, 989-774-3596
https://centrallink.cmich.edu/academics/sci_tech/math

Brad Safnuk, Graduate Coordinator
211 Pearce Hall, 989-774-6518

James Angelos, Ph.D., Montana State University, approximation theory

Ahmed Assaf, Ph.D., Technion University, combinatorics

Leo T. Butler, Ph.D., Queen’s University, geometry, topology, dynamical systems

C-Y. Jean Chan, Ph.D., University of Utah, commutative algebra and algebraic geometry

Chin-I Cheng, Ph.D., University of Missouri-Columbia, statistics

Susan Cooper, Ph.D., Queen’s University, algebraic geometry and commutative algebra

Kahadawala Cooray, Ph.D., University of Nevada at Las Vegas, statistics

John Daniels, Ph.D., Western Michigan University, statistics

Lisa DeMeyer, Ph.D., University of north Carolina at Chapel Hill, differential geometry

Ana Dias, Ph.D., Indiana State University, mathematics education

Donna Erickson, Ph.D., Michigan State University, mathematics education

Felix Famoye, Ph.D., University of Calgary, statistics

Martha Frank, Ph.D., Purdue University, mathematics education

Sidney W. Graham, Ph.D., University of Michigan, number theory

George Grossman, Ph.D., University of Windsor, applied mathematics

Yeonyang Kim, Ph.D., University of Wisconsin, analysis and approximation theory

Douglas Lapp, Ph.D., The Ohio State University, mathematics education

Carl Moun-Shen Lee, Ph.D., Iowa State University, statistics

En-Bing Lin, Ph.D., Johns Hopkins University, applied and computational mathematics

Meera Mainkar, Ph.D., Tata Institute of Fundamental Research, geometry, nilmanifolds

Tibor Marcinek, Ph.D., Comenius University, mathematics education

Sivaram K. Narayan, Ph.D., Purdue University, operator theory

Sing-Cheong Ong, Ph.D., Dalhousie University, operator theory

Christine M. Phelps, Ph.D., University of Delaware, mathematics education

Katrina Platek-Jimenez, Ph.D., University of Arizona, mathematics education

Leela Rakesh, Ph.D., Kanpur University, applied mathematics

Brad Safnuk, Ph.D., University of California, Davis, geometry and topology

Dennis St. John, Ph.D., University of Iowa, mathematics education

Jungsywan Sepanski, Ph.D., Texas A&M University, statistics

Mohan S. Shrikhande, Ph.D., Indiana University, combinatorics

Daniel X. Wang, Ph.D., The University of Alabama, applied statistics

Mingan Yang, Ph.D., The University of New Mexico, statistics
Mathematics

Xiaoming Zheng, Ph.D., University of California at Irvine, applied mathematics

The Department of Mathematics offers the Master of Arts in Mathematics (M.A.) that also offers an Accelerated Program and the Ph.D. in Mathematics with a concentration in the Teaching of College Mathematics.

The department has an active faculty with particular research strengths in the areas of algebra, algebraic geometry, applied mathematics, approximation theory, combinatorics and graph theory, differential geometry, functional analysis and operator theory, mathematics education, number theory, and statistics.

Classes are small, allowing students to receive individual attention. An active colloquium program draws speakers with varied research interests from a wide range of locales. A graduate student seminar gives students the opportunity to explore topics that extend the required coursework. The applied mathematics group’s specialty is computational and polymer fluid dynamics. Research groups have strong links with science and engineering departments within Central Michigan University, other universities, and industry.

Computing facilities within Pearce Hall, where the department is located, include microcomputer laboratories with Macintosh and PC computers.

Two types of financial aid are available: graduate fellowships and graduate teaching assistantships. Some of these are specified for doctoral students and carry a higher stipend. A limited number of graduate research assistantships may be available, and are dependent on current grant funding. Additional support is available for members of under-represented minority groups.

Completed applications for fellowships are due Feb. 6. Completed applications for assistantships must be submitted by March 1, although late applications may be considered if positions are available.

**Master of Arts (M.A.) in Mathematics**

**Minimum Totals for Graduation: 30 hours**

The M.A. degree has an emphasis in the more computational aspects of mathematics for students who are interested in jobs in business, industry and government. The degree program also retains the flexibility to prepare students for teaching mathematics at the undergraduate level or to undertake doctoral work in mathematics.

The requirements are those that a student with minimal undergraduate preparation would have to fulfill.

Any student having satisfied any of the course requirements prior to entering the program may be excused from that course requirement. However, the 30-hour requirement will not be affected.

If the student elects to write a thesis, it shall be in mathematics. If a student elects to follow non-thesis Plan B, two projects in two fields of mathematics must be completed under the direction of graduate faculty. More detailed information is available in the department office.

**Admission Requirements, Retention & Termination Standards**

Admission is dependent upon a student having completed a minimum of 20 semester hours of mathematics including MTH 233 (Calculus III) or its equivalent, and one course in either linear or abstract algebra. A grade point average of 2.7 overall and a 2.7 in mathematics are required.

**Degree Requirements**

**Algebra Requirements (6 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title and Code</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 525</td>
<td>Modern Algebra II</td>
<td>3(0-0)</td>
</tr>
<tr>
<td>MTH 623</td>
<td>The Theory of Groups</td>
<td>3(0-0)</td>
</tr>
</tbody>
</table>

**Analysis Requirements (9 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title and Code</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 533</td>
<td>Advanced Calculus II</td>
<td>3(0-0)</td>
</tr>
<tr>
<td>MTH 632</td>
<td>Introduction to Real Analysis and Its Applications</td>
<td>3(0-0)</td>
</tr>
<tr>
<td>MTH 636</td>
<td>Introduction to Complex Variables</td>
<td>3(0-0)</td>
</tr>
</tbody>
</table>

**Computational Mathematics Requirement (3 hours)**

Select one of the following:

- MTH 520 - Optimization Theory
- MTH 534 - Applied Mathematics and Differential Equations
- MTH 578 - Combinatorics I
- MTH 638 - Theoretical Numerical Analysis

**Perspectives in Math Requirement (3 hours)**

Select one of the following:

- MTH 673 - History of Advanced Mathematics
- MTH 761 - Methods for Teaching College Mathematics

**Statistics Requirement (3 hours)**

Any Statistics course offered by the mathematics department numbered STA 500 or higher.

**Research Requirements (6 hours)**

Select either plan A or plan B.

**Plan A (6 hours)**

- Completion of a thesis, including an oral examination over the thesis.
- MTH 798 - Thesis 1-6(Spec)

**Plan B (6 hours)**

**Required Courses (3 hours)**

- 1 hour of MTH 693, plus 1 hour of MTH 698 for Plan B paper 1, and 1 hour of MTH 698 for Plan B paper 2:
  - MTH 693 - Graduate Seminar in Mathematics and Its Applications
  - MTH 698 - Plan B Project 1-2(Spec)

**Electives (3 hours)**

Electives may be chosen from any graduate level course and may be selected from a department other than mathematics. Electives must be chosen with approval of the advisor.

**Total: 30 semester hours**

**ACCELERATED MASTER OF ARTS IN MATHEMATICS**

Advanced undergraduate students majoring in mathematics may want to consider an option by which they can obtain their Bachelor of Arts or Bachelor of Science in Mathematics and their Master of Arts in Mathematics in five years. The accelerated program requirements are identical to the Major in Mathematics and to the Master of Arts in Mathematics, but allow the student to apply 12 credit hours of graduate coursework toward both the Bachelor of Arts or the Bachelor of Science and the Master of Arts degrees.

**Admission Requirements, Retention & Termination Standards**

To be eligible for the accelerated program, a student must have completed a minimum of 20 semester hours of mathematics including MTH 233 (Calculus III) or its equivalent, and one course in either linear or abstract algebra. A grade point average of 3.0 overall and a 3.0 in mathematics are required. In addition, students must have completed MTH 332 or its equivalent with a letter grade of at least B and must have completed at least 90 credit hours of undergraduate course work, including all competency requirements and all but 12 credit hours of University Program requirements.

(Continued)
Degree Requirements

During the fourth year, students will complete MTH 632 or MTH 636, MTH 525, 533, 623 to be counted toward both the undergraduate and graduate degrees. Students will complete the Bachelor of Arts or Bachelor of Science degree requirements by the end of the summer term of the fourth year. Students will complete the coursework for the Master of Arts and complete either the Plan A or Plan B option by the end of the summer term of their fifth year.

A sample curriculum for a student who has completed 90 credit hours of undergraduate coursework is given below.

Year 4 - Fall (15 hours)
Undergraduate Courses (9 hours), plus 3 hours each of MTH 525 and 632:
MTH 525 - Modern Algebra II 3(3-0)
MTH 632 - Introduction to Real Analysis and Its Applications 3(3-0)

Note: MTH 525 and 632 apply to both the BA/BS and MA degrees. Students must register for graduate credit in these courses.

Year 4 - Spring (15 hours)
Undergraduate courses (9 hours), plus 3 hours each of MTH 533 and MTH 623.
MTH 533 - Advanced Calculus II 3(3-0)
MTH 623 - The Theory of Groups 3(3-0)

Note: MTH 533 and 623 apply to both the BA/BS and MA degrees. Students must register for graduate credit for these courses.

Year 4 - Summer (4 hours)
Undergraduate courses up to 4 hours.

(BA or BS degree conferred.)

Year 5 - Fall (7-9 hours)
A statistics (STA) elective (3 hours), MTH 636 (3 hours), plus:
• For Plan B, 1 hour of MTH 698.
• For Plan A, 6 hours of MTH 798 over two semesters.
MTH 636 - Introduction to Complex Variables 3(3-0)
MTH 698 - Plan B Project 1-2(Spec)
MTH 798 - Thesis 1-6(Spec)

Year 5 - Spring (6-8 hours)
Computational/Perspective (3 hours), plus:
• For Plan B, a Plan B elective (3 hours), and 1 hour each of MTH 693 and 698.
• For Plan A, students must complete 6 hours of MTH 798 over the course of two semesters.
MTH 693 - Graduate Seminar in Mathematics and Its Applications 1-4(Spec)
MTH 698 - Plan B Project 1-2(Spec)
MTH 798 - Thesis 1-6(Spec)

Year 5 - Summer (3 hours)
Computational Mathematics Requirement or Perspectives in Mathematics Requirement (3 hours)

(M.A. degree conferred)

Ph.D. in Mathematics

with a concentration in the Teaching of College Mathematics

Minimum Totals for Graduation: 90 hours

The Ph.D. degree is a content-based degree designed to develop well-prepared teachers of college mathematics who combine knowledge and skill in mathematics with a desire to teach it effectively. Coursework is broadly distributed across the various areas of mathematics and is intended to help students achieve a level of sophistication in mathematical knowledge that will establish a professional attitude about mathematics. Students would be prepared to do research in traditional mathematics or in areas related to the teaching of collegiate mathematics. Emphasis on pedagogy includes two required courses plus an internship.

Admission Requirements, Retention & Termination Standards

Admission

1. Applicants must meet all College of Graduate Studies admission requirements.
2. Applicants with a Bachelor's degree must have successfully completed 20 semester hours of mathematics including Multivariate Calculus (equivalent to MTH 233), Abstract Algebra (equivalent to MTH 523), and Advanced Calculus (equivalent to MTH 532). A minimum GPA of 2.7 overall (or 3.0 in the final sixty semester hours of graded coursework toward the bachelor's degree) and 3.0 in mathematics is required.
3. Applicants with Master's degrees in mathematics equivalent to the M.A. or M.A.T. degree at Central Michigan University must have a minimum GPA of 3.0 in their graduate work.
4. Applicants must submit GRE examination scores, however, this requirement may be waived by the Department in exceptional cases.

Applicants from non-English speaking countries must achieve a satisfactory score on the Test of English as a Foreign Language (TOEFL); a minimum score of 550 PBT, 213 CBT, or 79 iBT is required for applicants to the graduate college.

The nature of previous coursework, grades, and GRE score will be used by the department in evaluation of candidates for admission. Awards of Graduate Assistantships and Fellowships are competitive, with evaluation based on courses, grades, GRE scores, and letters of recommendation.

Program Requirements

Successful completion of the Ph.D. requires a minimum of 90 semester hours of graduate work beyond the bachelor's degree or 60 hours of graduate work beyond the master's degree. In order to obtain the Ph.D. degree the student must have a GPA of 3.0 (B) or better. A student with a bachelor's degree must have earned at least 50 of the total 90 hours at the 600 level or above. Those entering with a master's degree must have earned at least 35 of the 60 hours at the 600 level or above. At least 15 of the last 30 hours must be earned at the 700 level or above, excluding the dissertation and the internship credits.

Coursework

The program requires a minimum of 69 hours of coursework exclusive of internship and the dissertation credit beyond the bachelor's degree or 39 hours of such coursework after the master's degree. These hours are distributed among core courses and courses in area of specialization as given below. The minimum hours that are required in each category is specified in parentheses. An advisor will assist a student in the selection of the courses. Courses in which a student earns or has earned a grade below C (2.0) do not count toward meeting any graduate degree requirements.

Any student having satisfied any of the course requirements prior to entering the program may be excused from that course requirement. For this to be approved, the student must complete the Course Requirement Waiver Form supplied by the department. However, the total hour requirement of 69 (or 39) semester hours will not be affected.

A. Core Courses I - Algebra (9 hours)
MTH 525 - Modern Algebra II 3(3-0)
MTH 623 - Theory of Groups 3(3-0)
MTH 625 - Theory of Associative Rings 3(3-0)
2. Based on the material in the courses listed in the current Depart-
Qualifying Examinations will be offered in the following areas,
to demonstrate a broad knowledge of the topics and be able to
integrate concepts and explain them at an appropriate level.

C. Core Courses III - Mathematics Education (6 hours)
   MTH 761 - Methods for Teaching College Mathematics
   3(3-0)
   MTH 762 - A Survey of Research in Collegiate Mathematics
   Education 3(3-0)

Core Electives (21 hours)
   Students must select 21 hours from areas D-I. Students must
   choose courses from at least four different core elective areas,
   and at least two courses must be from the same area.

D. Core Electives I - Applied Mathematics
   MTH 520 - Optimization Theory 3(3-0)
   MTH 534 - Applied Mathematics and Differential Equations
   3(3-0)
   MTH 634 - Fourier Analysis 3(3-0)
   MTH 638 - Theoretical Numerical Analysis 3(3-0)

E. Core Electives II - Combinatorics
   MTH 578 - Combinatorics I 3(3-0)
   MTH 678 - Combinatorics II 3(3-0)

F. Core Electives III - Theoretical Statistics
   STA 584 - Mathematical Statistics I 3(3-0)
   STA 684 - Theory of Statistical Inference 3(3-0)

G. Core Electives IV - Applied Statistics
   STA 580 - Applied Statistical Methods I 3(3-0)
   STA 590 - Applied Statistical Methods II 3(3-0)
   STA 682 - Linear Models 3(3-0)

H. Core Electives V - Topology and Geometry
   MTH 644 - Differential Geometry 3(3-0)
   MTH 645 - Topology 3(3-0)

I. Core Electives VI - History
   MTH 673 - History of Advanced Mathematics 3(3-0)

J. Other Electives (3-9 hours)
   Students who have not had a course equivalent to MTH
   533 prior to entering the Ph.D. program are required to take
   MTH 533 as one of their electives.

K. Area of Specialization (15-21 hours)
   Each student, in consultation with his/her dissertation
   supervisor, will select at least 15 semester hours of courses
   in the area of specialization.

   These courses can be from outside the Department of
   Mathematics. These elective courses are to be selected by
   each student in consultation with his/her advisor or dis-
   sertation supervisor.

Qualifying Examination
   In the Ph.D. qualifying examinations, students are expected
to demonstrate a broad knowledge of the topics and be able to
integrate concepts and explain them at an appropriate level.
Qualifying Examinations will be offered in the following areas,
based on the material in the courses listed in the current Depart-
ment of Mathematics’ Graduate Student Handbook.
   1. Algebra
   2. Analysis
   3. Applied Mathematics
   4. Applied Statistics
   5. Combinatorics
   6. Mathematics Education
   7. Theoretical Statistics
   8. Topology

   Each doctoral student must pass three examinations in three
different areas from those listed above.
   • Students planning to write a dissertation in pure or applied
   mathematics must pass examinations in algebra, analysis,
   and one other area listed above.
   • Students planning to write a dissertation in statistics must
   pass examinations in theoretical statistics, applied statistics,
   and analysis.
   • Students planning to write a dissertation in mathematics
   education must pass examinations in mathematics education
   and two other areas listed above, at least one of which must
   be algebra or analysis.

   Students are strongly encouraged to take the examinations
   as soon as possible. Full-time students have a maximum of seven
   regular semesters (not counting summer term) to pass the ex-
   amination in all three areas. Part-time students may request the
   department for additional time. Three attempts in each area are
   allowed. A third failure in one area eliminates a student
   from the Ph.D. Program.

   Internship (6 hours)
   Students are required to teach two courses in mathematics/
   statistics at the 200 level or above under the supervision of a
   graduate faculty member in the Department of Mathematics.
   The student must earn the credits by registering for MTH 766.

   MTH 766 - Internship: College Teaching 3-6(Spec)

Dissertation (15 hours)
   Upon successful completion of the qualifying examinations,
   the student will select a dissertation supervisor. A dissertation
   supervisor must be a graduate faculty member in the Mathematics
   Department. The student will form a dissertation committee in
   consultation with the dissertation supervisor. This dissertation
   committee will be chaired by the supervisor and must include at
   least three other graduate faculty members. Two members of the
   dissertation committee must be from the Mathematics Depart-
   ment. A completed doctoral dissertation must be approved by the
   dissertation committee, and by the College of Graduate Studies.

   Students are required to register for 15 hours of MTH 898
   (Dissertation).

   The dissertation must consist of original work and can com-
   bine scholarly, analytical, creative and expository skills. It could
   consist of research on a topic in mathematics, an expository or
   historical examination of a piece of mathematics, or research on
   a topic related to the teaching of collegiate mathematics.
   Before starting the dissertation work, the project to be under-
   taken must be approved by the dissertation committee, and by
   the College of Graduate Studies.

   Upon completion of coursework, qualifying examination, 
   internship, and dissertation, the candidate for the Ph.D. degree
   must pass a final oral examination which is a dissertation defense
   in a colloquium format. The student’s dissertation committee
determines whether the student passes the examination.

   The dissertation must be prepared according to the regula-
   tions prescribed in the College of Graduate Studies most recent
   edition of the Preparation Guide to Doctoral Dissertations,
   Theses, Field Studies, and Plan B Papers and must be submitted
to Dissertations Abstracts International.

   MTH 898 - Dissertation 1-30(Spec)

   Total: 90 semester hours
Certificate in Data Mining

This is an interdepartmental graduate certificate. Please check the Index for the page number.

Course Descriptions: MTH

MTH 520 Optimization Theory 3(3-0)
An introduction to the theory, practical applications and algorithms of nonlinear programming. 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 cryptography. Prerequisite: MTH 332.

MTH 522 Math of Cryptology 3(3-0)
The mathematics and algorithms of classical and computer-age cryptography. Substitution, transposition, stream and block ciphers; DES, Rijndael and public key cryptography; 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 525 Modern Algebra II 3(3-0)
Vector spaces, subspaces, bases and dimensions; linear transformations, their algebra, their representation by matrices, and linear functionals; eigenvalues, triangularizable and diagonalizable transformations; inner product spaces. Prerequisite: MTH 523.

MTH 532 Advanced Calculus I 3(3-0)
Rigorous development 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 533 Advanced Calculus II 3(3-0)
Continuation of MTH 532. 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)
Initial-boundary value (linear, nonlinear) problems, orthogonal functions, differential operators, numerical techniques, introduction to partial differential equations, applications to biology, chemistry, engineering, medicine, and physics. Prerequisites: MTH 233, 334.

MTH 540 Mathematical Theory of Interest 3(3-0)
Fundamental concepts of mathematical theory of interest and applications in calculating present and accumulated values for various streams of cash flows. Introduction to financial instruments. Prerequisite: MTH 133.

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 351 and MTH 554.

MTH 553 History of Elementary Mathematics for K-8 Teachers 3(3-0)
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 351 and MTH 554.

MTH 554 Probability and Statistics for K-8 Mathematics Teachers 3(3-0)
Examines experimental and theoretical probability and statistics suitable for elementary and middle school. Simulations, counting techniques, and data gathering, organization, analysis and presentations. Credit will not apply toward Master’s degree in mathematics. Prerequisites: MTH 256.

MTH 556 Microcomputers for Elementary Mathematics Teachers 3(3-0)
Develops the use of microcomputers in elementary education with particular emphasis on mathematical applications. Computer literacy and BASIC programming are included. Open only to those students pursuing a B.S. in Elementary Emphasis. Prerequisites: MTH 107, MTH 251.

MTH 558 Mathematics in Popular Culture 3(3-0)
This course explores how popular culture (such as television, comics, movies, music and books) portrays mathematicians and mathematics as a discipline. This course is intended for elementary education mathematics majors and minors in-service teachers. Prerequisites: MTH 152.

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 graphics 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, queuing 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 comprehensive 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 manner not included in regular mathematics education course. May be taken for credit more than once, total credit not to exceed 6 hours. Does not count as one of two 400 or 500-level courses required on mathematics major. May not be counted toward a major or minor in mathematics except for students pursuing a B.S. in Ed. degree. Prerequisite: permission of instructor.

MTH 596 Special Topics in Mathematics 1-6(Spec)
Subject manner 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 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.

MTH 619 Continuing Registration for Final Research Project 1(1-0)
A non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

MTH 623 The Theory of Groups 3(3-0)
First graduate level course in algebra. Isomorphism theorems for group, Sylow theorems, nilpotent and solvable groups, modules over principal ideal domains/ abelian groups. Prerequisites: MTH 523.

MTH 625 Theory of Associative Rings 3(3-0)
Second graduate level course in algebra. Ring theory, module theory, categories and functors, tensor products. Prerequisites: MTH 623.

MTH 632 Introduction to Real Analysis and Its Applications 3(3-0)
Development of integration theory with introduction to Lebesgue measure and integral on the real line. Elementary theory of normed spaces, bounded linear operators and linear functionals with applications. Prerequisite: MTH 532.

MTH 633 Real Variables 3(3-0)

MTH 634 Fourier Analysis 3(3-0)

MTH 636 Introduction to Complex Variables 3(3-0)
Complex numbers, analytic functions, elementary functions, Cauchy’s theorem, Integral formula, Taylor and Laurent series, residue theorem and its applications, Rouche’s theorem. Prerequisite: MTH 532.

MTH 637 Complex Variable Theory 3(3-0)
Conformal mapping, Möbius transformations, harmonic functions, Dirichlet problem, entire and meromorphic functions, analytic continuation, Riemann surfaces, applications of complex analysis. Prerequisite: MTH 636.

MTH 638 Theoretical Numerical Analysis 3(3-0)
Numerical linear algebra with applications in linear and nonlinear systems. Interpolation and approximation and their applications to numerical differentiation, numerical integration, and differential equations. Prerequisite: MTH 532. Corequisite: MTH 533.

MTH 641 Topics in Geometry 3(3-0)
Advanced topics in geometry, foundations, non-Euclidean geometry. Prerequisite: MTH 341.

MTH 644 Differential Geometry 3(3-0)
Differential geometry of curves and surfaces. Curvature, maps between surfaces, vector fields and differential forms, Stokes’ Theorem, Euler Characteristic, Gauss-Bonnet Theorem, manifolds, Riemannian metrics. Prerequisites: MTH 532 or 545.

MTH 645 Topology 3(3-0)
A continuation of MTH 545. Topics include fundamental groups, product spaces, covering spaces, and homology. Prerequisite: MTH 523, MTH 545.

MTH 651 Basic Ideas and Procedures in Elementary School Arithmetic 3(3-0)
Mathematical concepts, fundamental processes, and measurement formulas. Prerequisite: successful completion of the Elementary Teachers Proficiency Tests.

MTH 652 The Teaching of Measurement 3(3-0)
The history, concepts, and learning of measurement systems. The metric system and laboratory activities are emphasized. Prerequisite: teaching experience.

MTH 656 Teaching & Learning Mathematics with Technology 3(3-0)
Use of instructional technology for teaching and learning mathematics and an introduction to related research literature in mathematics and mathematics education. Prerequisite: MTH 546.

MTH 658 Workshop in Teaching Mathematics 1-6(Spec)
Preparing materials and investigating methods for teaching mathematics in grades K-12. May be repeated, total credit not to exceed 6 hours. Prerequisite: permission of the instructor.

MTH 661 The Teaching of Middle School Mathematics 3(3-0)
Objectives of mathematics instruction in the middle school. Prerequisite: minor in mathematics or teaching experience in middle or senior high school mathematics.

MTH 673 History of Advanced Mathematics 3(3-0)
History of the development of modern mathematics from 1700 into the 20th century. Prerequisites: MTH 525 and MTH 532.

MTH 678 Combinatorics II 3(3-0)
Finite geometries, combinatorial designs, strongly regular graphs, and error correcting codes. Prerequisite: MTH 578.

MTH 692 Graduate Seminar in Mathematics Education 1-4(Spec)
Seminars will focus on current issues in mathematics education. May be taken for credit more than once, total credit not to exceed 4 hours. 3 credits needed before it counts as elective on any graduate degree in mathematics. Prerequisites: admission to graduate program in mathematics.

MTH 693 Graduate Seminar in Mathematics and Its Applications 1-4(Spec)
One hour seminars in subfields of mathematics and its applications; 3 credits needed before it counts as elective on graduate degrees in mathematics. Prerequisites: Graduate standing in mathematics and permission of instructor.

MTH 694 Practicum in Mathematics 3(3-0)
Taken during last semester in the M.A. program. Introduces concepts of mathematical modeling using deterministic and probabilistic methods. When possible, supervised consulting work in industry. Prerequisites: MTH 623 and permission of instructor.

MTH 695 Special Topics in Mathematics Education 1-6(Spec)
Consideration of 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 696 Special Topics in Mathematics 1-6(Spec)
Consideration of 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 697 Independent Study 1-9(Spec)
Open to graduate students in mathematics with permission of instructor. May be taken for credit more than once; total credit not to exceed 9 hours.

MTH 698 Plan B Project 1-2(Spec)
Plan B paper is normally an expository paper or research project on an area or problem related to but in addition to material covered in a course, written under the direction of graduate faculty. Each Plan B project is 1 credit hour. May be taken for credit more than once. Total credit not to exceed 2 hours. CR/NC only. Prerequisites: permission of advisor.

MTH 725 Topics in Algebra 3(3-0)
Advanced topics in abstract algebra. Designed to add breadth to the student’s abstract algebra background and to open possible research areas. Prerequisites: MTH 625.

MTH 732 Functional Analysis 3(3-0)
Fundamentals of topological vector spaces, normed spaces, Banach and Hilbert spaces, functional on such spaces, operators on Banach and Hilbert spaces, spectral theorems, Banach algebras. Prerequisites: MTH 632 and MTH 636.

MTH 734 Partial Differential Equations and Applications 3(3-0)
Solutions of partial differential equations by analytic and numerical techniques using standard methods, including Fourier series and Laplace transforms, perturbation, finite elements and finite differences. Prerequisites: MTH 334 and MTH 636.

MTH 761 Methods for Teaching College Mathematics 3(3-0)
Methods in teaching undergraduate mathematics including technology use, cooperative learning, inquiry, and guided discovery. Students will create activities and discuss issues surrounding undergraduate instruction. Prerequisite: Completion of 12 hours of graduate level mathematics at CMU and admission to one of the graduate programs in the Department of Mathematics.

MTH 762 A Survey of Research in Collegiate Mathematics Education 3(3-0)
Introduction to understanding and interpreting mathematics education research, trends, and evaluation at the undergraduate level. Prerequisites: MTH 761.

MTH 763 Advanced Perspectives In Collegiate Mathematics Education 3(3-0)
Advanced perspectives in collegiate mathematics education as it relates to the areas of teaching, learning, and curriculum. Prerequisites: MTH 762 and EDU 614.

MTH 764 Qualitative Research Methods in Mathematics Education 3(3-0)
Introduction to the qualitative research in mathematics education including research design, development of protocols, fieldwork, collecting and analyzing data and techniques for interviewing. Prerequisite: MTH 763.

MTH 766 Internship: College Teaching 3-6(Spec)
Teaching of undergraduate mathematics or statistics courses 200 level or above. Students will conduct their teaching internship under the supervision of a graduate faculty member. CR/NC only. Prerequisites: MTH 761; successful completion of all qualifying examinations.

MTH 767 Seminar I in Collegiate Mathematics Education 3(3-0)
Use of a review of literature to focus research questions and to develop a research proposal. Each student develops a proposal for his/her dissertation research. Prerequisites: MTH 764.

MTH 768 Seminar in Collegiate Mathematics Education II 3(3-0)
Conduct a pilot study to collect and analyze data. The students will then develop conclusions and implications of the study. Prerequisites: MTH 767. Pre/Co-requisite: PSY 611.

MTH 778 Topics in Combinatorics 3(3-0)
Advanced topics in combinatorics. Designed to add breadth to the student’s combinatorial background and to open possible research areas. Prerequisite: MTH 678.

MTH 796 Special Topics In Mathematics 1-6(Spec)
Consideration of subject matter not included in regular courses. May be taken for credit more than once; total credit not to exceed 6 hours. Prerequisite: completion of 30 hours of coursework required for the Doctoral program.

MTH 797 Independent Study 1-9(Spec)
Open to doctoral students in mathematics who have completed 30 hours of coursework required toward the Doctoral program, with permission of the instructor. May be taken for credit more than once; total credit not to exceed 9 hours.

MTH 798 Thesis 1-6(Spec)
Work towards Master’s thesis. Prerequisites: Graduate status and permission of thesis advisor. CR/NC only.

MTH 898 Dissertation 1-30(Spec)
Doctoral Dissertation Research. CR/NC only. Prerequisites: Doctoral status and permission of dissertation advisor.

Course Descriptions: STA

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 257; 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 is approved for offering in a distance learning format. Prerequisites: STA 282 or STA 382; or graduate standing.

STA 580 Applied Statistical Methods I 3(3-0)
Applications of statistical methods including the usage of computer packages. Topics include forecasting, simple and multiple regression, and analysis of variance. This course is approved for offering in a distance learning format. Prerequisites: STA 282 or STA 382; 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. Prerequisite: STA 382.

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. Prerequisites: STA 382.
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)
Principles 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 382.

STA 589 Time Series Forecasting 3(3-0)
Introduction to basis timer series forecasting techniques. Topics include forecasting, Box-Jenkins models, time series regression, exponential smoothing, and transfer function models. Prerequisites: 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)
Supervised data mining techniques for analyzing large and high dimensional data. Topics include data mining strategy, data processing, predictive modeling techniques, model assessment and comparison. This course has been approved for offering in a distance learning 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 improvements. Topics include DMAIC and PDSA strategies and applications, tools and statistical techniques used in the strategies. Prerequisites: STA 282 or 382; 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 six hours. Prerequisite: permission of the instructor.

STA 597 Independent Study 1-9(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 nine hours. Prerequisites: Permission of instructor.

STA 684 Theory of Estimation 3(3-0)
Theory of point estimation in Euclidean sample spaces. Topics include unbiasedness, equivariance, global properties, large-sample theory, and asymptotic optimality. Prerequisites: STA 684; MTH 632.

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STA 687 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 688 Sampling Techniques 3(3-0)
Principles 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 382.

STA 689 Time Series Forecasting 3(3-0)
Introduction to basis timer series forecasting techniques. Topics include forecasting, Box-Jenkins models, time series regression, exponential smoothing, and transfer function models. Prerequisites: STA 580.

STA 690 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 691 Data Mining Techniques I 3(3-0)
Supervised data mining techniques for analyzing large and high dimensional data. Topics include data mining strategy, data processing, predictive modeling techniques, model assessment and comparison. This course has been approved for offering in a distance learning format. Prerequisites: STA 580 or graduate standing.

STA 692 Six Sigma: Foundations and Techniques for Green Belts 3(3-0)
Six Sigma problem solving strategy for continuous improvements. Topics include DMAIC and PDSA strategies and applications, tools and statistical techniques used in the strategies. Prerequisites: STA 282 or 382; or graduate standing.

STA 696 Special Topics in Statistics 1-6(Spec)
Subject matter not included in regular courses. Course may be taken for credit more than once, total credit not to exceed six hours. Prerequisites: Graduate student status and permission of instructor.

STA 697 Independent Study 1-9(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 nine hours. Prerequisites: Permission of instructor.

STA 782 Generalized Linear Models 3(3-0)
Theory and applications of generalized linear models, models for continuous data, models for binary and polytomous data, log-linear models, quasi-likelihood functions and model checking. Prerequisite: STA 682.

STA 784 Theory of Estimation 3(3-0)
Theory of point estimation in Euclidean sample spaces. Topics include unbiasedness, equivariance, global properties, large-sample theory, and asymptotic optimality. Prerequisites: STA 684; MTH 632.

STA 787 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 797 Independent Study 1-9(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 nine hours. Prerequisites: Permission of instructor.

STA 782 Generalized Linear Models 3(3-0)
Theory and applications of generalized linear models, models for continuous data, models for binary and polytomous data, log-linear models, quasi-likelihood functions and model checking. Prerequisite: STA 682.

STA 784 Theory of Estimation 3(3-0)
Theory of point estimation in Euclidean sample spaces. Topics include unbiasedness, equivariance, global properties, large-sample theory, and asymptotic optimality. Prerequisites: STA 684; MTH 632.

STA 797 Independent Study 1-9(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 nine hours. Prerequisites: Permission of instructor.
College of Medicine (MED)

Ernest L. Yoder, M.D., Ph.D., MACP, Founding Dean
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Wayne Albrecht, Assistant Dean/Administration and Facilities, M.S.A., Central Michigan University

Deborah Biggs, Associate Dean/Administration & Finance; J.D., Thomas M. Cooley Law School

Kevin Karbowksi, Assistant Dean/Faculty Group Practice, M.H.S., University of Michigan

Sean K. Kesterson, Associate Dean/Clinical Affairs & Hospital Relations and Chief Medical Officer; M.D., Ohio State University; FACP

Joel H. Lanphear, Senior Associate Dean/Educational Programs, Ph.D., Michigan State University

J.D. McBrayer, Assistant Dean/Finance, B.S., Central Michigan University

Linda Perkowski, Associate Dean/ Medical Education, Ph.D., University of Texas Medical Branch in Galveston Texas

Ernest L. Yoder, Founding Dean; M.D., Ph.D., Wayne State University; MACP

Disciplines

Foundation Sciences
Edward E. McKee, Chair
CMED 2427; 989-774-7861

W. Robert Fleischmann, Ph.D., Virology, Immunology, Development of Cancer Vaccines

Daniel P. Griffin, Ph.D., Gene Expression, Development of Cancer Vaccines

Leaden Hickman, Ph.D., Epidemiology, Cardiovascular Disease and Clinical Outcomes

Edward E. McKee, Ph.D., Mitochondrial Toxicity of Antibiotics, Anti-Virals, and Anti-Cancer agents, Mitochondrial Biogenesis

Janet M. Miller, Ph.D., Brain Development, Genetics of Hydrocephalis, Protein Therapeutics

Julien Rossignol, Ph.D., Neurodegenerative Diseases, Brain Trauma, Stem Cell Therapeutics

Medical Sciences
Ronald Bradley, D.O., Psychiatry

Joe-La Dowdy, D.O., Obstetrics and Gynecology

Osama Elsabagh, M.D., Pediatrics

Daniel Elsholz, M.D., Internal Medicine

Sreeram Gonnalagadda, M.D., Family Medicine

Bala Grandhi, M.D., Internal Medicine

Theresa Guinther, D.O., Pediatrics

Marilyn Haupt, M.D., Internal Medicine

Ronald Hazen, M.D., Geriatrics

Christian Jacobus, M.D., Emergency Medicine

Sean Kesterson, M.D., Internal Medicine

Maria Klahre, M.D., Family Medicine

Shirley Layko, M.D., Obstetrics and Gynecology

Rosalyn Miller, D.O., Obstetrics and Gynecology

Imran Mir, M.D., Internal Medicine

Lourdes Morales-Dopico, M.D., Pediatrics

William Morrone, D.O., Family Medicine

Bernard Noveleso, M.D., Family Medicine

Sunil Parashar, M.D., Psychiatry

Linda Perkowski, Ph.D., Medical Education

Elizabeth Palmer, M.D., Family Medicine

Robert Satonik, M.D., Emergency Medicine

Renee Sundstrom, D.O., Obstetrics and Gynecology

Suneel Vallabhaneni, M.D., Internal Medicine

Steve Vance, M.D., Emergency Medicine

Vivek Variar, M.D., Internal Medicine

Mary Jo Wagner, M.D., Emergency Medicine

Noel Wagner, M.D., Emergency Medicine

Ernest L. Yoder, M.D., Ph.D., M.A.C.P., Internal Medicine

Surgical Sciences
Lori Alvord, M.D., General Surgery

Peter Bistolarides, M.D., General Surgery

Sandra Howell, M.D., General Surgery

Aziz Merchant, M.D., General Surgery

Doctor of Medicine (M.D.)

Minimum Totals for Graduation: 231 hours

The Central Michigan University College of Medicine (CMED) curriculum is aimed at creating an innovative, inquiry-based educational program which is integrated, individualized, sustains life-long engagement and embodies the values of the profession. This competency- based curriculum balances formal instruction with clinical training across the continuum of the fully integrated curriculum. At the successful completion of the four-year professional program, the student will receive the Doctor of Medicine degree (MD). CMED will take a holistic approach to admissions. We seek to admit students who have personal characteristics and interests that align with CMED’s mission to prepare physicians focused on improving access to high quality health care in rural and medically underserved areas in Michigan. The holistic process includes measuring a student’s cognitive capabilities, past experiences and personal attributes.

Admission Requirements, Retention & Termination Standards
Students should access the most current information directly from the CMU College of Medicine website (www.cmich.edu/med).

Required Courses - Year I (63 hours)
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)
Required Courses - Year II (56 hours)
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)

Required Courses - Year III (64 hours)
MED 880 - Longitudinal Integrated Ambulatory/In-patient Clerkships 64(Spec)

Required Courses - Year IV (48 hours)
MED 980 - In-Patient Based Clerkships 48(Spec)

Total: 231 semester hours

Note: MED 600, 610, and 620 are to be delivered longitudinally across the first two years of the CMED curriculum. Total credit hours per year reflect half of the total of each of these courses. Example: MED 600 (9 hours) - includes 4.5 hours in Year I total of 63 and 4.5 hours in Year II total of 56.

Course Descriptions: MED
MED 600 - Society & Community Medicine 9(Spec)
Integrates population and public health concepts with individual and community needs, health, and healthcare access, providing essential context for ethical, cultural, legal and organizational concepts. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 610 - Essentials of Clinical Skills 17(Spec)
An integrated clinical, diagnostic, and therapeutic skill development course. Emphasis is placed on history-taking, physical examination, and diagnostic skills presented by body system. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 620 - The Art of Medicine 9(Spec)
Explores foundational elements of professionalism, ethics, humanities and self-care in the medical profession. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 630 - Foundational Sciences of Medicine: Wellness and Disease 18(Spec)
Builds a knowledge base of the basic science mechanisms underlying wellness and disease that are presented in subsequent courses. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 640 - Reproductive/Human Development: Wellness and Disease 8(Spec)
Provides the basic and clinical sciences knowledge and learning experiences required to understand wellness and disease mechanisms for the human development and reproductive system. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 650 - Cardiopulmonary: Wellness and Disease 10(Spec)
Develops the basic and clinical sciences knowledge base required for understanding mechanisms underlying wellness and diseases of the cardiopulmonary system. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 660 - Renal/Endocrine: Wellness and Disease 10(Spec)
Develops the basic and clinical sciences knowledge base required for understanding mechanisms underlying wellness and diseases of the renal and endocrine systems. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 740 - Neurosciences and Behavior: Wellness and Disease 10(Spec)
Provides instruction on the basic structure and function of the nervous system and a clinical foundation required for examination and treatment of its disorders. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 750 - Musculoskeletal/Dermal: Wellness and Disease 8(Spec)
Develops the basic and clinical sciences knowledge base required for understanding mechanisms underlying wellness and diseases of the musculoskeletal and dermal systems. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 760 - Gastrointestinal: Wellness and Disease 8(Spec)
Provides the basic and clinical sciences knowledge and learning experiences required to understand wellness and disease mechanisms for the gastrointestinal system. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 770 - Hematology/Oncology: Wellness and Disease 8(Spec)
Develops the basic and clinical sciences knowledge base required for understanding mechanisms underlying wellness and diseases of the hematologic system. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 780 - SYNAPSE 4(Spec)
A course providing a review of curriculum to date and a transition to the clinical experiences in the third and fourth years. CR/NC only. Prerequisite: Admission to the College of Medicine.

MED 880 - Longitudinal Integrated Ambulatory/In-patient Clerkships 64(Spec)
Teaches basic competencies of family medicine, pediatrics, internal medicine, psychiatry, obstetrics and gynecology and surgery pertinent to the longitudinal ambulatory and hospital care of patients. CR/NC only. Prerequisites: MED 770 and End-of-Year II Cumulative Assessment.

MED 980 - In-Patient Based Clerkships 48(Spec)
Teaches basic competencies, in a hospital setting, of emergency room; hospital medicine; advanced level of surgery and medical sub-specialties and provides five individually focused experiences. CR/NC only. Prerequisites: MED 880, cumulative year III assessment; and successfully passing United States Medical Licensure Examination Step I and II.
Master of Music (M.M.)
Minimum Totals for Graduation: 30 - 36 hours

Admission Requirements, Retention & Termination Standards

Admission
In addition to university requirements for graduate admission, applicants for the Master of Music degree must meet the following requirements in the School of Music:
1. Applicants must have an appropriate music degree of at least 40 semester hours and a grade point average of 3.0 or better in undergraduate music studies.
2. Applicants must submit three letters of recommendation and a writing example (e.g., term paper from undergraduate studies) to the School of Music.
3. Additional admission requirements for each concentration are as follows:
   - Composition applicants must submit a portfolio of their compositions accompanied by a CD recording.
   - Conducting applicants must submit a VCR or DVD of their conducting.
   - Music Education applicants must have a music education degree or a major with at least 40 hours in music.
   - Performance applicants must audition with the appropriate faculty member or performance area.
   - Piano Pedagogy applicants must audition with the appropriate keyboard faculty member and submit a video of their teaching.
4. Any exceptions to the above requirements must be approved by the School of Music Graduate Committee.

Program Requirements
1. Each candidate will develop a program of studies in consultation with a school graduate advisor.
2. Candidates for the Master of Music degree must pass a comprehensive examination. Comprehensive exams may be taken a maximum of three times.
3. Credit earned in courses taken to remove deficiencies will not apply toward the graduate degree.
4. Candidates for the Master of Music degree must complete the Music Core and the requirements of one of the concentrations.
5. Candidates for the Master of Music: Music Education concentration must have completed certification requirements before graduation.

Degree Requirements
Core Courses (12 hours)
MUS 791 - Introduction to Music Research 3(3-0)
Plus:
• 3-6 hours in Music Theory
• 3-6 hours in Music History/Literature
These courses selected in consultation with an advisor.

Concentrations
Select one of the following options:

Music: Composition
Required Courses (12 hours)
MUS 701 - Advanced Composition 2-6(Spec)
MUS 798 - Thesis 1-6(Spec)
   Note: 8 hours of MUS 701; 4 hours of MUS 798.
Electives (6 hours)
Participation in conducted or coached ensembles is recommended (6 hours)
Total: 30 semester hours
Music: Conducting
Required Courses I (6 hours)
- Select one of the following:
  MUS 781 - Advanced Choral Conducting 3-6(Spec)
  MUS 782 - Advanced Instrumental Conducting 3-6(Spec)
Required Courses II (2-3 hours)
- Select one of the following:
  MUS 512 - Choral Literature II (Since 1750) 2(2-0)
  MUS 784 - Instrumental Rehearsal Techniques 3(3-0)
Required Course III (4 hours)
- MUS 799 - Recital 4(Spec)
Electives (5-6 hours)
- Participation in conducted or coached ensembles is recommended.
Total: 30 semester hours

Music: Music Education
Required Courses (6 hours)
- MUS 731 - Curriculum Design in Music Education 3(3-0)
- MUS 732 - History and Philosophy of Music Education 3(3-0)
Electives (12 hours)
- 12 hours selected in consultation with an advisor:
  - 6 hours of Pedagogy Electives
  - 6 hours of Music Electives (Participation in conducted or coached ensembles is recommended.)
Total: 30 semester hours

Music: Performance
Required Courses (13 hours)
- An Applied Major Area (8 hours) plus:
  - MUS 780 - Performance Ensembles 1-2(Spec)
  - MUS 799 - Recital 4(Spec)
- Note: 1 hour of MUS 780.
Electives (5 hours)
- Music electives selected in consultation with an advisor.
Total: 30 semester hours

Music: Piano Pedagogy
Required Courses (24 hours)
- MUS 607 - Basic Skills in Music Technology I 2(2-0)
- 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 - Internship in Piano Pedagogy 3(2-2)
- MUS 752 - Piano 1-8(Spec)
- MUS 799 - Recital 4(Spec)
- Note: 6 hours of MUS 752.
Total: 36 semester hours

Course Descriptions: MUS
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 Contemporary Compositional Techniques 2(2-0)
Compositional techniques from 1945 to the present, with particular attention paid to electronic music. Prerequisites: MUS 202, MUS 309, and admission to Music candidacy; or graduate standing in Music program.
MUS 505 Seminar In Analysis: Twentieth-Century Music 2-4(Spec)
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 2(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 Keyboard Literature 2(2-0)
Keyboard music from the sixteenth century to and including Beethoven.
MUS 516 Survey of Keyboard Literature II 2(2-0)
Piano music from Mendelssohn and Schubert to the present.
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 Orff’s Music for Children. Prerequisite: Admission to Music candidacy or MUS 330 or admission to graduate music program.
MUS 532 Dalcroze Eurhythmics 2(1-2)
Introduction to the music teaching concepts of Jaques-Dalcroze. Prerequisite: Admission to Music candidacy or MUS 330 or admission to graduate music program.
MUS 533 Kodaly Pedagogy 2(1-2)
Theory, materials, and pedagogy of the Kodaly method of music education. Prerequisite: MUS 333 or MUS 435 or admission to the graduate music program.
MUS 534 Music for Pre-School Children 2(2-0)
Musical activities for the preschool child designed to nurture musical potential and promote musical awareness.
MUS 535 Workshop in Music Education 1-4(Spec)
MUS 540 Organ Pedagogy Practicum 2(2-0)
Supervised experience in teaching the organ. Prerequisite: Admission to Music candidacy and MUS 151 or MUS 351; or admission to the graduate music program.
MUS 552 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: Admission to music candidacy or admission to the graduate music program and permission of instructor.
MUS 581 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 Studies 1-6(Spec)
MUS 607 Basic Skills in Music Technology I 2(2-0)
Develop skills and strategies for using electronic instruments with notation and sequencing software in music teaching. Prerequisite: Admission to the graduate music program.
MUS 608 Basic Skills in Music Technology II 2(2-0)
Develop skills and methods using instructional software, digital media, and the Internet in the music classroom. Prerequisite: Admission to the graduate music program.

MUS 619 Continuing Registration for Final Research Project 1(1-0)
An non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements. Prerequisite: Admission to the graduate music program.

MUS 620 Jazz Harmony and Analysis 3(3-0)
Advanced study of jazz harmony focusing on tonal and modal music. Prerequisite: Admission to the graduate music program.

MUS 621 Jazz Improvisation Pedagogy and Practicum 2(1-2)
Develops the skills, methods, and materials necessary to teach jazz improvisation through observation, research and teaching. Prerequisite: Admission to the graduate music program; MUS 620.

MUS 622 Modern Jazz History 3(3-0)
A course in modern jazz history designed for graduate music students that covers important styles and figures in the jazz genre since 1940. Prerequisite: Admission to the graduate music program.

MUS 624 Jazz Pedagogy 3(2-2)
A course designed to enhance skills in the teaching of jazz as a performing art and as a historically significant cultural event. Prerequisite: admission to the graduate music program.

MUS 631 Advanced Piano Pedagogy I 3(3-0)
Introduction to elementary through early intermediate piano teaching methods, materials, and technology for the independent piano instructor. Prerequisite: admission to the graduate music program.

MUS 632 Advanced Piano Pedagogy II 3(3-0)
Intermediate to early advanced piano teaching methods and materials. Prerequisite: Admission to the graduate music program and MUS 631.

MUS 633 Class Piano Pedagogy 3(3-0)
Materials and teaching techniques for group piano teaching at the pre-college and college levels. Prerequisite: Admission to the graduate music program and MUS 631 and MUS 632.

MUS 634 Internship in Piano Pedagogy 3(2-2)
Supervised experience in teaching piano at the pre-college and college levels in both the private and group setting. Prerequisite: Admission to the graduate music program and MUS 631, MUS 632, MUS 633.

MUS 701 Composition 2-8(Spec)
Graduate applied study of music composition. Prerequisite: Admission to the graduate music program.

MUS 707 Analytical Styles I: Medieval-Classical 3(3-0)
Detailed analysis of selected representative works from the Medieval era through the Classical period. Prerequisite: admission to the graduate music program.

MUS 708 Analytical Styles II: 19-20th Century 3(3-0)
Detailed analysis of selected representative works from the Romantic period through the twentieth century. Prerequisite: admission to the graduate music program.

MUS 711 Choral Literature from 1600 to 1750 3(3-0)
A survey of choral literature from 1600 to 1750. Prerequisite: admission to graduate music program (music major status not required).

MUS 714 Wind Band Literature 3(3-0)
A survey of wind band literature and its evolution from 1500 to present. Prerequisite: admission to the graduate music program.

MUS 715 Rock 'n Roll Seminar 3(3-0)
Traces the roots of rock, surveys the various types of rock, and provides in-depth analysis of the music. This course may be offered in an online or hybrid format. Prerequisite: admission to graduate music program (music major status not required).

MUS 717 Historical Topics I: Medieval - Classical 3(3-0)
Examination of selected topics in the history of music from the Medieval era through the Classical period. Prerequisite: admission to the graduate music program.

MUS 718 Historical Topics II: 19-20th Century 3(3-0)
Examination of selected topics in the history of music from the Romantic period through the twentieth century. Prerequisite: admission to the graduate music program.

MUS 719 Seminar in World Music 3(3-0)
A survey of selected musical cultures from around the world, with an emphasis on the study of music in its broader cultural context. Music major status not required.

MUS 731 Curriculum Design in Music Education 3(3-0)
Examination of contemporary practices and methods for developing appropriate curricula for K-12 music programs. Prerequisite: admission to the graduate music program.

MUS 732 History and Philosophy of Music Education 3(3-0)
Examines the history of music education in the United States and philosophical bases for teaching music. Provides a rationale for a comprehensive music education program. Prerequisite: admission to the graduate music program.

MUS 733 Woodwind Pedagogy 3(3-0)
Advanced study of pedagogical methodologies and materials for woodwind instruments. Prerequisite: MUS 335.

MUS 734 Brass Pedagogy 3(3-0)
Advanced study of pedagogical methodologies and materials for brass instruments. Prerequisite: admission to the graduate music program.

MUS 735 Percussion Pedagogy 3(3-0)
Advanced study of pedagogical methodologies and materials for percussion instruments. Prerequisite: admission to the graduate music program.

MUS 736 String Pedagogy 3(3-0)
Advanced study of pedagogical methodologies and materials for string instruments. Prerequisite: admission to the graduate music program.

MUS 750 Voice 1-8(Spec)
Audition required. Prerequisite: admission to the graduate music program.

MUS 751 Organ 1-8(Spec)
Individualized program of applied studio instruction in organ performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 752 Piano 1-8(Spec)
MUS 753 Violin and Viola 1-8(Spec)
MUS 755 Violoncello 1-8(Spec)
MUS 757 String Bass 1-8(Spec)
Individualized program of applied studio instruction in string bass performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. Prerequisite: admission to the graduate music program.

MUS 760 Harpsichord 1-8(Spec)
Study of solo harpsichord repertoire, continuo and ensemble playing, and figured bass. Prerequisite: admission to the graduate music program.
MUS 761 Flute 1-8(Spec)
Individualized program of applied studio instruction in flute performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 763 Oboe 1-8(Spec)
MUS 765 Clarinet 1-8(Spec)
Individualized program of applied studio instruction in clarinet performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 767 Bassoon 1-8(Spec)
Individualized program of applied studio instruction in bassoon performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 769 Saxophone 1-8(Spec)
Individualized program of applied studio instruction in saxophone performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 771 Trumpet 1-8(Spec)
Individualized program of applied studio instruction in trumpet performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 773 French Horn 1-8(Spec)
MUS 775 Trombone 1-8(Spec)
Individualized program of applied studio instruction in trombone performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 777 Euphonium 1-8(Spec)
Individualized program of applied studio instruction in euphonium performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; Successful completion of music audition.

MUS 778 Tuba 1-8(Spec)
Individualized program of applied studio instruction in tuba performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 779 Percussion 1-8(Spec)
Individualized program of applied studio instruction in percussion performance focusing on technique, musicianship, literature, and performance practice at the professional artist level. The course is repeatable. Prerequisites: Admission to the Graduate Music Program; successful completion of music audition.

MUS 780 Performance Ensembles 1-2(Spec)
CR/NC only. Prerequisite: admission to the graduate music program.

MUS 781 Advanced Choral Conducting 3-6(Spec)
Advanced rehearsal and conducting techniques for the choral director. Prerequisite: admission to the graduate music program.

MUS 782 Advanced Instrumental Conducting 3-6(Spec)
Advanced score preparation and conducting techniques for instrumental music educators and conductors. Prerequisites: Admission to the Graduate Music Program; Successful completion of music audition.

MUS 784 Instrumental Rehearsal Techniques 3(3-0)
Pedagogical techniques for the musical preparation of instrumental ensembles. Prerequisite: admission to the graduate music program.

MUS 790 Independent Study 1-9(Spec)
Student-initiated study guided by faculty member or faculty committee. Repeatable up to nine hours when content does not duplicate previous independent studies. Prerequisites: Admission to the School of Music graduate program.

MUS 791 Introduction to Music Research 3(3-0)
An overview of scholarly research techniques in music. Prerequisite: admission to the graduate music program.

MUS 793 Research Project in Music Education 2(Spec)
Qualitative, quantitative, or action research coordinated with a music education faculty member. Prerequisites: Admission to the graduate music program.

MUS 795 Psychology of Music Teaching and Learning 3(3-0)
Psychological foundations of music instruction, perception, response, and learning. Prerequisite: admission to the graduate music program.

MUS 797 Special Studies 1-6(Spec)
Appropriate title to be listed when offered. prerequisite: admission to the graduate music program.

MUS 798 Thesis 1-6(Spec)
CR/NC only.

MUS 799 Recital 4(Spec)
Preparation and performance of a juried public recital. Prerequisites: Admission to the graduate music program.

Applied Music (Private Instruction)
Students may earn credit for private instruction in the various areas of applied music as follows:

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Hours Credit</th>
<th>Maximum Hours</th>
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</thead>
<tbody>
<tr>
<td>In Each Area</td>
<td>Applicable Toward</td>
<td>Graduation</td>
</tr>
<tr>
<td>Master of Music</td>
<td>1-8</td>
<td>8</td>
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<tr>
<td>Master of Arts</td>
<td>1-2</td>
<td>4</td>
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<tr>
<td>(Music concentration)</td>
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</tbody>
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There is a special fee of $40.00 for one-credit-hour lessons and $75.00 for two- and four-credit-hour lessons. This fee is in addition to the regular tuition fees.
Department of Philosophy and Religion (PHL, REL)
College of Humanities and Social & Behavioral Sciences

Guy M. Newland, Chairperson
102 Ansprech (989) 774-3793
James B. Coleman, Ph.D., Ethics
Gary Fuller, B.L Lit., Philosophy of Mind
Hugh T. Halman, Ph.D., Islam
Roger D. Hatch, Ph.D., Religion and Society
Hope May, Ph.D., Ancient Philosophy
John Meixner, Ph.D., Philosophy of Science, Logic
Marilyn M. Mowrey, Ph.D., Ethics and Feminist Thought
Guy M. Newland, Ph.D., History of Religions, Tibetan Buddhism
Robert Noggle, Ph.D., Ethics
William W. Reader, Th.D., Biblical Studies, Greek
Mark Shelton, Ph.D., Ethics
David L. Smith, Ph.D., Modern Religious Thought
Greg Spinner, Ph.D., Judaism, History of Religions
Robert Stecker, Ph.D., Aesthetics
John Wright, Ph.D., History of Modern Philosophy 18th Century

Course Descriptions: PHL
PPHL 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. Prerequisites: 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: permission of instructor.

Course Descriptions: REL
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.
REL 642 African-American Sacred Song 3(3-0)
Study of nature and function of African-American sacred singing from spirituals to contemporary gospel. Singing will be examined in historical context with varied theoretical approaches. Prerequisites: a Bachelor's degree from an accredited college. No prior knowledge of music theory required.

Department of Physical Education and Sport (PES, PED)
The Herbert H. and Grace A. Dow College of Health Professions

Scott J. Smith, Chairperson
Health Professions Building 2234; (989) 774-2859
E-mail: Scott.J.Smith@cmich.edu

H. Ray Allen, Ph.D., Pedagogy
Gary W. Arbogast, Ph.D., Pedagogy and Curriculum
Judy P. Chandler, Ph.D., Special Physical Education
Janet S. Helfrich, Ed.D., Motor Learning, Sport Psychology, Elementary Physical Education, Coaching
Marcia J. Mackey, Ph.D., Sport Management
Vincent E. Mumford, Ed.D., Sport Management
Tracy W. Olrich, Ph.D., Motor Learning, Psychology of Sport
Jenifer E. Thorn, Ph.D., Pedagogy

The Department of Physical Education and Sport offers a Master of Arts in Physical Education with concentrations in teaching, athletic administration, exercise science, and coaching and a Master of Arts in Sport Administration.

Master of Arts (M.A.) in Physical Education

Minimum Totals for Graduation: 30 hours

- Students pursuing this degree must complete a minimum of 30 credit hours.
- Each option includes a required core of courses, specialization courses, and elective and cognate courses. The student must complete a required core. Credit hours in the core vary depending on whether a thesis (6 credits) or independent study (3 credits) is selected.

The Athletic Administration Option is designed to prepare the student for a career in collegiate, high school, or community sport administration through theoretical and practical experiences. Practicum experiences and an off-campus internship with a local education agency, university, or a sport organization of the student's choice supplement student coursework.

The Coaching Option is designed to prepare the student for a career in coaching athletics at the interscholastic or intercollegiate levels. The program is flexible and designed to provide both theoretical and practical experience.

The Teaching Option is designed to further the preparation of the student interested in teaching physical education. Primary emphasis is placed on preparing the student to analyze and implement the teaching and curricular process in physical education.

Admission Requirements, Retention & Termination Standards

To be considered for admission to the Master of Arts in Physical Education degree program, a student must meet the general requirements for admission to the CMU College of Graduate Studies. In addition, applicants for the MA in Physical Education must submit the official GRE results and a resume along with all other application materials. Based upon the undergraduate GPA, GRE results, resume, and professional experience, the candidate may be accepted as a regular or conditional student. For regular admission, the minimum undergraduate GPA must be 3.0 or higher on a 4.0 scale.

To be assured consideration for admittance, all application materials must be received by the following deadlines: April 1 for fall semester, August 1 for spring semester, and February 1 for summer sessions.
Physical Education and Sport

Athletic Administration - To be admitted to this program, prior work in physical education is recommended but is not required.
Coaching - To be admitted to this program, prior work in physical education is recommended but is not required.
Teaching - To be admitted to this program, a student must present 20 or more hours of physical education or related courses, of which 15 hours must be professional preparation physical education courses.

Degree Requirements
Core Courses (12-15 hours)
Note: These core courses are required for students in Athletic Administration, Coaching, or Teaching.
Core Courses I (9 hours)
PES 610 - Philosophy of Physical Education and Sport 3(3-0)
PES 670/HSC 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)
Core Courses II (3 - 6 hours)
Select either Plan A: Thesis or Plan B: Independent Study from the following:
PES 691 - Independent Study 3(Spec)
PES 698 - Thesis 1-6(Spec)

Concentration
Select one of the following:
Option I - Physical Education: Teaching
Core Courses (12-15) (see above)
Required Courses (6 hours)
PES 607 - Physical Education Curriculum Analysis 3(3-0)
PES 615 - Analysis of Teaching in Physical Education 3(3-0)
Electives (9 -12 hours)
Select electives in consultation with an advisor
Total: 30 semester hours
Note: See additional requirements at the end of this section.

Option 2 - Physical Education: Athletic Administration
Core Courses (12-15) (see above)
Required Courses (12 hours)
PES 603 - Administration of Sport and Physical Education 3(3-0)
PES 640 - Sport and the Law 3(3-0)
PES 650 - Sport Marketing 3(3-0)
PES 699 - Internship in Sport Administration 3-6(Spec)
Electives (3 - 6 hours)
Select electives in consultation with an advisor
Total: 30 semester hours
Note: See additional requirements at the end of this section.

Option 3 - Physical Education: Coaching
Core Courses (12-15) (see above)
Required Courses (9 hours)
Select from the following:
PES 560 - Principles and Foundations of Coaching 3(3-0)
PES 606 - Motor Learning and Human Performance 3(3-0)
PES 611 - Psychology of Sport 3(3-0)
PES 620 - Sport - An Interdisciplinary Study 3(3-0)
Electives (6-9 hours)
Select hours in consultation with an advisor.
Total: 30 semester hours
Note: See additional requirements at the end of this section.

Additional Requirements:
1. An oral examination in the field of specialization may be given at the discretion of the department. The department reserves the right to administer a comprehensive examination after the completion of approximately 20 hours of course work as a tool to secure information to be used in counseling the student toward the completion of the selected program.
2. Students must consult with an advisor prior to taking a 500-level course.
3. Students must present 20 or more semester hours of classes at or above 600-level for this degree.
4. A maximum of six hours of credit in practicum, field study, and internship courses may be applied toward the completion of this degree program.
5. Individualized graduate programs for specific areas of interest such as Special Physical Education may be arranged in consultation with an advisor and with the Graduate Coordinator's approval.

Master of Arts (M.A.) in Sport Administration
Minimum Totals for Graduation: 36 hours
This is a 36-hour graduate program designed specifically to meet the National Association for Sport and Physical Education-North American Society for Sport Management standards for accreditation.

The master's degree in sport administration is designed to prepare the student for a career in administration in a sport-related field. The program is flexible and designed to provide both theoretical and practical experience that will meet the needs and interests of the individual.

Admission Requirements, Retention & Termination Standards
Admission
To be considered for admission to the Master of Arts in Sport Administration degree program, a student must meet the general requirements for admission to the CMU College of Graduate Studies.

In addition, the applicants for the MA in Sport Administration must submit three letters of recommendation, and a resume, along with all other application materials. Based upon the undergraduate GPA, resume, professional experience, and the three letters of recommendation, the candidate may be accepted for regular or conditional admission. For regular admission, the minimum undergraduate GPA must be 3.0 or higher on a 4.0 scale.

Degree Requirements
Required Courses (30-36 hours)
Required Courses I
PES 602 - Sport Management: Theory & Application 3(3-0)
PES 603 - Administration of Sport and Physical Education 3(3-0)
PES 625 - Facilities for Sport and Physical Education 3(3-0)
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 670/HSC 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 699 - Internship in Sport Administration 3-6(Spec)

(Continued)
Required Courses II
Select one of the following in consultation with an advisor:
PES 691 - Independent Study 3(Spec)
PES 698 - Thesis 1-6(Spec)

Electives (0-6 hours)
These courses will be selected from Educational Leadership, Communication, Management, Marketing, Physical Education and Sport, etc.

Total: 36 semester hours

Master of Science in Administration (M.S.A.)

Concentration in Sport Administration
The Master of Science in Administration Program requires 36 Credit Hours of graduate study. The MSA program provides students with the fundamental principles required for successful sport administrative careers in the public, private, or nonprofit sectors.

The required core courses of the MSA program (15-21 Credit Hours) provide a comprehensive overview of organizational and human relationships and the administrative mechanisms through which to make sound analytical judgments and decisions.

The Sport Administration concentration (15-18 Credit Hours) provides specific skills required for administrators of college, professional, or commercial sport.

Please go to page 208 for concentrations or to https://centrallink.cmich.edu/academics/grad_studies/GSMasterofScienceInAdministration/Pages/default.aspx

Course Descriptions: PES
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. Recommended: PES 143.
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. 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 CoachesAdvance 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.
PES 602 Sport Management: Theory & Application 3(3-0)
An introduction to the theoretical basis of sport management combined with supervised experiences in sport event management. Credit may not be earned in both PES 602 and PES 690. Prerequisites: Graduate student accepted in the MA in Physical Education Option 2: Athletic Administration, MA in Sport Administration, or MSA - Sport Administration concentration.
PES 603 Administration of Sport and Physical Education 3(3-0)
A study of administrative techniques and administrative problems related to sport and physical education.
PES 606 Motor Learning and Human Performance 3(3-0)
Factors that make for successful motor performance, including learning theory, distribution and type of practice, developmental factors, and psychological factors.
PES 607 Physical Education Curriculum Analysis 3(3-0)
Students will be provided a framework for improving and analyzing K-12 programs. Planning, implementing, improving, and redesigning curricula will be emphasized.
PES 610 Philosophy of Physical Education and Sport 3(3-0)
Philosophical foundations underlying physical education and sport with particular emphasis upon the development of a consistent and rational professional philosophy.
PES 611 Psychology of Sport 3(3-0)
The psychological dimension in sport as it pertains to the athlete, the coach, and the spectator; the latest psychological findings dealing with the relationship between individuals and sport.
PES 615 Analysis of Teaching in Physical Education 3(3-0)
A comprehensive review and analysis of teaching functions and processes with a particular emphasis on how to improve the instructional behaviors of physical educators.
PES 619 Continuing Registration for Final Research Project 1(1-0)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.
PES 620 Sport - An Interdisciplinary Study 3(3-0)
An interdisciplinary study in sport in America through an examination of the historical, sociological, and philosophical principles of play, sport, games, and athletics.
PES 625 Facilities for Sport and Physical Education 3(3-0)
Basic planning principles from which guidelines to planning facilities can be established. Visitation to various state facilities.
PES 631 Physiology of Exercise 4(3-2)
Physiological basis of human movement and its application to physical training and performance. Identical to HSC 631. Credit may not be earned in more than one of these courses.
PES 640 Sport and the Law 3(3-0)
Provides the entering professional with a practical and theoretical application of U.S. law to the sport industry. Prerequisite: PES 670 or HSC 670.
PES 645 Financial Management of Sport 3(3-0)
Application of the fundamental concepts and theories of finance to the field of sport management.

PES 650 Sport Marketing 3(3-0)
Provides a practical and theoretical application of marketing science to all realms of the sport industry. It is also a basic course in a sequence of core courses taken to complete an MSA degree with a concentration in Sport Administration.

PES 660 Biomechanics 3(3-0)
Study of biological and mechanical aspects of biomechanics including the techniques of visual and cinematographic analysis.

PES 670 Research Methods for Physical Education and Sport, Health, and Recreation 3(3-0)
Basic research methods and techniques essential in performing and interpreting scientific studies. Recommended: 6 hours of graduate course work completed prior to enrollment. Identical to HSC 670. Credit may not be earned in more than one of these courses.

PES 672 Statistics for Physical Education and Sport, Health and Recreation 3(3-0)
Basic descriptive and inferential statistical concepts and techniques commonly encountered in professional literature and essential to teaching and research.

PES 690 Practicum 1-4(Spec)
To give the student professional experience of a supervisory or administrative nature in a public school, educational institution, or community agency. Prerequisite: Master's degree candidates only. CR/NC only.

PES 691 Independent Study 3(Spec)
A topic is selected, researched and a scholarly paper prepared in consultation with an advisor. CR/NC only. Prerequisite: PES 670.

PES 693 Field Study in Physical Education and Sport 1-6(Spec)
An approved investigation, survey, study, or descriptive observation in some area of physical education or sport, performed off campus. CR/NC only.

PES 696 Seminar in Physical Education 2(2-0)
Individual and group study of problems in physical education. Systematic analysis of individual and committee reports and research contributions on current problems.

PES 698 Thesis 1-6(Spec)
The student develops and completes a research study in a specific area of physical education. CR/NC only. Prerequisite: PES 670 or PES 672. 2 hours may be taken concurrently with PES 670.

PES 699 Sport Management Internship 3-6(Spec)
A capstone experience applying theoretical and practical knowledge in a sport management setting. Prerequisite: Completion of all required and elective courses, except PES 691/698; 3.0 overall G.P.A. or higher; significant progress toward Plan B paper or thesis; and permission of the academic advisor and the sport management internship supervisor.

PES 703 Advanced Independent Reading 1-2(Spec)
An in-depth, scholarly study of a selected phase of physical education or sport through individualized reading.

PES 791 Independent Study 2(Spec)
A topic is selected, researched, and a scholarly paper prepared, in consultation with an advisor. CR/NC only. Prerequisite: PES 670 and permission of instructor.

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Department of Physics
(PHY, PHS, AST)

College of Science and Technology

Christopher Tycner, Chairperson
Dow 203, (989) 774-3321
https://centrallink.cmich.edu/academics/sci_tech/physics

Veronica Barone, Ph.D., Computational Physics, Molecular Modeling

Joseph Finck, Ph.D., Experimental Nuclear Physics, Science Policy

Marco Fornari, Ph.D., Computational Condensed Matter Physics

Stanley Hirschi, Ph.D., Theoretical Physics, Experimental Polymer Physics

Mihai Horoi, Ph.D., Theoretical Nuclear Physics, Computational Physics

Koblar A. Jackson, Ph.D., Computational Condensed Matter Physics

Axel Mellinger, Ph.D., Experimental Materials Physics

Juan Peralta, Ph.D., Computational Condensed Matter Physics

Valeri Petkov, Ph.D., Experimental Materials Physics

Frederick M. Phelps, Ph.D., Optics

Andrzej Sieradzan, Ph.D., Experimental Atomic Physics

Christopher Tycner, Ph.D., Observational Astrophysics

Glen Williams, Ph.D., Theoretical Astrophysics

The Central Michigan University Department of Physics offers the Master of Science in physics for students who are interested in careers in business, industry, and government as well as for those preparing to teach at the undergraduate level, or for those considering doctoral work in physics or a related area such as materials science or astronomy. Classes are small, and students have the opportunity for close supervision and individual attention. Graduate research assistantships are available in several research areas, in addition to graduate teaching assistantships and fellowships. In past years, most graduate students in the Department of Physics have received financial support.

Department faculty members are active in the following areas of research: astrophysics, atomic physics, computational physics, condensed matter physics, materials physics, nuclear physics, observational astronomy, and science education. Collaborative research efforts exist with other CMU departments, and researchers at other universities and at national laboratories. A biweekly seminar series brings experts with varied research interests to campus.

The department is housed in the Leon A. and Frances M. McDermott wing of the Dow Science Center. The laser laboratory is presently equipped to perform fluorescence lifetime studies and Doppler-limited spectroscopy, as well as atom cooling experiments. The polymer physics laboratory has equipment to measure rheological properties of polymer fluids and melts. The condensed matter laboratory is designed to study the electrical properties of electret polymer films. The X-ray diffraction laboratory is equipped to study the structure of both crystalline and amorphous materials. The Brooks Astronomical Observatory is equipped for CCD photometric observations, optical spectroscopy, and general visual observing. The department houses CMU's Center for High Performance Scientific Computing, a Beowulf-style cluster with 60+ processors. Support facilities include electronics and machine shops, both staffed by full-time technicians.

Further information about research opportunities can be found on the department website, at https://centrallink.cmich.edu/academics/sci_tech/physics.
Master of Science (M.S.) in Physics

Minimum Totals for Graduation: 30 hours

The requirements for the M.S. in physics are based on a core of twelve semester hours in advanced mechanics, electricity and magnetism, and quantum mechanics. Three hours of seminar are required, and six hours of credit are given for the thesis. In consultation with an advisor the student selects at least nine additional hours in areas of specific value to the student. The program is normally completed in two years. There is no qualifying examination, and no foreign language is required.

Admission Requirements, Retention & Termination Standards

For admission to the physics graduate program, a bachelor's degree in physics is required with a minimum grade point average in physics of 2.7. An applicant with minor deficiencies may be admitted with the understanding that course work in addition to the usual 30 hours may be required. Students from non-English speaking countries are required to demonstrate proficiency in English via the TOEFL exam. Applicants for graduate assistantships are strongly urged to submit GRE General and Physics scores. A maximum of 24 credits earned during non-degree status may be applied toward a graduate degree in Physics.

Degree Requirements

Required Core Courses (21 hours)

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 798 Thesis 1-6(Spec)

Note: 3 hours of Seminar and 6 hours of Thesis are required for graduation.

Cognate Courses (0-6 hours)

Cognate courses may be chosen to meet the individual needs of the student, but must be in a discipline closely related to the area of specialization.

Electives (3-9 hours)

AST 562 Observational Astronomy 4(3-2)
AST 563 Astrophysics 3(3-0)

Or any physics courses at the 500 level or above.

Total: 30 semester hours

Ph.D. in the Science of Advanced Materials

This is an interdisciplinary degree. Please see the index for the page number.

Course Descriptions: PHY

PHY 505 Teaching Chemistry and Physics in the Secondary School 3(3-0)
Course surveys materials for the teaching of secondary chemistry/physics. For students on teaching curricula, the course must be completed prior to student teaching. Identical to CHM 505. Credit may not be earned in more than one of these courses. Prerequisites: junior standing; CHM 132 or CHM 161; PHY 131 or PHY 146.

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. Corequisites: CHM/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/Corequisite: PHY 442. Recommended: A basic knowledge of a programming language such as FORTRAN.

PHY 522 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 binding 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.

PHY 614 Methods of Theoretical Physics 3(3-0)
Application of advanced mathematical techniques to physical theory. Prerequisite: PHY 313.

PHY 619 Continuing Registration for Final Research Project 1(1-0)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

PHY 624 Advanced Mechanics 3(3-0)
Special relativity, kinematics, and dynamics of rotational motion, coupled oscillations, canonical transformation, Hamilton-Jacobi theory, classical fields. Prerequisite: PHY 322.

PHY 634 Advanced Electricity and Magnetism 3(3-0)
Boundary value problems, time-varying fields and the initial value problem. Covariant description of electrodynamics and radiation by point charges. Prerequisite: PHY 332.

PHY 643 Quantum Mechanics I 3(3-0)
The scattering matrix formulation of quantum mechanics, symmetry groups in quantum mechanics, perturbation theory. Prerequisite: PHY 442.

PHY 644 Quantum Mechanics II 3(3-0)
Identical particles, the self-consistent field, theory of multiplet, semiclassical theory of radiation, atomic collisions. Prerequisite: PHY 643.

PHY 685 Seminar: Contemporary Physics 1-4(Spec)
Discussion of recent research in various subfields of physics. Emphasis on oral presentation and literature searches. Offered in 1 hour blocks, but may be retaken three times. Prerequisite: graduate standing in physics.

PHY 780 Topics in Physics 1-9(Spec)
Topics not ordinarily covered in regular courses. Prerequisite: one course at 500 or 600 level.

PHY 790 Independent Study 1-3(Spec)
Individual study in an area not covered by regular courses. Prerequisite: Prior permission of instructor must be obtained.

PHY 798 Thesis 1-6(Spec)
Individual research, with thesis. Directed by a committee. CR/NC only.
Course Descriptions: PHS

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 2-6(Spec)
Practical experience in observation and teaching of investigative approaches to physical science under supervision of an experienced instructor. Prerequisite: permission of instructor.

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.

Course Descriptions: AST

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, planetarium utilization. Prerequisite: AST 111.

AST 562 Observational Astronomy 4(3-2)
Celestial mechanics, astronomical instruments, and the techniques of astronomical direct imaging, photometry, and spectroscopy. Prerequisite: PHY 322; AST 260 or AST 261.

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.
Service, teaching at the community college or high school level, and careers in the private sector.

Accordingly, the Master of Arts (MA) program in Political Science at Central Michigan University has the following goals:

- educating students about the diversity of models, approaches, and intellectual traditions within Political Science;
- training students in the appropriate research skills necessary to complete their research objectives;
- preparing students for entrance into Ph.D. programs in Political Science, entrance into law schools, entrance into public service, or for upgrading their credentials for careers in teaching, including primary and secondary education;
- developing students' ability to critically analyze and evaluate scholarly work;
- fostering students' ability to think critically and effectively express their thoughts in written and oral communication;
- encouraging and mentoring students' professional growth through research and presentations at professional conferences;
- providing opportunities to network within the field of study through internships, honorary organizations and on-campus events.

Admission Requirements, Retention & Termination Standards

Admission

1. An undergraduate grade point average of at least 2.8 (on a 4.0 point scale).
2. A minimum of 18 undergraduate hours in the social sciences of which at least 6 hours are in political science.
3. An essay (two or three pages, double-spaced) including a discussion of the applicant's professional and/or educational goals and how completion of the program will facilitate his or her achievement of those goals. This essay replaces the written statement requested as part of the application to the College of Graduate Studies.
4. Two letters of recommendation from college faculty or other professionals who are familiar with the applicants' abilities and can attest to the applicants' potential to succeed in the program.
5. Evidence of successful completion of an undergraduate statistics or social science research methods course.
6. If the applicant is an international student for whom English is not the first language, a score of 213 on the computer-based (or 550 on the written-based) Test of English as a Foreign Language (TOEFL).
7. Per university policy, conditional admission may be considered for applicants with backgrounds or grade point averages that do not meet these requirements. Courses taken to meet these requirements may not be counted toward graduate degree requirements. Regular admission status should be requested upon completion of all conditional requirements.
8. Up to 9 semester hours of graduate credit may be transferred from another institution with approval of the advisor and the dean of the College of Graduate Studies.

Program Requirements

A student must complete a minimum of 33 hours according to the plan of study below. At least 15 of the hours presented for the degree must be in courses at or above the 600 level.

The student must complete the required core courses (18 hours); either the American Politics Concentration (9 hours) or the Comparative/International Politics Concentration (9 hours); and either the Plan A Thesis (6 hours) or the Plan B non-thesis option (6 additional hours of course work selected in consultation with an advisor).

Required Courses (18 hours)

- PSC 520 - American National Government and Politics 3(3-0)
- PSC 551 - Seminar in International Relations 3(3-0)
- PSC 680 - Methodology of Political Research 3(3-0)
- PSC 740 - Seminar in Comparative Politics 3(3-0)
- PSC 770 - Seminar in Political Theory 3(3-0)
- PSC 781 - Techniques of Political Research 3(3-0)

Concentrations (9 hours)

Select one of the following concentrations:

American Politics Concentration

Select 3 courses from the following:

- 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 561 - American State Government and Administration 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 583 - Survey Research 3(3-0)
- PSC 585 - Public Sector Information Technology Management 3(3-0)
- PSC 610 - Foundations of Public Administration 3(3-0)
- PSC 615 - Politics and Regulation of Health Care Policy 3(3-0)
- PSC 761 - Seminar in American State Government 3(3-0)
- PSC 785 - Strategic Leadership 3(3-0)

Comparative/International Politics Concentration

Select 3 courses from:

- PSC 515 - Comparative Public Policy 3(3-0)
- PSC 555 - International Law I 3(3-0)
- PSC 556 - International Law II 3(3-0)
- PSC 583 - Survey Research 3(3-0)
- PSC 642 - Problems and Processes of International Development I 3(3-0)
- PSC 651 - Comparative Political & Economic Systems 3(3-0)
- PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
- PSC 785 - Strategic Leadership 3(3-0)

Plan Option (6 hours)

Select either Plan A or Plan B:

Plan A - Thesis (6 hours)

Thesis and Oral Defense

Students selecting Plan A are required to complete a Thesis. In their final semester of graduate coursework, students must enroll in Thesis (PSC 798). At this time the student shall form a Master's Thesis Committee, including a Chair and two additional members, and complete a significant original scholarly work. This Committee shall determine whether the completed thesis is satisfactory for permanent filing. In addition, students will be required to complete an oral defense of their thesis before the Committee.

PSC 798 - Thesis 1-6(Spec)

Plan B - Non-Thesis Option (6 hours)

Two papers and oral defense

Students completing the Plan B are required to take 6 additional hours of coursework and present two seminar papers as evidence of scholarly achievement.

Although students planning to continue their studies in pursuit of a Ph.D. in Political Science are strongly advised to pursue the Plan A option, the Department also offers a Plan B option for those students who expect the M.A. to be their terminal degree. The Plan B option requires students to:
1. complete 6 additional hours of graduate coursework (in lieu of 6 hours of Thesis Writing); and
2. submit two research papers as evidence of scholarship. These papers must be prepared in connection with a seminar, an independent research course, or a graduate-level course in the Department of Political Science.

Accordingly, before a student's final semester, the student shall form a Plan B Paper Committee, including a Chair and two additional members. This Committee shall determine whether the submitted papers, normally after revisions, are satisfactory for permanent filing. In addition, students will be required to complete an oral defense of each of these papers before the Committee. A minimum of 15-20 pages for each paper is suggested.

Total: 33 semester hours

Accelerated Master of Arts in Political Science

Eligibility Standards

Students who meet the following criteria are eligible to apply to the accelerated program:
1. Signed major in political science.
2. Enrolled in last semester of junior status.
3. Completion of at least 15 political science credits, not including internship and CR/NC courses.
4. Completion of PSC 280 Introduction to Empirical Methods of Political Science with a grade of B+ or higher.

Admission Requirements

Students must apply for admission to the College of Graduate Studies during the last semester of their junior undergraduate year. Students must meet the requirements for admission to the Master of Arts in Political Science degree and to the College of Graduate Studies. In addition, students should also have completed university competency requirements. If admitted, graduate status is conferred in the senior year after the student has completed at least 86 undergraduate credit hours with a cumulative undergraduate grade point average of at least 3.25 or a grade point average of 3.25 in political science course work.

Program Requirements

Three to twelve (3-12) hours of graduate PSC credit (500 and 600 level courses) leading to Master of Arts degree in Political Science may be taken in the final year of undergraduate work.

Total: 33 semester hours

Master of Public Administration (M.P.A.)

Minimum Totals for Graduation: 36 hours

Program Director: Dr. Lawrence Sych, 989-774-3316; sychf1@cmich.edu

Mission Statement

The NASPAA-accredited Master of Public Administration program at Central Michigan University provides a professional degree to prepare students to assume or advance in careers in the public and non-profit sectors. The program focuses on developing critical thinking, analytical skills, and an appreciation for ethical decision making. The program maintains a commitment to the recruitment and education of a diverse student body, and the recruitment and professional development of a diverse faculty. Consistent with the University's mission, the program, through collaboration with Global Campus, offers the degree to underserved communities in select locations served by CMU.

Accordingly, MPA-CMU has the following goals:
- Graduating well qualified professionals who will assume careers in the public and non-profit sectors.
- Graduating well-qualified, mid-career professionals who will be prepared to advance in careers in the public and non-profit sectors.
- Balancing practical learning with the current theories of management, leadership, and administration.
- Providing a systematic understanding of political, economic, and social issues facing public administrators.
- Developing quantitative, analytical, and information and technology skills required for current and future work in the public and non-profit sectors.
- Offering students professional development opportunities through internships and applied research in the public and non-profit sectors.
- Developing core competencies in problem solving skills, policy analysis, legal and constitutional frameworks, and management of a diverse workforce.
- Growing the MPA program for an off-campus audience through traditional and non-traditional delivery modes.

Program Requirements

The requirements for the MPA degree consist of 36 hours of course work.

First, completion of a set of core courses presents an understanding of essential components of the discipline. Then, with the approval of an advisor, the student creates a degree emphasis in one of three ways:

a. by selecting a specific concentration in either Public Management or State and Local Government;

b. by selecting a set of general elective courses; or

c. by selecting a set of cognate courses focused on a particular subject area. Using this last method, MPA students have developed emphases in such areas as Planning and Land Use, Health Administration, and Recreation Management by incorporating courses from other departments, again with the approval of an advisor.

Advisors may make substitutions to the course requirements to fit the student's focus and the availability of course work.

The pre-service student will also complete an internship of 3 hours (PSC 795) in place of an elective course.

Before enrollment in PSC 796, Applied Research in Public Administration, a student, in conjunction with their advisor and faculty, develops an approved research topic for the Applied Research Project. The student will present his or her project as part of the PSC 796 course guidelines.
Admission Requirements, Retention & Termination Standards

MPA Admission Requirements include the following:
1. An undergraduate grade point average of at least 2.8 (on a 4.0 point scale).
2. A minimum of 18 undergraduate hours in social science.
3. Evidence of successful completion of an undergraduate statistics or research methods course is required.
4. An essay (two or three pages, double-spaced) including a discussion of the applicant's professional goals and how completion of the program will facilitate his or her achievement of those goals. This essay replaces the written statement requested as part of the application to the College of Graduate Studies.
5. Three letters of recommendation from former professors or professionals in the field of public service that attest to the applicant's potential to succeed in the program.
6. If the applicant is an international student for whom English is not the first language, a score of 550 on the written-based (or 213 on the computer-based) Test of English as a Foreign Language (TOEFL).
7. Per university policy, conditional admission may be considered for applicants with backgrounds or grade point averages that do not meet these requirements. Courses taken to meet these requirements may not be counted toward graduate degree requirements. Regular admission status should be requested upon completion of all conditional requirements.
7. Up to 9 semester hours of graduate credit may be transferred from another institution with approval of the advisor and the dean of the College of Graduate Studies.
8. A current resume.

Degree Requirements

Core Courses (24-27 hours)
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 610 - Foundations of Public Administration 3(3-0)
- PSC 711 - Public Personnel Administration Practice 3(3-0)
- PSC 713 - Public Budgeting and Finance 3(3-0)
- PSC 714 - Program Analysis and Evaluation 3(3-0)
- PSC 775 - Organization Theory in Public Administration 3(3-0)
- PSC 780 - Research in Public Administration in Political Science 3(3-0)
- PSC 795 - Internship in Public Administration 1-6(Spec)
- PSC 796 - Applied Research in Public Administration 3(3-0)

Note: In-service students with experience are not required to take an internship (PSC 795). Students without experience will take 3 hours of internship, reducing their number of elective courses by 1 course, or 3 credit hours.

PSC 796 The Applied Research Project: Before a student’s final semester, he or she forms a Plan B paper committee of three members, and, with their advice, develops an approved research topic. The student will present his or her finished paper to the committee when completed. Both on-campus and Global Campus students are encouraged to develop their research topics through the tutelage of the entire teaching staff.

Degree Emphasis (9-12 hours)

Choose from one of the following four options:

Cognate Courses Option (9-12 hours)

With the approval of an advisor, a student may create an emphasis in a subject area by selecting from 9 to 12 hours of cognate course work in place of the general electives. A cognate course is one outside of but related to the principal discipline of Public Administration.

General Electives (9-12 hours)
- PSC 516 - Environmental Politics and Policy 3(3-0)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
- PSC 561 - American State Government and Administration 3(3-0)
- PSC 565 - Managing Modern Local Government 3(3-0)
- PSC 566 - Intergovernmental Relations in the United States 3(3-0)
- PSC 583 - Survey Research 3(3-0)
- PSC 585 - Public Sector Information Technology Management 3(3-0)
- PSC 712 - Implementation and Reform of Public Programs 3(3-0)
- PSC 761 - Seminar in American State Government 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 785 - Strategic Leadership 3(3-0)

Note: Both PSC 561 and PSC 761 may not be selected.

Public Management Concentration (9-12 hours)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
- PSC 566 - Intergovernmental Relations in the United States 3(3-0)
- PSC 585 - Public Sector Information Technology Management 3(3-0)
- PSC 712 - Implementation and Reform of Public Programs 3(3-0)
- PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
- PSC 785 - Strategic Leadership 3(3-0)

State and Local Government Concentration (9-12 hours)
- PSC 561 - American State Government and Administration 3(3-0)
- PSC 563 - Politics and Policy in Urban Communities 3(3-0)
- PSC 565 - Managing Modern Local Government 3(3-0)
- PSC 566 - Intergovernmental Relations in the United States 3(3-0)
- PSC 585 - Public Sector Information Technology Management 3(3-0)
- PSC 761 - Seminar in American State Government 3(3-0)

Note: Both PSC 561 and PSC 761 may not be selected.

Total: 36 semester hours
Certificate of Professional Development in Public Administration

Minimum Totals for Graduation: 15 hours

The 15 credit hour certificate is designed for regularly admitted graduate students who desire advanced training in the field of public administration, but who are not seeking a master's degree at this time. Credits successfully earned with the certificate program can be transferred toward the MPA degree. Students may substitute courses only upon approval of the Public Administration Council. Admission is through the College of Graduate Studies. Students pursuing this certification program should have a background in political science, public administration, economics, social work, criminal justice or any other administration related field.

Required Courses (15 hours)
PSC 585 - Public Sector Information Technology Management 3(3-0)
PSC 710 - Seminar on Public Bureaucracies and Policy Formation 3(3-0)
PSC 711 - Public Personnel Administration Practice 3(3-0)
PSC 713 - Public Budgeting and Finance 3(3-0)
PSC 714 - Program Analysis and Evaluation 3(3-0)
PSC 775 - Organization Theory in Public Administration 3(3-0)

Note: Both PSC 775 and 710 may not be selected.

Total: 15 Semester Hours

Course Descriptions: PSC

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.
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 politics of the U.S. regulatory processes. This course is approved for offering in a distance learning format.
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 561 American State Government and Administration 3(3-0)
Political, legislative, executive, and judicial processes of American state government, with emphasis on the way they affect public policies in the states.
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 565 Managing Modern Local Government 3(3-0)
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.
PSC 583 Survey Research 3(3-0)
Development and utilization of quantitative data, with emphasis on behavioral research, public opinion polling, and statistical analysis.
PSC 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.
PSC 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.
PSC 598 Special Topics in Political Science 1-12(Spec)
Subject matter not included in courses currently listed in Bulletin.
PSC 610 Foundations of Public Administration 3(3-0)
Overview of major subfields of modern public administration including administrative theories and processes, democratic environments, administrative functions and activities and analytical tools and concepts.
PSC 615 Politics and Regulation of Health Care Policy 3(3-0)
Explore external environments in which health care systems operate, political determinants of health care policy, politics of bureaucracy, social and economic demands placed upon the system.
PSC 619 Continuing Registration for Final Research Project 1(1-0)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.
PSC 642 Problems and Processes of International Development I 3(3-0)
Impact of modernization and industrialization upon emergent countries and nation-building processes.
PSC 651 Comparative Political & Economic Systems 3(3-0)
An introduction to comparative political and economic systems. How politics and economics interact in theory, as well as in concrete political-economic interactions of nations. Prerequisite: PSC 351.

PSC 675 Public Sector Emergency and Crisis Organizational Theory 3(3-0)
Analysis of organizational theory as applied to public sector emergency and crisis management. Emphasis on structure, behavior, networks, and leadership. Prerequisites: Admission to the MPA program.

PSC 676 Emergency and Crisis Prevention, Preparedness and Response 3(3-0)
Analysis of public sector capacity in the four operational phases of emergency and crisis management; prevention, preparedness, response and recovery. Prerequisites: Admission to the MPA program.

PSC 677 The Public Sector Role in Post-Disaster Recovery 3(3-0)
Analysis of the emergency and crisis management considerations necessary to restoration of public services following a disaster. Prerequisites: Admission to the MPA program.

PSC 680 Methodology of Political Research 3(3-0)
This course focuses on the advanced study of the logic and methods of scientific research in political science. Recommended: PSC 280, or SOC 200 and SOC 350.

PSC 711 Public Personnel Administration Practice 3(3-0)
Emphasizes skill development in selected areas of public personnel administration, including: personnel evaluation, collective bargaining, affirmative action, and human resource planning and development. This course is approved for offering in a distance learning format.

PSC 712 Implementation and Reform of Public Programs 3(3-0)
Methodology of implementing public programs. Examination of administrative reforms and their implementation. Recommended: Admission to MPA program.

PSC 713 Public Budgeting and Finance 3(3-0)
Advanced study of public budgets and processes. Emphasizes political nature of budget preparation, adoption, administration and evaluation at various levels of government.

PSC 714 Program Analysis and Evaluation 3(3-0)
Methodology of analyzing and evaluating public programs. Design and use of quantitative and qualitative techniques for predicting and measuring performance. Recommended: Admission to MPA program.

PSC 740 Seminar in Comparative Politics 3(3-0)
Examination of the specific approaches and methods of comparative political analysis.

PSC 761 Seminar in American State Government 3(3-0)
Study and research in the problems and the process of state government. Content varies. Recommended: PSC 561.

PSC 770 Seminar in Political Theory 3(3-0)
Investigation of selected aspects of ancient or modern political thought through a variety of sources. This course may be offered in an online or hybrid format.

PSC 773 Administration and Ethics in Public Service 3(3-0)
This course examines ethical problems faced by participants in a modern administrative system with a focus on their sources and on methods for resolving them.
Department of Psychology (PSY)
College of Humanities and Social & Behavioral Sciences

Hajime Otani, Chairperson
101 Sloan Hall (989) 774-3001

Ignacio "David" Acero-Polakovich, Ph.D., University of Kentucky. Multicultural psychology, applied youth development, program evaluation, participatory research

Jane Ashby, Ph.D., University of Massachusetts. Cognitive psychology

Richard Backs, Ph.D., University of Southern California. Human factors, psychophysiology, aging, attention, emotion.

Terry Beehr, Director, Industrial/Organizational Psychology, Ph.D., University of Michigan. Job stress, retirement, leadership, careers

Sharon Bradley-Johnson, Ed.D., Western Michigan University. Low incidence disabilities, educational diagnosis, infant assessment

Nicholas Cassavaugh, Ph.D., University of Illinois, Urbana-Champaign. Human Factors/Physiology

Neil Christiansen, Ph.D., Northern Illinois University. Personality and work, racism and social judgments, attitudes toward affirmative action

Stephen Colarelli, Ph.D., New York University. Industrial/Organizational psychology, evolutionary psychology

Gary Dunbar, Co-Director, Neuroscience Program, Ph.D., Clark University. Behavioral neuroscience, stem cell and pharmacological treatment of brain damage and neurodegenerative diseases

Rachel Foster-Lifson, Ph.D., University of Washington. Self-concept, psychology of women and of religion, social cognition.

Bryan Gibson, Director, Experimental Psychology, Ph.D., University of Utah. Self presentation, smoker-nonsmoker interaction, psychology of gambling

Kyunghoo Han, Ph.D., University of Minnesota. Scientific study of culture, quantitative methods, psychological test/scale development and evaluation

Timothy Hartshorne, Ph.D., University of Texas at Austin. Low-incidence disabilities, CHARGE syndrome, deafblindness, disability and the family, parent-professional relationships, therapeutic interventions, issues around loss

Michael Hixson, Ph.D., Western Michigan University. Behavior analysis, direct instruction, precision teaching, behavior development, curriculum based measurement

Susan Jacob, Ph.D., Michigan State University. Ethics and law in school psychology, GLBTQ youth issues

Melynn Jaffa, Ph.D., Columbia University. Social cognition, emotionality, interpersonal behavior, eating

Carl Johnson, Ph.D., Michigan State University. Sleep disorders, applied behavior analysis, organizational behavior management

Elizabeth Meadows, Ph.D., State University of New York at Albany. Anxiety disorders, trauma, prevention of psychopathology, psychological and medical problem interactions

John Monahan, Undergraduate Director, Ph.D., Duke University. Perception, word and pattern perception, perceptual structure, attention, illusions

Sandra Morgan, Director, School Psychology, Ph.D., Central Michigan University. Academic and behavioral assessment and intervention, pediatric consultation

Larissa Niec, Ph.D., Case Western Reserve University.

Children's interpersonal function, impact of out-of-home care on children, child maltreatment, attachment

Kimberly O'Brien, Ph.D., University of South Florida. Occupational Health, job stress, psychometrics and research methods

Justin Oh-Lee, Ph.D., University of California Los Angeles. Behavioral neuroscience, neuropathology, molecular genetics in neurodegenerative diseases such as Parkinson's and Alzheimer's

Hajime Otani, Ph.D., University of Georgia. Human memory and cognition

Debra Poole, Ph.D., University of Iowa. Basic language/cognitive/social development in children related to social issues, forensic psychology

Matthew Prewett, Ph.D., University of South Florida. Team performance management, personality traits, technology in the workplace

Stuart Quirk, Ph.D., Case Western Reserve University. Emotional response (with a general focus upon psychopathology), emotional regulation through substance use

Mark Reilly, Ph.D., West Virginia University. Experimental analysis of behavior, operant/respondent conditioning, animal learning, quantitative models, behavioral pharmacology, substance abuse

Katrina Rhymen, Ph.D., Mississippi State University. Academic, behavioral, and social/emotional interventions, curriculum-based measurement and single-subject design research

George Ronan, Ph.D., Fairleigh Dickinson University. Personal problem solving, anger/aggression, psychological assessment

Michael Sandstrom, Co-Director, Neuroscience Program, Ph.D., Ohio State University. Assessing brain plasticity, compensatory neuronal activity, or neurochemical control during active behavior at various stages of deteriorative brain diseases such as Parkinson's and Huntington's using animal models

Kyle Scherr, Ph.D., Iowa State University, Psychology and Law

Reid Skeel, Director, Clinical Psychology, Ph.D., University of Florida. Neuropsychology

K. Roger Van Horn, Ph.D., Iowa State University. Human development and developmental changes in cognitive and psychosocial processes

Nathan Weed, Ph.D., University of Minnesota. Assessment of personality and psychopathology, psychometric methods in personality assessment

The Programs

The first graduate degree awarded in psychology at CMU was the Master of Arts in General Psychology in 1967. Since then the department has expanded its programs to include the Master of Science in Experimental Psychology, a Master of Arts in Industrial/Organizational Psychology, a Specialist in Psychological Services in School Psychology, and Doctor of Philosophy degrees in Industrial and Organizational Psychology, Clinical Psychology, School Psychology and Applied Experimental Psychology. These programs have been, and continue to be, successful, with some of its graduates attaining national and international recognition in psychology.

The Department of Psychology maintains a variety of facilities that are used in the education of graduate students. Following is a brief description of those most frequently used within the department and university.
Computer Facilities. A computer lab for graduate students is located in Sloan Hall. There are a total of 36 networked computers (located on the second floor and in the basement) available for testing research participants. Computers are also available at the Health Professions Building for students who are working at the Psychological Training and Consultation Center (PTCC) as well as at the neuroscience and psychophysiology laboratories. Further, each faculty member maintains a lab with a computer, which is used for research purposes.

Human Subjects Laboratories. Space is reserved in Sloan Hall for research with human participants. Special apparatus permits studies in neuropsychology, social psychology, biofeedback, discrimination learning, and perception. A computer with appropriate interfacing helps provide flexibility in instruction and research. The use of closed-circuit TV monitoring in some rooms is also possible.

Brain Research and Integrative Neuroscience (BRAIN) Center. The BRAIN Center is a compilation of four state-of-the-art neuroscience laboratories located in the Health Professions Building, each with fully-equipped shared core facilities for cellular/molecular neurobiology, behavioral assessment, image analysis, and microscopy, and computer lab. A fully-equipped animal care facility with surgical suites and necropsy room is adjacent to the BRAIN Center. There is also a radioisotope room, cold room, and darkroom available for specialized procedures.

Behavior Analysis Laboratory. The Behavior Analysis Laboratory is located in rooms 201-204 of Rowe Hall. The facilities include both rodent and avian colonies and state-of-the-art environmental control equipment and behavioral testing apparatus. Operant conditioning chambers are computer controlled and fully equipped with multiple response manipulanda and reinforce delivery systems, including syringe pumps for drug delivery. The lab is adjacent to a conference area with computer workstations for data analysis. There is also a fully modernized undergraduate student laboratory equipped with ten operant conditioning stations.

Psychological Training and Consultation Center (PTCC). As one of the Carls Center allied health clinics, the Psychological Training and Consultation Center (PTCC) is located in the Health Professions Building. PTCC offers high quality and low cost psychological services, including psychotherapy and psychological assessment, to the mid-Michigan community. Psychology services are provided by CMU graduate students in psychology, as part of their clinical training experience. The students are supervised by psychology faculty whose expertise span a broad range of theoretical orientations, contributing to PTCC’s overall eclectic approach to assessment and intervention. In addition, PTCC offers specific services through its specialty clinics, which include: The Violence Reduction Clinic, Parent-Child Interaction Therapy Clinic, Health Psychology Clinic, Trauma & Anxiety Disorders Clinic, Psychological Assessment Clinic, The Neuropsychology Clinic, Childhood ADHD Clinic and the Learning Acceleration Center. For further information about any PTCC program, or to request services, the Psychological Training and Consultation Center’s main telephone number is 989-774-3904.

Engineering Psychophysiology Laboratory. This laboratory, located in the Health Professions Building, conducts research on the psychophysiology of attention in human performance. The current focus of the laboratory is on attention, distraction, and the use of advanced technological devices during driving across different populations of drivers (e.g., young vs. old adults, patients with neurological or developmental disorders). A variety of central and autonomic nervous system measures can be collected during driving simulation in this laboratory, including electroencephalographic (dense-array EEG and event-related brain potentials), cardiovascular (electro- and impedance cardiography, blood pressure), and pulmonary responses.

DeafBlind Central: Michigan’s Training and Resource Project is a comprehensive statewide technical assistance program funded through the United States Department of Education. The project provides information, training, consultation, and referrals for families and/or professionals who are impacted by, or associated with, a child who has combined vision and hearing loss, often with additional disabilities. Project staff members are also involved with various systems change initiatives. DeafBlind Central is housed in Sloan 105.

CMU Center for Driving Evaluation, Education, & Research (D.E.E.R.). The mission of the CMU D.E.E.R. Center is to provide clinical services to evaluate cognitive fitness to drive, to provide education to improve driver safety, and to conduct research on driver safety. The center has the AAA Michigan Driving Simulator for use in research and in evaluation and education. The D.E.E.R. Center is a place where multidisciplinary research on novice drivers, older drivers, and drivers with attention disorders is conducted. For more information, see http://www.cmich.edu/academics/health_professions/clinics_centers/Pages/DEER_Center.aspx.

Graduate Student Offices. Graduate assistants and fellowship recipients have office space available to them in Sloan Hall. Deadlines for application for admission are listed with each degree program. Prospective applicants can contact the Psychology Department directly for information and application material or visit the website at https://centrallink.cmich.edu/academics/grad_studies/landing_pages/Pages/Psychology.aspx.

Master of Science (M.S.) in Experimental Psychology

Minimum Totals for Graduation: 36 hours

The Master of Science in Experimental Psychology program at Central Michigan University is a broad yet flexible program designed to develop individual scholarship. Students are exposed to a variety of content areas, while concentrating on a major area of study. Throughout their program, all students are expected to be actively involved in research with a faculty member. The program’s primary emphasis is to prepare students for doctoral study or research positions in the public or private sector.

Admission Requirements, Retention & Termination Standards

Application Deadline for all materials: February 1

The Master of Science degree in Experimental Psychology is based upon the satisfactory completion of a minimum of 36 semester hours of graduate work.

When applying for the Master of Science degree in Experimental Psychology, applicants must send three letters of reference and official GRE scores directly to the Department of Psychology. Fifteen semester hours of undergraduate psychology or the equivalent as determined by the department, and a 3.0 grade point average, are required for admission. Students who are deficient in certain subject areas such as statistics (PSY 211) or methodology (PSY 285, PSY 385) will be expected to make up these deficiencies in addition to the normally prescribed graduate course work for the degree. A maximum of nine credit hours earned during non-degree status may be applied toward the MS degree.

Degree Requirements

Required Courses (14 hours)

PSY 511 - Statistics in Psychology 3(3-1)
PSY 609 - History and Systems of Psychology 3(3-0)
PSY 690 - Research Seminar: Experimental Psychology 1-3(Spec)
PSY 798 - Thesis 1-6(Spec)

Note: 2 hours of PSY 690; 6 hours of PSY 798.
In addition to coursework, a student must complete an oral examination over the thesis.

**Additional Requirement I (3 hours)**
Select one course from the following:
PSY 611 - Research Design 3(3-0)
PSY 612 - Applied Multiple Regression and Correlation 3(3-0)
PSY 613 - Multivariate and Correlational Methods 3(3-0)

**Additional Requirement II (3 hours)**
Select one course from the following:
PSY 587 - Physiological Psychology 3(3-0)
PSY 687 - Physiological Foundations 3(3-0)

**Additional Requirement III (3 hours)**
Select one course from the following:
PSY 589 - Cognitive Psychology 3(3-0)
PSY 680 - Learning 3(3-0)
PSY 681 - Sensation and Perception 3(3-0)

**Additional Requirement IV (3 hours)**
Select one course from the following:
PSY 624 - Advanced Developmental Psychology 3(3-0)
PSY 630 - Advanced Social Psychology 3(3-0)

**Cognate Courses (0-6 hours)**
To be chosen in consultation with an advisor.

**Electives (4-10 hours)**
To be chosen in consultation with an advisor.

**Total: 36 semester hours**
Information concerning additional requirements can be obtained by contacting the Experimental MS program director.

**ACCELERATED MASTER OF SCIENCE IN EXPERIMENTAL PSYCHOLOGY**

Advanced undergraduate students majoring in psychology who want to obtain additional training in experimental psychology may want to consider an option by which they can obtain their Bachelor of Science with the General Major in Psychology and their Master of Science in Experimental Psychology in five years. The accelerated program course requirements are identical to the General Major in Psychology and to the Master of Science in Experimental Psychology and allows the student to apply 12 credit hours of graduate coursework toward both their Bachelor of Science and Master of Science degrees.

To be eligible for the accelerated program, students must meet all of the admissions requirements for regular admission to the Master of Science in Experimental Psychology program and have completed at least 84 credit hours of undergraduate coursework, including all General Education, University Program, and competency requirements. It is expected that students will already be engaged in research with a faculty member prior to admission to the accelerated program.

The accelerated Master of Science in Experimental Psychology program is a 12-month program. Students will complete the Bachelor of Science degree requirements and the first year of coursework for the Master of Science by the end of the summer term of their fourth year. Students will complete the coursework for the Master of Science and conduct and defend their thesis by the end of the summer term of their fifth year. A sample curriculum for a student who has completed 84 credit hours of undergraduate coursework is given below. Undergraduate coursework completed beyond 84 credit hours would lead to conferral of the Bachelor of Science degree prior to the end of the summer term in Year Four.

**Sample Curriculum**

**Year Four**

**Fall**
PSY 511 - 3 hours (see Note 1)
Graduate Requirement - 3 hours (See Note 1)
PSY 690 - 1 hour (See Note 2)
Undergraduate Courses - 9 hours
**Total: 16 hours**

**Spring**
Graduate Requirement - 3 hours (See Note 1)
Graduate Requirement - 3 hours (See Note 1)
PSY 690 - 1 hour (See Note 2)
Undergraduate Courses - 9 hours
**Total: 16 hours**

**Summer**
Undergraduate Courses - 10 hours
**Total: 10 hours**

Bachelor of Science degree conferred

**Year Five**

**Fall**
Graduate Requirement - 6 hours
Graduate Elective - 3 hours
**Total: 9 hours**

**Spring**
PSY 798 - 3 hours
Graduate Elective - 3 hours
**Total: 6 hours**

**Summer**
PSY 798 - 3 hours
Graduate Elective - 4 hours
**Total: 7 hours**

Master of Science degree conferred

**Note 1:** Courses that apply to both the BS and MS degrees. Required courses are (PSY 511; PSY 609; PSY 611 or 612 or 613; PSY 587 or 687; PSY 589 or 680 or 681; and PSY 624 or 630). Students must register for graduate credit for these courses.

**Note 2:** Apply to MS degree only.
Doctor of Philosophy (Ph.D.) in Applied Experimental Psychology

Minimum Totals for Graduation: 54 hours

The objective of the Ph.D. program in Applied Experimental Psychology is to develop individuals with strong applied experimental research skills for positions in business, industry, allied health, government agencies and in academia. The program is designed to provide advanced training in psychological processes (e.g., biological, cognitive, behavioral, social, personality) and quantitative-methodological procedures (e.g., statistics, experimental design, computer applications) and their utilization in an applied setting. The program will provide students with specialized applied training, including a pre-doctoral internship. The program uses a mentor system, matching students with faculty members who have interest in closely related areas. The current areas of training include: human factors (ergonomics, psychophysiology, attention and perceptual processes); behavioral medicine (with emphasis on developmental disabilities and infant disorders); applied cognitive science (with special emphasis on memory, cognitive modeling, decision making, forensic psychology); applied social psychology (social cognition, personality judgments, individual differences, and attitudes); applied developmental psychology (with emphasis on adjustment in adolescent and aged individuals); and applied behavioral neuroscience (with specific emphasis on testing potential pharmacotherapies for neurodegenerative diseases, such as Huntington's and Parkinson's diseases); and behavior analysis (with special emphasis on applied behavior analysis, behavioral pharmacology, behavioral pediatrics, organizational behavior management and the experimental analysis of behavior).

Admission Requirements, Retention & Termination Standards

Application deadline for all materials: February 1

Applicants to the Program are expected to have a baccalaureate degree, a minimum 3.00 GPA, and at least 15 hours of psychology. The foundation of the program is the M.S. Program in Experimental Psychology. The first two years of the program are identical to those of the M.S. Program in Experimental Psychology. Students accepted into the program must complete all of the requirements of the M.S. Program in Experimental Psychology or its equivalent. The emphasis in third and fourth years is on advanced specialized training, including generating high quality applied research and gaining practical experience through internships.

Program Requirements

Admission to doctoral candidacy is based on satisfactory grades, completion of thesis requirements, and passing a comprehensive examination over PSY 800 project at the end of the third year. Before applying for pre-doctoral internship training, students must have a doctoral dissertation proposal accepted by their dissertation committee. The doctoral degree is awarded upon successful completion of a pre-doctoral internship, as well as the successful defense of a doctoral dissertation.

Degree Requirements

Required Courses (30 hours)
PSY 789 - Seminar in Applied Experimental Psychology 1-9(Spec)
PSY 800 - Research in Applied Experimental Psychology 1-12(Spec)
PSY 888 - Doctoral Dissertation: Design 3-12(Spec)
PSY 889 - Doctoral Dissertation: Implementation 3-12(Spec)

Note: A minimum of 15 credit hours from the combination of PSY 898 and PSY 899 is required.

Required Courses II (6 hours)

Select one of the following:
PSY 990 - Internship A: Professional Services 3-6(Spec)
PSY 991 - Internship B: Professional Services 3-6(Spec)

Note: A minimum of 6 credit hours is required.

Electives (18 hours)

Select 18 hours of PSY courses in consultation with advisor.

Total: 54 semester hours (minimum hours for third and fourth years)

Clinical Psychology

Master of Arts (M.A.) in Clinical Psychology

A Master of Arts degree in Clinical Psychology can only be awarded to students who have been accepted and matriculated in the Ph.D. program in Clinical Psychology. Students must complete the first two years of the Clinical Psychology program and defend a master's thesis prior to petitioning for the M.A. degree.

Doctor of Philosophy (Ph.D.) in Clinical Psychology

Minimum Totals for Graduation: 108 hours

Model

The Ph.D. program in clinical psychology follows a scientist-practitioner model in training graduates to function as ethical clinical psychologists who have breadth and depth in assessment and intervention, as well as the ability to conduct clinical research. Graduates function successfully in modern professional contexts and demonstrate an investment in lifelong learning. The clinical faculty represent various clinical and research interests.

The program endorses the criteria for training set forth by the Committee on Accreditation of the American Psychological Association (APA)* and is listed as an accredited program. The curriculum reflects recent developments in scientific psychology, while imparting to students the skills needed to respond to contemporary clinical concerns. Our training model endorses practice based on sound theoretical and empirical foundation in the science of psychology. The doctoral program includes four years of intensive didactic preparation and applied experience plus a yearlong, full-time internship.

*Committee on Accreditation
American Psychological Association
750 First Street, NE
Washington, DC 20002-4242
202-336-5979
202-336-6123 TDD/TTY

Curriculum

Students are accepted into the program on a full-time basis. Before arriving on campus each student is assigned a clinical faculty mentor. This faculty mentor aids the student in his or her passage through the program. Students entering with a BA/BS degree are required to complete approximately 108 graduate credit hours. Although some courses may be waived based on prior graduate work, no more than 30 credit hours can be transferred. The current curricular requirements are listed below by year of completion.

Admission Requirements, Retention & Termination Standards

Application deadline for all materials: December 15
Admission

Admission requirements and a detailed description of the Clinical Ph.D. program can be obtained from the Department of Psychology. In addition to grades and GRE scores, the admissions committee is attentive to letters of recommendation, personal statements, and relevant professional experiences. The admissions committee selects students who have general academic preparation in psychology and psychology-related research methodology.

Program Requirements

Admission to doctoral candidacy is based on satisfactory grades, completion of thesis requirements, and passing a Clinical Qualifying Examination at the end of the third year. Before applying for pre-doctoral internship training, students must have a doctoral dissertation proposal accepted by their dissertation committee. The doctoral degree is awarded upon successful completion of a pre-doctoral internship, as well as the successful defense of a doctoral dissertation.

Degree Requirements

Year 1 (24 hours)

- PSY 510 - Principles of Psychological Measurement 3(3-0)
- PSY 609 - History and Systems of Psychology 3(3-0)
- PSY 642 - Clinical Research Methods 3(3-0)
- PSY 653 - Intervention I: Adult 3(3-0)
- PSY 657 - Assessment I: Adult 3(3-1)
- PSY 658 - Assessment II: Child and Adolescent 3(3-1)
- PSY 660 - Intervention II: Child and Adolescent 3(3-0)
- PSY 751 - Psychopathology 3(3-0)

Year 2 (30 hours)

- PSY 512 - Applied Multiple Regression and Correlation 3(3-0)
- PSY 613 - Multivariate and Correlational Methods 3(3-0)
- PSY 624 - Advanced Developmental Psychology 3(3-0)
- PSY 641 - Objective Personality Assessment 3(2-2)
- PSY 765 - Seminar: Ethics and Professional Issues 3(3-0)
- PSY 785 - Seminar: Cognitive-Behavior Therapy 3(3-0)
- PSY 791 - Practicum I A: Professional Services 3(Spec)
- PSY 791 - Practicum I B: Professional Services 3(Spec)
- PSY 798 - Thesis 1-6(Spec)

Year 3 (24 hours)

- PSY 589 - Cognitive Psychology 3(3-0)
- PSY 630 - Advanced Social Psychology 3(3-0)
- PSY 661 - Neuropsychological Assessment 3(3-0)
- PSY 687 - Physiological Foundations 3(3-0)
- PSY 850 - Ethnic and Minority Issues in Therapy 3(3-0)
- PSY 890 - Practicum II A: Professional Services 3(Spec)
- PSY 891 - Practicum II B: Professional Services 3(Spec)
- Plus one elective (3 hours)

Year 4 (24 hours)

- PSY 892 - Practicum III A: Professional Services 3(Spec)
- PSY 893 - Practicum III B: Professional Services 3(Spec)
- PSY 898 - Doctoral Dissertation: Design 3-2(Spec)
- PSY 899 - Doctoral Dissertation: Implementation 3-2(Spec)
- Plus two electives (6 hours)

Year 5 (6 hours)

- PSY 990 - Internship A: Professional Services 3-6(Spec)
- PSY 991 - Internship B: Professional Services 3-6(Spec)

Total: 108 Semester Hours

Industrial and Organizational (I/O) Psychology

The Department of Psychology offers a terminal Master's degree (M.A.) and a Doctor of Philosophy degree (Ph.D.) in Industrial and Organizational (I/O) Psychology. Both degrees are oriented toward training students for careers in research, university, or business settings. Graduates of the programs are typically involved in research, and in planning, design, delivery, or evaluation of psychological programs in organizations. Examples of such programs include employee testing and selection, performance appraisal, training, stress management, job and organizational design, and organizational change and development.

Master of Arts (M.A.) in Industrial/Organizational Psychology

Minimum Totals for Graduation: 39 hours

This program is designed for full-time students. It is helpful if students have taken introductory courses in general psychology, I/O psychology, social psychology, psychological testing or measurement, research methodology, and statistics.

Admission Requirements, Retention & Termination Standards

Application deadline for all materials: January 1.

When applying for the terminal M.A. degree in Industrial/Organizational Psychology, applicants must send three letters of reference, official GRE scores directly to the Psychology Department, and send the graduate college application materials to the College of Graduate Studies. The M.A. degree in Industrial/Organizational Psychology is based on the satisfactory completion of a minimum of 39 semester hours of graduate coursework, including a master's thesis. The M.A. is oriented toward training students for careers in business, government, consulting, or going on to Ph.D. programs.

Degree Requirements

Required Application Course (3 hours)

Select one of the following:

- PSY 790 - Practicum I A: Professional Services 3(Spec)
- PSY 791 - Practicum I B: Professional Services 3(Spec)

Required Courses (18 hours)

- PSY 535 - Organizational Psychology 3(3-0)
- PSY 536 - Personnel Psychology 3(3-0)
- PSY 537 - Organizational Behavior Management 3(3-0)
- PSY 636 - Organizational Applications of Personnel Psychology 3(3-0)
- PSY 736 - Strategies for Interventions in Social Systems 3(Spec)
- PSY 798 - Thesis 1-6(Spec)

Note: Student must choose between PSY 537 and PSY 736.

Required Quantitative Courses (9 hours)

Select three from the following:

- PSY 510 - Principles of Psychological Measurement 3(3-0)
- PSY 611 - Research Design 3(3-0)
- PSY 612 - Applied Multiple Regression and Correlation 3(3-0)
- PSY 613 - Multivariate and Correlational Methods 3(3-0)

Electives (9 hours)

Psychology electives to be selected in consultation with the advisor.

Total: 39 semester hours
Doctor of Philosophy (Ph.D.) in Industrial/Organizational Psychology

Minimum Totals for Graduation: 96 hours

This program is designed for full-time students. It is helpful if students have taken introductory courses in general psychology, I/O psychology, social psychology, psychological testing or measurement, research methodology, and statistics.

The Ph.D. curriculum in I/O Psychology involves approximately four years of intensive academic preparation. The curriculum has been designed to reflect classic and current developments in applied psychology and to provide skills needed in the resolution of organizational problems. Students take courses in foundation areas of psychology. Training in I/O Psychology emphasizes theory, research, and practice in personnel psychology and organizational psychology.

Admission Requirements, Retention & Termination Standards

Application deadline for all materials: January 1

Admission

When applying for the Ph.D. in I/O Psychology, applicants must submit three letters of reference and official GRE scores.

Program Requirements

Progress through the program is based upon satisfactory grades (a B average overall and a B or better in each class) plus the passage of a comprehensive exam, and successful completion of coursework, a master’s thesis, and a doctoral dissertation. Students must take a minimum of 12 hours of dissertation credits, and may take up to 24 hours.

Students entering the Ph.D. program are expected to complete the program within seven (7) years. The time limit for students entering with a graduate degree or graduate work will be prorated. Extension of the time limit to complete degree requirements will be granted rarely and only if steady progress toward the degree is evident.

An internship is optional. Before accepting an internship, I/O students must pass their comprehensive exams and have a doctoral dissertation proposal accepted by their dissertation committees.

Students entering with a bachelor’s degree will be required to complete approximately 96 credit hours; those entering with a master’s degree will be required to complete approximately 70 graduate credit hours.

Some courses are offered in accordance with a planned sequence.

Students enrolled in the Ph.D. program in I/O Psychology will be eligible for the Master of Arts degree after successful completion of appropriate coursework and a master’s thesis.

Degree Requirements

Required Courses I (9 hours)

Foundations of Psychology Courses

Select three of the following with these exceptions: If you select PSY 587, do not select PSY 687. If you select one of PSY 589, PSY 680 or PSY 681 do not select the other two.

- PSY 583 - Motivation and Emotion 3(3-0)
- PSY 587 - Physiological Psychology 3(3-0)
- PSY 589 - Cognitive Psychology 3(3-0)
- PSY 609 - History and Systems of Psychology 3(3-0)
- PSY 624 - Advanced Developmental Psychology 3(3-0)
- PSY 630 - Advanced Social Psychology 3(3-0)
- PSY 680 - Learning 3(3-0)
- PSY 681 - Sensation and Perception 3(3-0)
- PSY 687 - Physiological Foundations 3(3-0)

Required Courses II (24 hours)

Industrial/Organizational Psychology Content Courses

- PSY 535 - Organizational Psychology 3(3-0)
- PSY 536 - Personnel Psychology 3(3-0)
- PSY 538 - Organizational Psychology 3(3-0)
- PSY 636 - Organizational Applications of Personnel Psychology 3(3-0)
- PSY 736 - Strategies for Interventions in Social Systems 3(Spec)
- PSY 737 - Seminar in I/O Psychology 3-2(Spec)

Required Courses III (12 hours)

Research Courses

- PSY 510 - Principles of Psychological Measurement 3(3-0)
- PSY 611 - Research Design 3(3-0)
- PSY 612 - Applied Multiple Regression and Correlation 3(3-0)
- PSY 613 - Multivariate and Correlational Methods 3(3-0)

Required Courses IV (6 hours)

Experience-based Courses

- PSY 790 - Practicum I A: Professional Services 3(Spec)
- PSY 791 - Practicum I B: Professional Services 3(Spec)

Master’s Thesis (6 hours)

- PSY 798 - Thesis 1-6(Spec)

Doctoral Dissertation (12 hours)

- 12 hours are required, 6 in PSY 898 and 6 in PSY 899. Students may take an additional 12 dissertation credits as electives.
- PSY 898 - Doctoral Dissertation: Design 3-12(Spec)
- PSY 899 - Doctoral Dissertation: Implementation 3-12(Spec)

Electives (27 hours)

A. 27 hours of electives, of which 9 hours may be from outside Psychology.

B. Occupational Health Psychology (OHP) Concentration

Requirements within the I/O Ph.D. Program

Students in the Industrial/Organizational Psychology Ph.D. Program can earn a concentration in OHP by using 9 hours of their I/O Psychology Program electives in OHP courses and completing a thesis or doctoral dissertation on an OHP topic. The 9 hours of OHP electives must come from the following list unless substitutions are approved by the student’s advisor or the I/O Psychology Program Director. The thesis or dissertation topic also must be approved as an OHP topic by the student’s advisor or the I/O Psychology Program Director.

Electives (18 hours)

Select 18 hours.

Occupational Health Psychology Concentration (9 hours)

Select from the following:

- HSC 505 - Work Injury Prevention 3(3-0)
- HSC 537 - Stress Reduction Workshop 1(Spec)
- HSC 544 - Biostatistics 3(2-1)
- HSC 604 - Epidemiology 3(3-0)
- PSY 559 - Rehabilitation Psychology 3(3-0)
- PSY 579 - Behavioral Medicine 3(3-0)
- PSY 696 - Directed Research 1-12(Spec)
- PSY 697 - Independent Study 1-8(Spec)
- PSY 737 - Seminar in I/O Psychology 3-12(Spec)
- PSY 751 - Psychopathology 3(3-0)
- SOC 514 - Sociology of Health and Illness 3(3-0)

Total: 96 semester hours
School Psychology

Training Model: Scientist-Practitioner Model

The training model is based on the scientist-practitioner tradition emphasizing the application of behavioral science in educational systems and the larger community. Training emphasizes practice guided by scientific knowledge. Students are taught to use scientific principles to inform their practice (including consultation, intervention, and diagnostic services) and to evaluate their practice in order to improve services as well as contribute to the field of school psychology. The program is committed to fostering in its students sensitivity to, appreciation for, and understanding of ethnic diversity. Similarly, the program strives to promote understanding of, and responsiveness to, the special needs of individuals with disabilities.

Specialist in Psychological Services (S.Psy.S.)

Minimum Totals for Graduation: 70 hours

This is a three-year, full-time, 70-hour graduate program, designed specifically to meet NASP/NCATE accreditation standards, leading to the Master of Arts degree in Psychology and the Specialist in Psychological Services. Students complete coursework that prepares them to be knowledgeable in the following core content areas: Psychological and Educational Foundations, Research Methods, Psychological and Educational Assessment, Intervention Strategies, and Professional School Psychology. A full-time internship is completed during the third year of the program. The program is designed to be completed in three years. Students are expected to take no more than five years to finish.

Although this is a three-year graduate degree, applications will be accepted from students who already have taken graduate work, including the master's degree, at Central Michigan University or at other approved institutions. Credit will be given for such work in accordance with university regulations, provided it is consistent with the School Psychology curriculum.

This program meets the Michigan requirements for certification as a School Psychologist as defined by the State Board of Education. In addition, this program will permit certification as a School Psychologist in the majority of states.

Admission Requirements, Retention & Termination Standards

Application deadline for all materials: January 15

Admission

Admission is competitive with approximately 8 to 10 students accepted each year.

An acceptable master's degree or 15 semester hours of undergraduate psychology or the equivalent as determined by the department, a 3.0 overall grade point average, and scores from the Graduate Record Examination taken within the last five years are required for admission. Students who are deficient in certain subject areas will be expected to make up these deficiencies in addition to the normally prescribed graduate coursework for the degree.

Program Requirements

Progress through the program is based on satisfactory grades (a grade point average of "B" or better overall) and satisfactory evaluations of pre-professional functioning (e.g., appropriate interpersonal skills, ethical and professional conduct). Serious and persistent difficulties in preprofessional functioning may result in dismissal from the program (see Student Handbook, School Psychology Program).

For admission to 790, a student must have earned a "B" or better grade in each of the following courses: PSY 655, 656, 667, 767. In addition, a student must earn a "B" or better grade in PSY 791 and have an approved thesis proposal prior to admission to PSY 795.

At the master's degree level, a thesis and oral exam over the thesis are required. At the specialist degree level, the student must demonstrate professional competencies in working with students, parents, and school personnel. This requirement will be met by the student's satisfactory completion of a supervised internship (PSY 795, Internship A; PSY 796, Internship B).

Degree Requirements

Required Course for Master's Degree (34 hours)

34 hours chosen from Required Courses I-VI below:

Required Courses I (19 hours)

PSY 605 - Assessment of Affective and Behavioral Disorders of Children and Youth 3(3-0)
PSY 655 - Introduction to Intelligence Testing 2(2-2)
PSY 656 - Advanced Intellectual Assessment 2(2-2)
PSY 667 - Assessment and Development of Academic Skills I 3(3-1)
PSY 767 - Assessment and Intervention for Developmental Disabilities 3(3-1)
PSY 798 - Thesis 1-6(Spec)

Required Courses II (3 hours)

PSY 511 - Statistics in Psychology 3(3-1)

Required Courses III (3 hours)

Social Basis of Behavior
SPE 550 - Teaching Culturally Diverse Students 3(3-0)

Required Courses IV (3 hours)

Human Development
PSY 682/EDU 682 - Psychology of Child Development 3(3-0)

Required Courses V (3 hours)

Cognitive Basis of Behavior
PSY 680 - Learning 3(3-0)

Required Courses VI (3 hours)

Biological Basis of Behavior
PSY 587 - Physiological Psychology 3(3-0)

Note: Course substitutions can be made in Required Courses III through VI with the approval of the student's advisor and program director.

Additional Required Courses for the Specialist Degree (36 hours)

36 additional hours are required for the Specialist Degree selected from Additional Required Courses I and II as follows:

Additional Required Courses I (3 hours)

Select one of the following:

PSY 586 - Applied Behavioral Analysis in Education 3(3-0)
PSY 780 - Behavior Therapy 3(2-2)

Additional Required Courses II (27 hours)

PSY 562 - Therapeutic Intervention: Foundations 3(3-0)
PSY 662 - Advanced Therapeutic Interventions 3(3-1)
PSY 677 - Assessment and Development of Academic Skills II 3(3-0)
PSY 760 - Seminar: School Services 3(3-0)
PSY 766 - Seminar: Consultation Skills 3(Spec)
PSY 790 - Practicum I A: Professional Services 3(Spec)
PSY 791 - Practicum I B: Professional Services 3(Spec)
PSY 795 - Internship in School Psychology A 3(Spec)
PSY 796 - Internship in School Psychology B 3(Spec)

Electives (6 hours)

Hours of coursework are chosen with the approval of the student's advisor.

Total: 70 semester hours
Doctor of Philosophy (Ph.D.) in School Psychology

Minimum Totals for Graduation: 106 hours

CMU's School Psychology Doctoral program is fully accredited by both the American Psychological Association (APA) and the National Association of School Psychologists.

The Doctor of Philosophy curriculum in School Psychology is designed to extend the training of the specialist level school psychologist so that he or she is prepared to serve educational systems and the larger community. The program prepares school psychologists who are flexible enough to assume a variety of roles in the delivery of mental health services; who can assume a leadership role in the development of comprehensive and effective educational and psychological services to children, families, and schools; and who are able to supervise, coordinate, and direct the activities of others in the delivery of school psychological services.

The program of study typically includes four years of intensive academic preparation and field experience plus a one-year, full-time internship. At least 600 hours of supervised experience shall be in a school setting. The curriculum is designed to reflect recent developments in school psychology.

Students are accepted into the program on a full-time basis, and normal progress through the program requires a course load of about 12 credit hours per semester. Students are expected to take at least 6 credit hours per semester. For at least one year of the program, students must be in full-time residence at Central Michigan University.

Admission

Admission is competitive with approximately 8 to 10 students accepted each year (Specialist and Doctoral).

Minimum admission requirements include an undergraduate major in psychology or at least 15 semester hours of psychology and a 3.0 overall grade point average. A background in scientific psychology and basic research methodology including statistics and experimental psychology is strongly weighted to assure that students will be conversant with research. Students who do not meet the required 15 semester hours of basic psychology courses, but appear qualified for doctoral study, are required to remedy deficiencies as part of their initial coursework. The doctoral admissions committee will identify what coursework is necessary and inform the student about remediation.

In addition to grades and GRE scores (taken within five years of application), the doctoral admissions committee is very atten- tive to letters of recommendation, personal statements, and relevant professional experiences. Work history, professional goals, capacity for relating to and working with other people, emotional maturity and stability, and motivation also are considered. GRE scores are viewed as one predictor of the likelihood of success in graduate study. Consequently, for applicants who already hold a graduate degree in school psychology or a related field, greater weight is given to prior graduate school performance than GRE scores.

Program Requirements

Progress through the program is based upon satisfactory grades (a B average overall; a B or better in all assessment, practica, and internship courses; and a B- or better in all other classes) and satisfactory evaluations of pre-professional functioning (e.g., appropriate interpersonal skills, ethical and professional conduct). Serious and persistent difficulties in pre-professional functioning may result in dismissal from the program (See Student Handbook, School Psychology Program).

Successful completion of the thesis and comprehensive exam and approval of the dissertation proposal are required before taking the internship. The Ph.D. degree will be awarded upon successful completion of coursework, a thesis, a doctoral dissertation, and an internship.

Students entering with a BA/BS degree will be required to complete 106 credit hours, those entering with appropriate advanced degrees may be able to waive some coursework in consultation with their advisor. Courses are offered in accordance with a planned sequence designed to meet individual needs in terms of professional goals, academic background, and attained skills of each candidate.

Degree Requirements

Required Courses I (9 hours)

- PSY 609 - History and Systems of Psychology 3(3-0)
- PSY 630 - Advanced Social Psychology 3(3-0)
- PSY 687 - Physiological Foundations 3(3-0)

Required Courses II (3 hours)

- Human Development

  Select one of the following:
  - PSY 624 - Advanced Developmental Psychology 3(3-0)
  - PSY 682/EDU 682 - Psychology of Child Development 3(3-0)

Required Courses III (3 hours)

- Cognitive and Affective Aspects of Behavior

  Select one of the following:
  - PSY 589 - Cognitive Psychology 3(3-0)
  - PSY 680 - Learning 3(3-0)

Required Courses IV (3 hours)

- Multicultural Issues

  Select one of the following:
  - HDF 603/SOC 611 - Human Diversity Within and Between Families 3(3-0)
  - PSY 533 - Psychology of Racism 3(3-0)
  - PSY 850 - Ethnic and Minority Issues in Therapy 3(3-0)

Required Courses V (6 hours)

- Educational Foundations

  - PSY 677 - Assessment and Development of Academic Skills II 3(3-0)
  - PSY 760 - Seminar: School Services 3(3-0)

Required Courses VI (28 hours)

- Assessment and Intervention

  - PSY 562 - Therapeutic Intervention: Foundations 3(3-0)
  - PSY 605 - Assessment of Affective and Behavioral Disorders of Children and Youth 3(3-0)
  - PSY 655 - Introduction to Intelligence Testing 2(2-2)
  - PSY 656 - Advanced Assessment 2(2-2)
  - PSY 662 - Advanced Therapeutic Interventions 3(3-1)
  - PSY 667 - Assessment and Development of Academic Skills II 3(3-1)
  - PSY 751 - Psychopathology 3(3-0)
  - PSY 766 - Seminar: Consultation Skills 3(Spec)
  - PSY 767 - Assessment and Intervention for Developmental Disabilities 3(3-1)
  - PSY 780 - Behavior Therapy 3(3-2)
Required Courses VII (9 hours)
Methods Statistics and Program Evaluation Courses
- PSY 611 - Research Design 3(3-0)
- PSY 612 - Applied Multiple Regression and Correlation 3(3-0)
- PSY 818 - Program Evaluation 3(Spec)

Required Courses VIII (3 hours)
Ethics
- PSY 765 - Seminar: Ethics and Professional Issues 3(3-0)

Thesis (6 hours)
- PSY 798 - Thesis 1-6(Spec)

Required Experience-Based Courses (18 hours)
- PSY 790 - Practicum I: Professional Services 3(Spec)
- PSY 791 - Practicum II: Professional Services 3(Spec)
- PSY 890 - Practicum II A: Professional Services 3(Spec)
- PSY 891 - Practicum II B: Professional Services 3(Spec)
- PSY 990 - Internship A: Professional Services 3-6(Spec)
- PSY 991 - Internship B: Professional Services 3-6(Spec)

Doctoral Dissertation (12 hours)
- PSY 898 - Doctoral Dissertation: Design 3-12(Spec)
- PSY 899 - Doctoral Dissertation: Implementation 3-12(Spec)

Electives (6 hours)
- Chosen in consultation with advisor

Total: 106 semester hours

M.S. and Ph.D. in Neuroscience
These degrees are interdisciplinary programs. Please see the index for the page number.

Course Descriptions: PSY
PSY 500 Special Issues 1-12(Spec)
Subjects of contemporary psychology not covered by regular curriculum. Prerequisites: See Class Schedule.

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 Class Schedule.

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.

PSY 533 Psychology of Racism 3(3-0)
This course explores racism from a cognitive-social 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 science methods 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); graduate standing. This course is approved for offering in a distance learning format.

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, and job systems related to individual differences within organizations to improve job performance and satisfaction. Topics include job analysis, criterion development, personnel selection, training, and performance evaluation. Prerequisites: PSY 336, or graduate standing; Recommended: PSY 211.

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 and PSY 220; 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 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. Known causes 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.
PSY 583 Motivation and Emotion 3(3-0)
Survey of the theories, systems and concepts of motivation and emotion. Prerequisites: Fifteen hours of psychology or graduate standing.

PSY 584 Cognitive Neuroscience 3(3-0)
Converging evidence from human neuroanatomy and neurophysiology, cognitive psychology, neuropsychology, and neuroimaging research will be examined for topics in attention, perception, memory, language, and emotion. Prerequisites: PSY 387 or graduate standing.

PSY 585 Psychophysiology 3(3-0)
Introduction to psychophysiological methods, measures, and applications. Topics include: basic neuroanatomy and neurophysiology; electrophysiological recording; inference using brain, cardiovascular, somatic measures; biofeedback; ergonomic, and other applications. Prerequisite: PSY 387 or graduate standing.

PSY 586 Applied Behavioral Analysis in Education 3(3-0)
Behavior modification techniques in the areas of motivation, elimination of undesirable behaviors, promotion of academic participation, and definition of behavioral objects. Prerequisites: PSY 100, and upper-division or graduate standing.

PSY 587 Physiological Psychology 3(3-0)
Physiological events which underlie human and animal behavior. Prerequisite: PSY 387 or graduate standing.

PSY 588 Functional Neuroanatomy 3(3-0)
Function of the nervous system in behavior. Emphasis is on how various CNS structures function to mediate behavior. Prerequisite: PSY 387 or graduate standing.

PSY 589 Cognitive Psychology 3(3-0)
Introduction to cognitive processes; survey of theory and research in memory, thinking, concept formation, problem solving, and language. Prerequisites: PSY 383.

PSY 600 Special Issues 1-12(Spec)
Subjects of contemporary psychology not covered by regular curriculum. Prerequisite: See class schedule.

PSY 605 Assessment of Affective and Behavioral Disorders of Children and Youth 3(3-0)
Assessment measures and procedures for emotional and behavioral disorders of children and adolescents will be addressed with an emphasis on linking assessment to intervention. Prerequisite: matriculation in the School Psychology program or the Clinical Psychology program.

PSY 609 History and Systems of Psychology 3(3-0)
Modern psychology is analyzed by tracing its historical roots and early systems. Emphasis is on the influence of historical systems on current areas of specialization.

PSY 611 Research Design 3(3-0)
Common types of analysis of variance, multiple comparisons tests, the analysis of covariance. Prerequisite: PSY 511.

PSY 612 Applied Multiple Regression and Correlation 3(3-0)
A study of the general linear model as applied to multiple regression and the analysis of variance. Prerequisites: PSY 211 and permission of instructor.

PSY 613 Multivariate and Correlational Methods 3(3-0)
A survey of multivariate statistical procedures, including multiple regression and correlation, canonical and discriminant analysis, multivariate analysis of variance, and factor analysis. Prerequisites: PSY 612.

PSY 614 Seminar in Research Methods and Statistics for Psychology 3(3-0)
Exploration of specialized research methods and statistics for Psychology. Topics may include quasi-experimental designs, meta-analysis, modeling techniques, qualitative research, or other advanced research methods topics. This course may be taken as a three credit course and may be repeated for a maximum of six credits. Prerequisites: PSY 612.

PSY 619 Continuing Registration for Final Research Project 1(1-0)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

PSY 624 Advanced Developmental Psychology 3(3-0)
Basic theory and principles of life-span developmental psychology. Prerequisite: matriculation in psychology graduate program.

PSY 630 Advanced Social Psychology 3(3-0)
Intensive examination of the major theories and experiments of social psychology. Prerequisite: matriculation in psychology graduate program.

PSY 636 Organizational Applications of Personnel Psychology 3(3-0)
This course examines major ideas, assumptions, and technologies in personnel psychology, the implementation and utilization of personnel technologies, and selected current topics. Prerequisites: graduate standing and PSY 536.

PSY 641 Objective Personality Assessment 3(2-2)
Survey of concepts, procedures, and issues in personality assessment. Prerequisites: PSY 544, matriculation in the School or Clinical psychology graduate programs.

PSY 642 Clinical Research Methods 3(3-0)
Provides a basis for designing and executing clinical research and data analysis. Prerequisites: Matriculation into the Ph.D. program in Clinical Psychology at CMU or approval from the instructor.

PSY 653 Intervention I: Adult 3(3-0)
Survey of different therapeutic approaches and techniques. Prerequisite: admission to the Doctoral Program in Clinical Psychology.

PSY 655 Introduction to Intelligence Testing 2(2-2)
Administration and interpretation of individual intelligence scales. Lab fee prorated among class members after registration. Prerequisite: permission of instructor.

PSY 656 Advanced Intellectual Assessment 2(2-2)
Report writing, interpretation of intelligence tests, and integration of testing with other assessment devices used in diagnosis of emotional and learning problems. Prerequisites: PSY 655 and permission of instructor.

PSY 657 Assessment I: Adult 3(3-1)
Administration and interpretation of intelligence scales, report writing, and integration of intellectual testing with other assessment devices. Prerequisite: matriculation in Clinical Psychology program.

PSY 658 Assessment II: Child and Adolescent 3(3-1)
Intellectual and personality assessment of children and adolescents. Prerequisite: admission to the doctoral program in Clinical Psychology.

PSY 660 Intervention II: Child and Adolescent 3(3-0)
Introduction to therapeutic interventions for children and adolescents. Prerequisite: admission to the doctoral program in Clinical Psychology.

PSY 661 Neuropsychological Assessment 3(3-0)
Introduction to neuropsychological assessment of behavior with emphasis on instrument, research, and interpretation. Prerequisite: PSY 587 or PSY 687.

PSY 662 Advanced Therapeutic Interventions 3(3-1)
The practice and application of therapeutic intervention with children, birth through high school. Takes a developmental perspective on children's problems. Prerequisites: PSY 562 and concurrent enrollment in PSY 791.
PSY 667 Assessment and Development of Academic Skills I 3(3-1)
Administration and interpretation of special diagnostic testing of children with learning difficulties. Lab fee. Prerequisite: PSY 577.

PSY 677 Assessment and Development of Academic Skills II 3(3-0)
Principles underlying development and evaluation of academic interventions and critique of current programs and procedures designed to improve academic performance of K-12 children. Prerequisite: matriculation in Psychology graduate program.

PSY 680 Learning 3(3-0)
Theory and research in basic learning phenomena including classical, operant, and complex behavior. Prerequisite: permission of instructor.

PSY 681 Sensation and Perception 3(3-0)
Cognitive, neuroscience, psychophysical, and behavioral analysis of perceptual systems. Vision and audition are emphasized. Prerequisite: Permission of Instructor.

PSY 682 Psychology of Child Development 3(3-0)
Identical to EDU 682. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.

PSY 686 Engineering Psychology 3(3-0)
An overview of the discipline of engineering psychology including the topics of human error and applications of perception and cognition in human-machine systems. Prerequisite: graduate standing in Psychology.

PSY 687 Physiological Foundations 3(3-0)
Extensive survey of knowledge of the physiological, anatomical, and hormonal events underlying human behavior, emphasizing brain function and neurochemical factors.

PSY 690 Research Seminar: Experimental Psychology 1-3(Spec)
Study of problems and issues in experimental psychology under faculty guidance via lecture and/or seminar format. CR/NC only.

PSY 696 Directed Research 1-12(Spec)
For students who desire to investigate some research problem in psychology. Prerequisite: must file written proposal approved by faculty sponsor in departmental office prior to registration.

PSY 697 Independent Study 1-8(Spec)
For students who accept responsibility for studying a psychological problem of their own. Prerequisite: must file written proposal approved by faculty sponsor in departmental office prior to registration.

PSY 700 Special Issues 1-12(Spec)
Special topics in contemporary psychology. May be repeated to a maximum of 12 hours, but no more than 3 hours may be taken per semester. Prerequisites: admission to doctoral candidacy in psychology; see class schedule.

PSY 724 Psychology of Aging 3(3-0)
This course examines theories of adult development and how those theories are related to important issues affecting older adults. Prerequisite: graduate standing.

PSY 727 Developmental Neuropsychology 3(3-0)
Introduction to neuropsychological assessment of children with emphasis on instruments, research and interpretation. For advanced graduate students. Prerequisites: PSY 661 or PSY 655 or PSY 657.

PSY 736 Strategies for Interventions in Social Systems 3(Spec)
Study of various social technologies of intervention, and the evaluation of a range of these methods. Prerequisite: matriculation in professional psychology doctoral program.

PSY 737 Seminar in I/O Psychology 3-12(Spec)
Exploration of specialized areas in the field of I/O Psychology. This course is taken as a three credit course and may be repeated for a maximum of twelve hours. Prerequisite: Admission to masters or doctoral programs in I/O Psychology.

PSY 751 Psychopathology 3(3-0)
A course in descriptive psychopathology with an emphasis on understanding the manifestations of disordered functioning within a variety of cultural and contextual constraints. Prerequisite: admission into a graduate program in psychology.

PSY 760 Seminar A: School Services 3(3-0)
Philosophical rationale for development of school psychology as major discipline. Role of school psychologist, and legal and ethical issues that affect the role are discussed. Prerequisite: permission of instructor.

PSY 765 Seminar: Ethics and Professional Issues 3(3-0)
Problems and issues in the practice of professional psychology. Prerequisite: matriculation in school psychology subdoctoral program or professional psychology doctoral programs.

PSY 766 Seminar: Consultation Skills 3(Spec)
Objectives of and strategies in consultation are studied with practice and evaluation of methods in actual work settings. Prerequisite: Advanced graduate standing in psychology.

PSY 767 Assessment and Intervention for Developmental Disabilities 3(3-1)
Procedures and background issues for psychoeducational assessment and intervention for infants, children, and adolescents who are emotionally-, visually-, hearing-, motorically-, or mentally-impaired or autistic. Prerequisite: PSY 667.

PSY 780 Behavior Therapy 3(2-2)
Assumptions and principles of behavioral analysis and the strategies used in a variety of behavioral disorders. Prerequisite: matriculation in psychology graduate program.

PSY 781 Seminar: Perception 4(Spec)
Detailed treatment of selected research areas in perception. Emphasis is on perceptual data and measures and their application to real world situations. Prerequisites: PSY 681 or PSY 686.

PSY 785 Seminar: Cognitive-Behavior Therapy 3(3-0)
A graduate seminar focusing on the development and implementation of cognitive-behavioral interventions for the remediation of a variety of psychiatric disorders. Prerequisite: permission of instructor.

PSY 789 Seminar in Applied Experimental Psychology 1-9(Spec)
Exploration of specialized areas in the field of Applied Experimental Psychology through the review of the primary literature. May be repeated to a maximum of 9 hours, but no more than 3 hours may be taken per semester. Prerequisite: permission of instructor.

PSY 790 Practicum I A: Professional Services 3(Spec)
Practice needed to function as a competent psychologist within a variety of professional settings. Prerequisites: Admission to Clinical Psychology or Industrial/Organization Psychology or School Psychology.

PSY 791 Practicum I B: Professional Services 3(Spec)
Continuation of 790. Prerequisites: A grade of B or better in PSY 790.

PSY 792 Supplemental Supervision 1-3(Spec)
Supplemental supervision arranged with clinical or school supervising faculty. For students with special interests. Prerequisites: matriculation in clinical or school psychology graduate programs, enrollment in one of the practica, and permission of the instructor.
PSY 795 Internship in School Psychology A 3(Spec)
The first semester of a 1200 hour full-time experience in a school setting supervised by an approved school psychologist and on-campus faculty. Prerequisites: PSY 790 and PSY 791; permission of instructor.

PSY 796 Internship in School Psychology B 3(Spec)
Continuation of 795. The second semester of a 1200 hour full-time experience in a school system. Prerequisite: PSY 795.

PSY 798 Thesis 1-6(Spec)
CR/NC only.

PSY 800 Research in Applied Experimental Psychology 1-12(Spec)
Directed research course in which students work in close collaboration with instructor on a research topic in the area of applied experimental psychology. May be repeated to a maximum of 12 hours. Prerequisites: permission of instructor; students should have graduate standing, and have completed most, if not all, of the requirements for the M.S. degree in General/Experimental Psychology.

PSY 818 Program Evaluation 3(Spec)
Design and implementation of program evaluation research in professional settings with a focus on how to evaluate such research. Prerequisites: matriculation in graduate program, PSY 612.

PSY 850 Ethnic and Minority Issues in Therapy 3(3-0)
A graduate seminar addressing cultural issues in therapy with different ethnic and minority groups. Prerequisite: matriculated students in graduate programs.

PSY 890 Practicum II A: Professional Services 3(Spec)
Development of advanced competencies and expansion of a repertoire of skills in the delivery of psychological services. CR/NC only. Prerequisites: matriculation in psychology doctoral program and permission of instructor.

PSY 891 Practicum II B: Professional Services 3(Spec)
Continuation of PSY 890. CR/NC only. Prerequisites: matriculation in psychology doctoral program and permission of instructor.

PSY 892 Practicum III A: Professional Services 3(Spec)
Further development of advanced clinical competencies and a repertoire of psychodiagnostic, psychotherapy, interviewing, and consultation skills in the delivery of psychological services. CR/NC only. Prerequisites: matriculation in the professional psychology doctor program, PSY 790, PSY 791, PSY 890, PSY 891, and permission of instructor.

PSY 893 Practicum III B: Professional Services 3(Spec)
Continuation of PSY 892. CR/NC only. Prerequisites: PSY 892 and permission of instructor.

PSY 898 Doctoral Dissertation: Design 3-12(Spec)
Design of a doctoral dissertation. CR/NC only. Prerequisite: matriculation in psychology doctoral program.

PSY 899 Doctoral Dissertation: Implementation 3-12(Spec)
Completion of the doctoral dissertation designed in PSY 898: data collection, analysis, and write-up. CR/NC only. Prerequisite: PSY 898.

PSY 990 Internship A: Professional Services 3-6(Spec)
Develop competencies in psychological services, program development evaluation, needs assessment, and/or delivery systems; PSY 990-991 constitutes a full-time year-long experience. CR/NC only. Prerequisites: Matriculation in psychology doctoral program, complete MA thesis, pass comprehensive exams, dissertation proposal completed and accepted, and permission of instructor.

PSY 991 Internship B: Professional Services 3-6(Spec)
Continuation of 990 as a full-time, year-long experience. CR/NC only. Prerequisite: matriculation in psychology doctoral program, PSY 790, PSY 791, PSY 890, PSY 891, CR/NC only. Prerequisites: matriculation in psychology doctoral program and permission of instructor.

Department of Recreation, Parks, and Leisure Services Administration (RPL)

College of Education and Human Services

Robert Frost, Interim Chairperson,
214 Finch, (989) 774-3858

Lynn Dominguez, Ph.D., Outdoor Recreation
Robert Dvorak, Ph.D., Outdoor Recreation
Al Ellard, Re.D., Recreation Administration
Robert Frost, M.A., Therapeutic Recreation
Patricia Janes, Ph.D., Commercial Recreation
Timothy Otteman, Ph.D., Programming & Event Management
Dean Pybus, Ph.D., Recreation Administration
Mary Lou Schilling, Ph.D., Therapeutic Recreation

The Department of Recreation, Parks, and Leisure Services Administration offers a Master of Arts degree in Recreation, Parks, and Leisure Services Administration, with options in Recreation and Parks Administration and Therapeutic Recreation. The Department also offers a concentration on the Master Science in Administration program, an interdisciplinary degree.

The graduate programs in Recreation, Parks, and Leisure Services Administration are strengthened by the diverse academic and professional background of the faculty. The faculty members provide information, suggest areas of study and research, and furnish expertise in the areas of park and recreation administration, including organization, legislation, personnel management, financing and marketing; and therapeutic recreation including administration, programming, federal regulations, and advocacy.

Graduates of the department have been well accepted in the professional fields as well as at doctoral level programs at other institutions. Over 750 graduates of these master’s programs are now located throughout the United States.

Graduate assistantships are available in the RPL Department. Opportunities may involve research, teaching assignments, assisting in the management of the undergraduate internship programs, Adventure Seminar supervision, or external assignments in area communities. Contact the Graduate Coordinator for further information. Refer to the department website (http://www.cmich.edu/academics/educ_humanservices/rec_parks_leisure/Pages/default.aspx).

The graduate program continues to evolve to meet the changing needs in the profession of recreation, parks, and leisure services.

Master of Arts (M.A.) in Recreation and Parks Administration or Therapeutic Recreation

Minimum Totals for Graduation: 33 hours

Admission Requirements, Retention & Termination Standards

Note: Effective Spring, 2012 through Summer, 2013, the department is not accepting students into the M.A. in Recreation and Parks Administration or Therapeutic Recreation. Questions regarding this matter may be directed to the chair of the Department of Recreation, Parks, and Leisure Services Administration at 989-774-3858.

The student must meet the general requirements for admission to the College of Graduate Studies. In addition, applicants for admission to the RPL programs must:
A. Have a bachelor's degree with:
   1. a major in Recreation, Parks, and Leisure Services Administration on campus (or similarly titled program) with appropriate concentration, or
   2. a degree in another area with attained competencies commensurate with a RPL degree.
B. Have a grade point average of 3.0 over the last 60 hours of undergraduate work.
C. Submit two references for academic potential and two references for human service abilities.
D. Submit a written candidate's paper, discussing professional/career goals in relation to the graduate program in RPL at CMU and identifying and discussing prior experiences relevant to proposed program and professional/career goals.
E. Submit results of GRE (Graduate Record Examination). Forms are available from the RPL Graduate Coordinator or on the department website (rpl.cmich.edu).

Conditional Admission
A. If the student has insufficient background in RPL, that applicant must complete 3-12 credits of undergraduate course work in RPL, which is determined by the student and graduate advisor.
B. If the last 60 hours GPA is below 3.0, the student must attain a GPA of 3.00 in the first 12 semester hours of graduate courses.

Degree Requirements
Core Courses (9-12 hours)
Select hours (based on entry-level competencies)
PES 670/HSC 670 - Research Methods for Physical Education and Sport, Health and Recreation 3(3-0)
RPL 605 - Administration of Leisure Services Systems 3(3-0)
RPL 611 - Evaluation in Recreation and Leisure Services 3(3-0)
RPL 618 - Issues in Leisure 3(3-0)

Required Courses (6 hours)
Select from the following:
PES 672 - Statistics for Physical Education and Sport, Health and Recreation 3(3-0)
RPL 508 - Budgeting for Leisure Service Agencies 3(3-0)
RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)
RPL 521 - Fund Development & Grant Writing for Public & Non-Profit Organizations 3(3-0)
RPL 545 - Marketing of Leisure Services 3(3-0)
RPL 552 - Environmental Interpretation 3(3-0)
RPL 560 - Planning for Parks and Recreation Facilities 3(3-0)

Electives (6-9 hours)
Selected in consultation with advisor.
Total: 33 semester hours

Master of Science in Administration (M.S.A.)

Concentration in Recreation and Parks Administration
The Master of Science in Administration Program requires 36 Credit Hours of graduate study. The MSA Program provides students with the fundamental principles required for successful Recreation and Parks Administrative careers in the public, private, or nonprofit sectors.

The required core courses of the MSA program (15-21 Credit Hours) provide a comprehensive overview of organizational and human relationships and the administrative mechanisms through which to make sound analytical judgments and decisions.

The Recreation and Parks Administration Concentration (15-18 Credit Hours) is designed to provide students with administrative and management background and competencies associated with local parks and recreation agencies including organizational structure, strategic planning, personnel management, evaluation, risk management, budgeting and finance, marketing, local, state and federal regulations, advocacy, and current issues.

Please go to page 208 for concentrations or to https://cmich.edu/academics/grad_studies/GSMasterofScienceinAdministration/Pages/default.aspx.
Course Descriptions: RPL

RPL 508 Budgeting for Leisure Service Agencies 3(3-0)
Basic budgetary principles and procedures for leisure service agencies. Prerequisite: RPL 204 or 210 or 216 or 261 or graduate status.

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 is approved for offering in a distance learning format. Prerequisites: 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, procedures, and applied skills for grant writing and fund development for public and non-profit organizations. Prerequisites: 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 service experiences. 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. Prerequisites: RPL 210 or graduate status. Pre/Co-Requisites: Two of the following RPL 340, 341, 342, 344, 345.

RPL 600 Advanced Issues in Recreation 1-6(Spec)
Advanced concentration study of a current recreation or park administration problem or issue. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

RPL 603 Advanced Independent Reading in Recreation 1(Spec)
Exploration of one or more aspects of the recreation, parks, and leisure services profession through individual study. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

RPL 605 Administration of Leisure Services Systems 3(3-0)
The administrative aspects of operating recreation, parks, and leisure services systems. Emphasis on advanced administrative principles, practices, methods, and issues. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

RPL 610 Leisure Research 1(1-0)
Introduction to leisure research methodology. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

RPL 611 Evaluation in Recreation and Leisure Services 3(3-0)
A study of evaluation and its application to the field of recreation and leisure services. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

RPL 615 Practicum in Recreation Supervision and Administration 1-6(Spec)
Supervised and practical experience in some facet of recreation or park administration or supervision. Not applicable for RPL Masters candidates, except to fulfill requirement deficiencies. CR/NC only. Prerequisite: Permission of instructor.

RPL 618 Issues in Leisure 3(3-0)
Theories of leisure behavior and current issues and trends in leisure. Topics discussed are dependent upon interests of students enrolled in class. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program. Recommended: RPL 518.

RPL 619 Continuing Registration for Final Research Project 1(1-0)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

RPL 620 Planning for Parks and Recreation Facilities 3(3-0)
Principles and procedures in the planning, development, and maintenance of park and recreation areas and facilities. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

RPL 636 Recreation Facility Operations and Management 3(3-0)
Administrative practices for the management and operations of areas and facilities for recreation and leisure services.

RPL 652 Outdoor Recreation 3(3-0)
Focus on state, national, and international agencies involved in the provision of programs and services for outdoor recreation. Prerequisite: Admission to MA or MSA in Recreation & Park Administration program.

RPL 698 Graduate Internship 1-6(Spec)
Advanced internship experience, performed under a certified or trained professional in a recreation/leisure setting for a 15-week period. Prerequisite: Permission of instructor.

RPL 699 Graduate Project 1-6(Spec)
Student proposes, implements, and evaluates an advanced, in-depth administrative or supervisory level applied project. Prerequisite: Permission of instructor.

RPL 791 Independent Study 2(Spec)
Independent research in a topic of interest. Topic must be approved prior to enrollment. Not open to students taking RPL 798. Prerequisite: Permission of instructor. Recommended: PES 670.

RPL 798 Thesis 1-6(Spec)
A written thesis and oral defense of research conducted in the leisure services field. The thesis must be approved by the candidate’s graduate committee and advisor. Not open to students enrolled in RPL 791. Prerequisite: Permission of instructor. CR/NC only.
School of Rehabilitation and Medical Sciences

(PHA, PTH, ATR)

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

Herman Triezenberg, Chairperson
HPB 1232, (989) 774-2347

Elaine Betts, P.T., P.Ph.D.
Gail Capehart, P.T., NSA
Nancy Epstein, P.T., M.A., PCS
Karen Grossnickle, P.T., M.S.
Ahmad Hakemi, M.D.
Kevin Lee, D.O.
John E. Lopes, Jr., DHSc, PA-C
Peter Loubert, P.T., Ph.D.
Elizabeth Mostrom, P.T., Ph.D.
Ron Nelson, PA-C
Jan Perkins, P.T., Ph.D.
Erin Sherer, PA-C, M.S., RD
Deb Silkwood-Sherer, P.T., M.S.
Matthew Stack, PA-C, M.S.
Herman Triezenberg, P.T., Ph.D.
Ksenia Untinova, Ph.D.
J. Tim Zipple, P.T., M.S., OCS, OM

Master of Science (M.S.) in Physician Assistant Program

Minimum Totals for Graduation: 130 hours

Admission Requirements, Retention & Termination Standards

Admission for 2013 Entering Class

Please reference the PAAdmission website https://centrallink.cmich.edu/academics/health_professions/physician_assistant/admissions to determine application requirements. The application deadline for the 2013 entering class is October 1, 2012, which is a “firm” deadline. GRE and TOEFL (if applicable) scores must be submitted directly to CMU’s College of Graduate Studies and received by October 1. Admission to the program is competitive. Contact The Herbert H. and Grace A Dow College of Health Professions Admissions Office at: 989-774-1730 or at: chpadmit@cmich.edu for further information.

To be eligible for admission, a prospective student must:
1. Complete a minimum of 100 paid direct patient care hours.
2. Students must have completed or be in the final stages of completing an undergraduate degree.
3. Complete the prerequisite courses.
4. Obtain a minimum of 3.0 in all prerequisite courses.
5. Obtain an overall, undergraduate cumulative GPA of at least 3.0.
6. Submit GRE scores (or TOEFL scores if applicable).

Prerequisite Courses for Physician Assistant Program

Listed below are the prerequisite courses that must be completed before beginning the Physician Assistant Program. Students completing the prerequisites at other universities are encouraged to contact The Herbert H. and Grace A. Dow College of Health Professions Admissions Office (989-774-1730) to determine course equivalencies. The final decision regarding whether a course satisfies a prerequisite will be determined by the program director of the Physician Assistant Program.

At CMU, these prerequisites are met by:
- Anatomy: BIO 337 OR HSC 214
- Physiology: BIO 392 OR HSC 215
- Pathophysiology: HSC 411
- Chemistry Courses:
  - General Chemistry: CHM 120 and 127 OR CHM 131 and 132
  - Organic Chemistry: CHM 342
- Biochemistry: CHM 421
- Psychology Courses:
  - Introductory Psychology: PSY 100
  - Developmental Psychology: PSY 220
- Statistics Courses:
  - Biostatistics: HSC 544 OR BIO 500

Like all programs that have competitive admissions, students meeting the admission criteria are not guaranteed admission to the program.

Degree Requirements

First Year - Summer (15 hours)
HSC 630 - Regional Human Anatomy 5(3-4)
PHA 624 - Issues in Practice 2(2-0)
PHA 633 - Scientific Basis of Medicine I 2(2-0)
PHA 660 - History and Physical Examination I 3(2-2)
PHA 671 - Preventive Medicine 1(1-0)
PHA 672 - Applied Ethics for Physician Assistants 2(2-0)

First Year - Fall (22 hours)
PHA 608 - Clinical Medicine I 4(4-0)
PHA 620 - Infectious Diseases 3(3-0)
PHA 625 - Clinical Pharmacology I 3(3-0)
PHA 634 - Scientific Basis of Medicine II 2(2-0)
PHA 640 - Critical Appraisal of Medical Literature and Evidence-Based Medicine 2(2-0)
PHA 650 - Diagnostic Tests I 2(1-2)
PHA 661 - History and Physical Examination II 3(2-2)

First Year - Spring (25 hours)
PHA 609 - Clinical Medicine II 4(4-0)
PHA 612 - Obstetrics/Gynecology 3(3-0)
PHA 626 - Clinical Pharmacology II 3(3-0)
PHA 630 - Clinical Procedures I 3(2-2)
PHA 641 - Clinical Problem Solving II 3(0-11)
PHA 651 - Diagnostic Tests II 2(2-0)
PHA 662 - History and Physical Examination III 4(2-4)
PHA 673 - Psychiatry 3(3-0)

Second Year - Summer (15 hours)
PHA 610 - Clinical Medicine III 3(3-0)
PHA 614 - Pediatrics 3(3-0)
PHA 616 - Surgery 2(2-0)
PHA 618 - Emergency Medicine 2(2-0)
PHA 631 - Clinical Procedures II 3(0-6)
PHA 635 - Scientific Basis of Medicine III 2(2-0)
PHA 642 - Clinical Problem Solving III 3(0-11)
PHA 652 - Diagnostic Tests III 2(1-2)

Second Year - Fall (16 hours)
PHA 690 - Clinical Education I 16(0-40)

Second Year - Spring (16 hours)
PHA 691 - Clinical Education II 16(0-40)

Third Year - Summer (16 hours)
PHA 692 - Clinical Education III 16(0-40)

Total: 130 semester hours
Course Descriptions: PHA

PHA 608 Clinical Medicine I 4(4-0)
Comprehensive survey course that studies prioritized medical topics within organ systems. The systems covered are otorhinolaryngologic, ophthalmologic, cardiovascular and respiratory systems. Prerequisites: admission to the Physician Assistant program.

PHA 609 Clinical Medicine II 4(4-0)
A comprehensive survey course that studies prioritized medical topics within organ systems. The systems covered are the gastrointestinal, hepatobiliary, genitourinary, endocrine, hematological systems and oncology. Prerequisites: admittance to the Physician Assistant program and PHA 608.

PHA 610 Clinical Medicine III 3(3-0)
Comprehensive survey course that studies prioritized medical topics within organ systems. The topics covered are the immunologic, musculoskeletal and neurologic systems and geriatrics. Prerequisites: admittance to the Physician Assistant program and PHA 609.

PHA 612 Obstetrics/Gynecology 3(3-0)
Prioritized instruction in normal function and selected medical conditions in women’s health including pregnancy, childbirth, neoplasm and endocrine changes. Prerequisites: admittance to the Physician Assistant program.

PHA 614 Pediatrics 3(3-0)
A survey course of growth, development and diseases from birth to adolescence. It prepares students for the primary care clinical setting. Prerequisites: admittance to the Physician Assistant program.

PHA 616 Surgery 2(2-0)
Survey course that focuses on pre-, peri- and postoperative care and medical considerations of the surgical patient and prepares the student for the clinical setting. Prerequisites: admittance to the Physician Assistant program.

PHA 618 Emergency Medicine 2(2-0)
Survey course that familiarizes the student with common emergency medicine problems and injuries utilizing a priority system. Prerequisites: Admission to the Physician Assistant Program.

PHA 619 Continuing Registration for Final Research Project 1(1-0)
Non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

PHA 620 Infectious Diseases 3(3-0)
A comprehensive survey course on the diagnosis and treatment of infectious diseases seen in primary care medicine and organized by organ system. Prerequisites: admittance to the Physician Assistant program.

PHA 624 Issues in Practice 2(2-0)
Topics concerning physician assistant professional practice. CR/NC only. Prerequisites: Admission to the Physician Assistant Program.

PHA 625 Clinical Pharmacology I 3(3-0)
Survey clinical course that emphasizes principles of pharmacology, pharmacokinetics and pharmacotherapy as they relate to drugs in the treatment of common primary care conditions. Prerequisites: admittance to Physician Assistant program.

PHA 626 Clinical Pharmacology II 3(3-0)
This clinical survey course continues instruction in pharmacology of select drugs, prescription essentials general pharmacology resources for the primary care practitioner. Prerequisites: admittance to Physician Assistant program, PHA 625.

PHA 630 Clinical Procedures I 3(2-2)
Integrated didactic and laboratory course which develops medical procedural diagnostic and therapeutic skills. This prepares the student for the clinical setting. CR/NC only. Prerequisite: admission to the Physician Assistant program.

PHA 631 Clinical Procedures II 3(0-6)
A two module course consisting of Advanced Cardiac Life Support and Pediatric Advanced Life Support. CR/NC only. Prerequisite: Admission to the Physician Assistant Program.

PHA 633 Scientific Basis of Medicine I 2(2-0)
An in depth review of the normal and abnormal physiologic processes associated with diseases of the cardiac and pulmonary organ systems. Prerequisites: Admission to the Physician Assistant Program.

PHA 634 Scientific Basis of Medicine II 2(2-0)
An in-depth review of the normal and abnormal physiologic processes associated with diseases of the renal, neurological, and endocrine system. Prerequisites: Admission to the Physician Assistant Program.

PHA 635 Scientific Basis of Medicine III 2(2-0)
An in-depth review of the normal and abnormal physiologic processes associated with diseases of the gastrointestinal system, immune system, heritable conditions, and spontaneous genetic abnormalities. Prerequisites: Admission to the Physician Assistant Program.

PHA 640 Clinical Problem Solving I 3(0-11)
Onsite interactive group problem solving sessions and offsite patient/student/preceptor clinical interactions. Both modes develop clinical diagnostic reasoning by focusing on a hypothetic-deductive approach. Prerequisites: admission to the Physician Assistant program; successful completion of the didactic portion of the curriculum.

PHA 641 Clinical Problem Solving II 3(0-11)
Onsite interactive problem solving sessions and offsite patient/student/preceptor clinical interactions. Both modes develop clinical diagnostic reasoning by focusing on a hypothetic-deductive approach. Prerequisites: admission to the Physician Assistant program; successful completion of PHA 640.

PHA 642 Clinical Problem Solving III 3(0-11)
Onsite interactive problem solving sessions and offsite patient/student/preceptor clinical interactions. Both modes develop clinical diagnostic reasoning by focusing on a hypothetic-deductive approach. Prerequisites: admission to the Physician Assistant program; successful completion of PHA 641.

PHA 645 Critical Appraisal of Medical Literature and Evidence-Based Medicine 2(2-0)
Students will develop the ability to critically analyze current and past medical research and publications, and apply those concepts to the practice of Evidence-Based Medicine. Prerequisites: Admission into the Physician Assistant Program.

PHA 650 Diagnostic Tests I 2(1-2)
An introduction to the indications for and interpretation of the chest radiograph and electrocardiogram. Prerequisites: Admission into the Physician Assistant Program.

PHA 651 Diagnostic Tests II 2(2-0)
Indications for and interpretation of laboratory, pulmonary function, and neurophysiologic testing. Prerequisites: PHA 650.

PHA 652 Diagnostic Tests III 2(1-2)
Indications for and interpretation of imaging of the central nervous system, vascular system, abdomen and extremities. Principles of nuclear medicine, magnetic resonance, and computed tomography. Prerequisites: PHA 651.
PH A 660 History and Physical Examination I 3(2-2)  
Integrated didactic/laboratory course. This course teaches assessment via the medical history with focus on interviewing skill and technique. It prepares students for the clinical setting. Prerequisites: admission to the Physician Assistant program.

PH A 661 History and Physical Examination II 3(2-2)  
Integrated didactic/laboratory series that teaches patient assessment through the complete medical history and physical examination. It prepares students for the clinical setting. Prerequisites: admission to the Physician Assistant program; successful completion of PH A 660.

PH A 662 History and Physical Examination III 4(2-4)  
Integrated didactic/laboratory series that teaches patient assessment through the complete medical history and physical examination. It prepares students for the clinical setting. Prerequisites: admission to the Physician Assistant program; successful completion of PH A 661.

PH A 671 Preventive Medicine 1(1-0)  
This course introduces the principles of preventive medicine and methods for their incorporation into primary care on an individual, family and community basis. Prerequisites: Admission to the Physician Assistant program.

PH A 672 Applied Ethics for Physician Assistants 2(2-0)  
This course enables the student to examine the principles of medical ethics, develop an organized process to resolve clinical dilemmas, and to explore future professional roles. Prerequisites: admission to the Physician Assistant program.

PH A 673 Psychiatry 3(3-0)  
The course includes the identification and management of psychiatric disorders, with an emphasis on the pharmacological management of mood disorders. Prerequisites: admission to the Physician Assistant program.

PH A 690 Clinical Education I 16(0-40)  
This course consists of a full-time clinical internship. CR/NC only. Prerequisites: admission to the Physician Assistant program; successful completion of didactic course work for Physician Assistant program.

PH A 691 Clinical Education II 16(0-40)  
This course consists of a full-time clinical internship. CR/NC only. Prerequisites: admission to the Physician Assistant program; PH A 690.

PH A 692 Clinical Education III 16(0-40)  
This course consists of a full-time clinical internship. CR/NC only. Prerequisites: admission to the Physician Assistant program; PH A 691.

PH A 694 Clinical Clerkship Remediation 3-9(Spec)  
A structured course of remedial education for students who do not show adequate progress during their clinical clerkship year. CR/NC only. May be taken no more than three times. Prerequisites: PH A 692.

PH A 697 Special Topics for Physician Assistants 1-9(Spec)  
Presentation and examination of special topics in medicine, health, and biosciences. May be taken up to a maximum of 9 hours. Prerequisites: Entry into the Physician Assistant Program.

Doctor of Physical Therapy (DPT)  
Herm Triezenberg, Director  
HPB 1232, 774-2347  
Minimum Totals for Graduation: 118 - 131 hours

The Program  
The professional curriculum in physical therapy is three years in length. Students are eligible to apply for admission to the Doctoral Program in Physical Therapy following the completion of undergraduate coursework. Students must complete both the requirements for their undergraduate major and the physical therapy prerequisite courses before entering the program. At the completion of the professional program, the student will receive a Doctor of Physical Therapy (D.P.T.). In the undergraduate preparation phase, the student can enroll in one of a number of appropriate undergraduate majors. Some suggested undergraduate majors include health fitness in preventive and rehabilitation programs, athletic training, health administration, biology, psychology, child development, and therapeutic recreation. Students must contact an advisor from their chosen undergraduate major during their first semester to identify the coursework that is needed for their undergraduate degree. Students also need to incorporate into their undergraduate program a series of prerequisite courses that are required to prepare them for the coursework in the graduate program in physical therapy.

Admission Requirements, Retention & Termination Standards

Admission to the Professional Curriculum  
The Doctor of Physical Therapy Program has transitioned to PT CAS (Physical Therapy Centralized Application Service), an online application service, beginning with the May 2010 application cycle. For complete instructions on the application process go to the Physical Therapy Application Requirements web-page: https://centrallink.cmich.edu/academics/health_professions/hp_academics/physicaltherapy/Pages/Admissions.aspx.

To be eligible for admission students must complete the following requirements:

2. Complete a minimum of 50 hours of volunteer/career exploration or paid work in physical therapy clinic. Experience in at least 2 different settings is required.
3. Complete all prerequisite courses before entry into the program.
4. Maintain a minimum GPA of 3.0 in all prerequisite courses with no grade below a 2.0 in any prerequisite course.
5. Complete undergraduate degree with a minimum GPA of 3.0.
6. Students must submit their GRE scores.

Admission into the Doctoral Program in Physical Therapy is competitive. Students should contact The Herbert H. and Grace A Dow College of Health Professions Admissions office for specific information or questions on this process. (989) 774-1730.

Retention and Dismissal  
Students will be placed on probation for:

1. Any grade below a C (2.0) or NC (NC) in any course required in the PT professional curriculum will result in a student being placed on probation.
2. A semester GPA below 3.0 for courses required in the PT curriculum will result in a student being placed on probation.

(Continued)
3. A cumulative GPA below 3.0 for any semester will result in a student being placed on probation.
   Students may be dismissed from the program for:
   1. Two consecutive semesters of probation.
   2. Failure to satisfactorily complete remedial work required to be taken off probation.
   3. Failure to satisfactorily complete a repeated course at a level of CR (credit) or C or above.
   4. Student shows multiple academic or clinical deficits to a degree that makes it unlikely the student will be able to succeed in the remainder of the curriculum.
   5. Accumulative GPA below 3.0 (graduate) in the professional portion of the physical therapy curriculum for two semesters.
   6. Failure (NC) of clinical affiliation/internship courses.
   7. Students who display a lack of professional conduct and/or any behavior patterns that may jeopardize the safety or well-being of patients or others; this includes students who do not demonstrate satisfactory performance or progress in Generic Abilities in academic or clinical courses.
   8. Students who participate in unethical or illegal activity including, but not limited to, academic dishonesty or violations of the APTA Code of Ethics and Guide for Professional Conduct.

**Degree Requirements**

**First Year I - Summer (8 hours)**

- HSC 630 - Regional Human Anatomy 5(3-4)
- PTH 615 - Principles of Pharmacology 1(1-0)
- PTH 618 - Human Physical Development 2(2-0)

**First Year II - Fall (16 hours)**

- HSC 631/PES 631 - Physiology of Exercise 4(3-2)
- PTH 617 - Clinical Pathophysiology I 1(1-0)
- PTH 626 - Neuroanatomy in Physical Therapy 3(3-0)
- PTH 635 - Examination and Diagnosis I 2(1-2)
- PTH 645 - Patient Care I 5(3-4)
- PTH 665 - Physical Therapy Seminar I 1(1-0)

**First Year III - Spring (16 hours)**

- PTH 622 - Clinical Pathophysiology II 1(1-0)
- PTH 633 - Clinical Education I 3(1-4)
- PTH 636 - Examination and Diagnosis II 2(1-2)
- PTH 646 - Patient Care II 5(3-4)
- PTH 666 - Physical Therapy Seminar II 1(1-0)
- PTH 672 - Clinical Anatomy and Kinesiology of Human Joints 4(3-3)

**Second Year I - Summer (12 hours)**

- HSC 670/PES 670 - Research Methods for Health, Physical Education and Sport, Health and Recreation 3(3-0)
- PTH 634 - Clinical Education II 6(Spec)
- PTH 655 - Teaching and Learning in Physical Therapy 2(2-0)
- PTH 661 - Manual Therapy I 1(0-2)

**Second Year II - Fall (14 hours)**

- PTH 623 - Clinical Pathophysiology III 1(1-0)
- PTH 690 - Motor Learning in Neurorehabilitation 2(2-0)
- PTH 732 - Clinical Education III 3(1-4)
- PTH 735 - Examination and Diagnosis III 2(1-2)
- PTH 745 - Patient Care III 5(3-4)
- PTH 765 - Physical Therapy Seminars III 1(1-0)

**Second Year III - Spring (17 hours)**

- PTH 620 - Clinical Management of Geriatric Patients 2(2-0)
- PTH 621 - Clinical Pediatrics 2(2-0)
- PTH 624 - Clinical Pathophysiology IV 1(1-0)
- PTH 662 - Manual Therapy II 2(0-4)
- PTH 695 - Ethics in Physical Therapy 3(3-0)
- PTH 736 - Examination and Diagnosis IV 2(1-2)
- PTH 746 - Patient Care IV 4(3-2)
- PTH 766 - Physical Therapy Seminars IV 1(1-0)

**Third Year I - Summer (12 hours)**

- PTH 710 - Principles of Clinical Management 3(3-0)
- PTH 825 - Health Promotion in Physical Therapy Practice 2(0-0)
- PTH 850 - Evidence Based Practice in Physical Therapy 2(2-0)
- PTH 860 - Health Informatics for Physical Therapists 2(2-0)
- PTH 870 - Rehabilitation Care Management 3(3-0)

**Third Year II - Fall (16 hours)**

- PTH 790 - Clinical Research I 4(4-0)
- PTH 832 - Clinical Education IV 12(Spec)

**Third Year III - Spring (16 hours)**

- PTH 890 - Clinical Research II 4(4-0)
- PTH 932 - Clinical Education V 12(Spec)

**Electives**

- 3-4 hours of PTH electives.

**Total: 118-131 semester hours**

**Note:** The total number of credit hours required for completion of the program may be reduced by up to 12 credit hours based on a student's prior course work or experiences. The previous course work or experience must have provided the student with the equivalent knowledge and skills presented in the specific required course(s) within the DPT curriculum. The faculty of the Physical Therapy Program will make the determination on whether a student's previous course work and experience are equivalent to the content of a specific course.

**Additional Program Requirements:**

- **Doctoral Research Project:** Students must complete a Doctoral Research Project in Clinical Research I and II (PTH 790 and 890).

  To fulfill the requirements for PTH 790 and 890 the student must complete either:
  a. a prospective research project or
  b. a clinical case report. Students must submit final manuscripts in publication form according to program guidelines.

  At the completion of the professional curriculum, students will receive a Doctor of Physical Therapy (DPT) degree.

**Accreditation**

The physical therapy program at Central Michigan University is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association.

**Course Descriptions: PTH**

**PTH 615 Principles of Pharmacology 1(1-0)**

Provides students with an introduction to the principles of pharmacology with an emphasis on understanding how drug therapy is utilized in rehabilitation. Prerequisites: admission to Physical Therapy Program.

**PTH 617 Clinical Pathophysiology I 1(1-0)**

Study of the body's physiological responses to disease states with emphasis on the clinical management pertinent to physical therapy practice. Prerequisite: admission to the physical therapy program.

**PTH 618 Human Physical Development 2(2-0)**

Examination of life stages and their relationship to patient conditions seen in physical therapy. The developmental foundations of therapeutic procedures are discussed. Prerequisite: admission to the Physical Therapy program.

**PTH 619 Continuing Registration for Final Research Project 1(1-0)**

An on-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.
PTH 620 Clinical Management of Geriatric Patients 2(2-0)
Study of clinical management of geriatric patients. Physiological aspects of aging musculoskeletal, neurological, and cardiopulmonary systems are emphasized. Prerequisite: admission to the Physical Therapy program.

PTH 621 Clinical Pediatrics 2(2-0)
Students will learn evaluation procedures and strategies for clinical management of the pediatrics patient. Prerequisites: PTH 618, admission to the Physical Therapy program.

PTH 622 Clinical Pathophysiology II 1(1-0)
Study of physiological responses to disease states associated with the musculoskeletal system. Emphasis is placed on the clinical management pertinent to physical therapy practice. Prerequisites: PTH 622, admission to the Physical Therapy program.

PTH 623 Clinical Pathophysiology III 1(1-0)
Study of physiological responses to disease states associated with the nervous system. Emphasis is placed on the clinical management pertinent to physical therapy practice. Prerequisites: PTH 622, admission to the Physical Therapy program.

PTH 624 Clinical Pathophysiology IV 1(1-0)
Study of physiological responses to cancer and to diseases of the endocrine, cardiovascular, and respiratory systems. Physical therapy clinical management is emphasized. Prerequisites: PTH 623, admission to the Physical Therapy program.

PTH 626 Neuroanatomy in Physical Therapy 3(3-0)
An introduction to functional neuroanatomy as it relates to physical therapy. Case studies are used to relate implications of neurological lesions with physical therapy intervention. Prerequisites: admission to the Physical Therapy program.

PTH 633 Clinical Education I 3(1-4)
A mock clinic format is utilized to introduce the student to specific clinical situations and case studies. Problem-solving, interaction and technical skills analyzed. CR/NC only. Prerequisites: admission to the Physical Therapy program. Concurrent enrollment in PTH 646.

PTH 634 Clinical Education II 6(Spec)
This course provides one six-week full-time clinical experience for physical therapy students in physical therapy practice settings. Focus of experience is orthopedic disorders. CR/NC only. Prerequisites: PTH 633 and permission of instructor.

PTH 635 Examination and Diagnosis I 2(1-2)
Theory, concepts, and procedures central to examination and diagnosis of patients with dysfunctions or disabilities involving the musculoskeletal system, with laboratory practice in selected measures. Prerequisites: Admission to the Physical Therapy Program. Corequisite: PTH 645.

PTH 636 Examination and Diagnosis II 2(1-2)
Theory, concepts, and procedures central to examination and diagnosis of patients with dysfunctions or disabilities involving the musculoskeletal system, with laboratory practice in selected measures. Prerequisites: PTH 635. Corequisite: PTH 646.

PTH 645 Patient Care I 5(3-4)
An introduction to the skills and techniques needed in the care of patients. Problem-solving, communication, general patient care and safety will be emphasized. Prerequisites: admission to the Physical Therapy program.

PTH 646 Patient Care II 5(3-4)
An introduction to evaluation procedures and interventions used for patients with a variety of dysfunctions involving the musculoskeletal system. This orthopedic intervention course is designed to integrate with other courses in a semester focused on orthopedics. Prerequisites: Admission into physical therapy program, PTH645, concurrent enrollment in PTH633, concurrent enrollment in PTH 636.

PTH 655 Teaching and Learning in Physical Therapy 2(2-0)
Theory and research on learning development and instruction as it relates to the role of physical therapists as teachers and learners in a variety of situations/settings. Prerequisites: admission to the Physical Therapy program.

PTH 661 Manual Therapy I 1(0-2)
Lab demonstration/participation is used to study foundational manual therapy techniques used in physical therapy for the treatment of extremity dysfunctions and associated painful postures. Prerequisites: PTH 646; admission to the Physical Therapy program.

PTH 662 Manual Therapy II 2(0-4)
The study of manual techniques used in physical therapy for the treatment of spine dysfunction and associated painful posture. Prerequisites: PTH 661, admission to the Physical Therapy program.

PTH 663 Proprioceptive Neuromuscular Facilitation 2(2-0)
This course introduces the treatment techniques and procedures that are integral to proprioceptive neuromuscular facilitation in treating neuromuscular or musculoskeletal problems. Prerequisites: PTH 745, admission to the Physical Therapy program.

PTH 665 Physical Therapy Seminar I 1(1-0)
The study of professional issues in physical therapy. Course will focus on health care delivery and practice issues. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 666 Physical Therapy Seminar II 1(1-0)
The study of professional issues in physical therapy. Course will focus on practice, political and demographic issues. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 672 Clinical Anatomy and Kinesiology of Human Joints 4(3-3)
Anatomical and kinesiological overview of joints in the human body. Includes anatomy, histology of musculo-skeletal tissue, joint biomechanics, arthrokineinatics, osteokinematics and study of human gait. Prerequisites: HSC 630 and admission to the Physical Therapy program.

PTH 690 Motor Learning in Neurorehabilitation 2(2-0)
Students will examine the current theory on motor learning and make applications to case studies in rehabilitation. Prerequisites: admission to the Physical Therapy program.

PTH 692 Clinical Biomechanics 2(1-2)
Addresses advanced topic areas in clinical biomechanics. Areas include special cases for gait, kinetic chain activities, and the mechanical bases of clinical practice.

PTH 695 Ethics in Physical Therapy 3(3-0)
The course introduces biomedical ethics principles to students in physical therapy education programs. Students are instructed in ethical theories and decision-making strategies. Credit may not be earned in more than one of these courses. Prerequisites: admission to the Physical Therapy program.

PTH 710 Principles of Clinical Management 3(3-0)
Study of Administrative and organizational activities needed in a physical therapy clinic. Personnel, quality assurance, reimbursement, and legal issues are examined. Prerequisites: admission to the Physical Therapy program.

PTH 732 Clinical Education III 3(1-4)
A mock clinic format is utilized to introduce students to specific clinical situations. Patient management skills for complex clinical case studies are emphasized. CR/NC only. Prerequisites: admission to the Physical Therapy program, PTH 634.
PTH 735 Examination and Diagnosis III 2(1-2)
Theory, concepts, and procedures central to examination and diagnosis in neurological physical therapy practice, with laboratory practice in the application of selected measures. Prerequisites: PTH 636. Corequisite: PTH 745.

PTH 736 Examination and Diagnosis IV 2(1-2)
Theory, concepts, and procedures central to examination and diagnosis of patients with dysfunctions or disabilities involving selected multiple systems, with laboratory practice in selected measures. Prerequisites: PTH 735; Co-requisite: PTH 746.

PTH 745 Patient Care III 5(3-4)
Students are instructed in skills for the care of patients. Neurologic case studies, standardized testing, education and management issues are emphasized. Prerequisites: admission to the Physical Therapy program, PTH 745.

PTH 765 Physical Therapy Seminars III 1(1-0)
The study of professional issues in physical therapy. Course will focus on social, business and government issues. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 766 Physical Therapy Seminars IV 1(1-0)
The study of professional issues in physical therapy. Course will focus on ethical, educational and practical issues. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 790 Clinical Research I 4(4-0)
First of two courses sequence to satisfy the doctoral project requirements for physical therapy program. Students complete either (a) a prospective research project or (b) clinical case report. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 791 Independent Study 1-3(Spec)
Students engage in independent study on a topic related to physical therapy. Students work with a faculty sponsor to outline the project requirements and complete the activities. Prerequisites: admission into the Graduate Program in Physical Therapy and a written proposal approved by the Physical Therapy Program Director.

PTH 792 Special Topics in Physical Therapy 1-9(1-9)
Exploration of current special topics in physical therapy examination and intervention. May be repeated to a maximum of 9 credits. Prerequisites: Admission to the Physical Therapy Program.

PTH 825 Health Promotion in Physical Therapy Practice 2(2-0)
Overview of health promotion in physical therapy practice. Focus on health needs assessment, implementing health promotion interventions, and evaluating program effectiveness with individuals and groups. Prerequisites: admission to the Physical Therapy Program.

PTH 832 Clinical Education IV 12(Spec)
This course consists of a full-time clinical internship. The student will have 16 weeks of clinical experience. Students will be affiliated with various clinical sites throughout Michigan and the U.S. CR/NC only. Prerequisites: admission to the Physical Therapy program, and permission of instructor. Concurrent enrollment for students selecting PTH 790.

PTH 850 Evidence Based Practice in Physical Therapy 2(2-0)
Principles of evidence based practice applied to the physical therapy profession. Students will learn to gather and evaluate evidence and incorporate it into clinical practice. Prerequisites: HSC 670, admission to the Physical Therapy Program.

PTH 860 Health Informatics for Physical Therapists 2(2-0)
Exploration and application of health informatics in support of patient care, teaching, research and health care administration applicable to physical therapy. Prerequisites: admission to the Physical Therapy Program.

PTH 870 Rehabilitation Care Management 3(3-0)
Students develop skills for primary care management in rehabilitation services. Content areas include: keep/referral decision making, patient advocacy, utilization of public health agencies, and cultural issues. Prerequisites: admission to the Physical Therapy Program.

PTH 890 Clinical Research II 4(4-0)
Second of two courses sequence to satisfy the doctoral project requirements for physical therapy program. Students complete (a) a prospective research project or (b) clinical case report. CR/NC only. Prerequisites: admission to the Physical Therapy program.

PTH 891 Fall Assessment and Prevention 1(1-0)
This course presents comprehensive fall assessment and prevention programs. Evaluation of risk factors for falling and prevention strategies are emphasized. Prerequisites: Admission to the Graduate Program in Physical Therapy.

PTH 893 Imaging in Physical Therapy 1(1-0)
Study and application of patient imaging in the practice of physical therapy. Prerequisites: PTH 634 and admission to the Physical Therapy Program.

PTH 894 Issues and Practice in Women’s Health 1(1-0)
Issues in physical therapy evaluation, examination, and management of female patients/clients. Unique conditions of female adolescents, the childbearing years, midlife, and aging are discussed. Prerequisites: PTH 634 and admission to the Physical Therapy Program.

PTH 895 Imaging in Physical Therapy 2(2-0)
The study of professional issues in physical therapy. Course will focus on social, business and government issues. CR/NC only. Prerequisites: admission to the Physical Therapy program.

Course Descriptions: ATR

ATR 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 HPS 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.
Course Descriptions: SOC

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. Prerequisite: One anthropology or sociology course.

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 511 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 admission to Graduate Program.

SOC 512 Sociology of Health and Illness 3(3-0)
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 IIB 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 300 or both SOC 200 and 350; SOC 301; or regular admission to the Sociology Graduate program.

SOC 527 Community-Based Justice 3(3-0)
Interdisciplinary approach to community as locus of justice, and justice as locus of community. Review of intellectual heritage 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 which provides field experience for students enrolled in the Youth Studies minor. Students spend time working with youth in various community settings and meet periodically on campus to systematically reflect on practical field experience. Prerequisites: SOC 100, 222, 311, 411, 412, 425; or graduate standing Co-requisites: Concurrent enrollment in SOC 411, 412, and/or 425 is permitted.

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; 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 shappings, expressions and experiences of contemporary aging. Social and cultural responses to perceived problems of aging. Transformations of aging under globalization. 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.

SOC 601 Contemporary Sociological Theory 3(3-0)
Analysis of social theories of knowledge, postcolonialist social theory, postcolonialist feminism, black feminist thought, interactionism, critical theory, postmodernism, and other sociological theories of contemporary relevance. Prerequisites: 15 hours of sociology and graduate standing.

SOC 602 Professional Seminar 3(3-0)
Techniques of thesis writing; development of thesis prospectus. The research of departmental faculty is presented and discussed. Prerequisites: Regular admission to the Sociology Graduate Program.

SOC 605 Sociology of Knowledge 3(3-0)
Relationship of ideas to social life. The intellectual in society; relationship of empirical knowledge to cultural values and ideologies; objectivity in sociology. Prerequisite: SOC 301 or SOC 501.

SOC 607 Methodology of Sociological Research 3(3-0)
Exploration and critique of various epistemological approaches to sociological inquiry. Research design, concept development, nature of data, introduction to qualitative and quantitative methods. Prerequisites: SOC 200 and 350; and permission of instructor.

SOC 611 Human Diversity Within and Between Families 3(3-0)
Diverse backgrounds of families/individuals based on ethnicity, religion, sexual orientation, class and disabilities will be studied. Models to explore the diverse nature will be applied. Identical to HDF 603. Credit may not be earned in more than one of these courses.

SOC 619 Continuing Registration for Final Research Project 1(1-0)
Anon-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

SOC 621 Social Control and Justice Systems 3(3-0)
Formal and informal responses to crime and delinquency, analyzed in terms of criminology theory and research and with reference to concepts of social control. Prerequisites: SOC 300, and SOC 301 or SOC 501.

SOC 631 Workshop on Qualitative Research 3(3-0)
This course is designed to introduce students to the various qualitative research methods in the social sciences. Prerequisites: SOC 607.

SOC 632 Techniques of Sociological Research 3(3-0)
Analysis of quantitative social science data. Hypothesis testing and descriptive methods. Prerequisite: SOC 607.

SOC 699 Special Topics in Sociology 1-10(Spec)
Consideration of subject matter not included in courses currently listed in Bulletin. Not open to students on academic probation.

SOC 795 Independent Reading 1-6(Spec)
Prerequisite: Open to students who have obtained the permission of the department chairperson and an instructor to read intensively on an approved topic.

SOC 796 Independent Research 1-6(Spec)
Prerequisite: open to students who have obtained the permission of the department chairperson and an instructor to conduct research on an approved topic.

SOC 798 Thesis 1-6(Spec)
Credit is earned in this course through successful completion of a thesis in sociology. Prerequisite: Advisor’s permission is required. CR/NC only.
Course Descriptions: ANT
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 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 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 490. 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.

ANT 698 Independent Studies in Anthropology 1-12(Spec)
Directed reading and/or research on an approved topic. Not open to students on academic probation.

Course Descriptions: SWK
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.
Master of Arts (M.A.) in Educational Technology (EDU/MLE)

Minimum Totals for Graduation: 33 hours

The Educational Technology master's degree program prepares students to provide instruction utilizing new learning technologies. The technologies addressed in this program include multimedia, telecommunications, and distance learning. While meeting the needs of the classroom teacher, this program also prepares individuals for technology leadership roles.

The degree program requires a minimum of 33 hours and all candidates for the MA must complete the Educational Technology Seminar, resulting in a terminal project. Educational Technology projects must demonstrate effective uses of technology in K-12 classroom settings.

Admission Requirements, Retention & Termination Standards

In addition to the university's general admission requirements, the student must either hold a valid K-12 teaching certificate or be employed in an educational capacity within their school, school district, community college, or profession. Regular admission in the program requires an undergraduate grade point average of at least 2.7 (on a 4-point scale). Students with a GPA below 2.5 will not be considered for admission for the graduate program in teacher education. A maximum of 9 hours taken before signing the master's program may be counted toward the 33 hours taken.

Students must earn a B- or better in each graded course within the 9 hours taken.

Advisors for the master's program are assigned only after the student has been regularly or conditionally admitted to the College of Graduate Studies and has selected an option.

Degree Requirements

Required Courses (12 hours)

EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
EDU 613/MLE 613 - Current Educational Issues 3(3-0)
EDU 614 - Advanced Educational Psychology 3(3-0)
EDU 660 - Methods of Educational Research 3(3-0)
EDU 755 - Advanced Research Design and Interpretation 3(3-0)

Required Cognate Courses (18 hours)

EDU 642 - Instructional Multimedia 3(3-0)
EDU 643 - Instructional Design 3(3-0)
EDU 653 - The Read/Write Web 3(3-1)
EDU 707 - Seminar: Issues in Educational Technology 3(3-0)
EDU 708 - Distance Education 3(3-0)
EDU 710 - Seminar: Terminal Project 3(3-0)

Electives (3 hours)

Select from the following:

EDL 610 - Grants and Fund Procurement 3(3-0)
EDU 506 - Principles and Techniques for Individualizing Instruction 3(3-0)
EDU 566 - Independent Study in Elementary Education 1-6(Spec)
EDU 709 - Innovative Uses of Technology 3(3-0)

(or courses selected in consultation with graduate advisor.)

Total: 33 semester hours (minimum)

Master of Arts (M.A.) in Elementary Education (EDU)

Minimum Totals for Graduation: 30 - 33 hours

Guide Sheets specifying requirements for all the department's programs may be obtained from 421 EHS Building or on the department website.

Admission Requirements, Retention & Termination Standards

In addition to meeting the university's general admission requirements, the student must have a valid Michigan elementary teaching certificate or the equivalent. Courses taken to meet this admission requirement shall not count toward the master's degree. Those who do not possess the elementary teaching certificate should contact the Center for Student Services for information on how to meet certification requirements. Advisors for the master's program are assigned only after the student has been regularly or conditionally admitted to the College of Graduate Studies and has selected a concentration.

Regular admission in the program requires an undergraduate grade point average of at least 2.70 (on a 4-point scale). Students with a GPA below 2.50 will not be considered for candidacy for the graduate program in teacher education. A maximum of 9 hours taken before signing the master’s program may be counted on the program. To earn a CMU graduate level degree, students must have at least a 3.0 (B) cumulative GPA, and a cumulative GPA of 3.0 (B) in all coursework on the student's authorization of degree program.

Program Requirements

All candidates for the M.A. must fulfill requirements for scholarly activity under Plan A (thesis) or Plan B (comprehensive written exam).

Classroom Teaching Concentration:

- Plan A requires a minimum of 24 hours of course work and a thesis (6 hours of thesis credit), total 30 credits.
- Plan B requires a minimum of 30 hours of course work and a capstone seminar (3 hours of credit), total 33 credits.

Early Childhood Concentration:

- Plan A requires a minimum of 27 hours of course work and a thesis (6 hours of thesis credit), total 33 credits.
- Plan B requires a minimum of 30 hours of course work and a capstone seminar (3 hours of credit), total 33 credits.

Plan B for both concentrations requires a minimum of 30 hours of coursework, a 3-hour capstone experience (EDU 780) which explores research pertinent to all Master of Arts in Elementary Education students, and a comprehensive four (4) hour examination over the coursework in the student's M.A. Program. The examination over the coursework must be taken early in the term following the completion of EDU 780. Students will not need to register for a class or pay fees for the examination. The examination may be taken a maximum of two times. Specific descriptions of program requirements are available in 421 EHS Building or online.

Degree Requirements

Select one of the following concentrations:

Classroom Teaching Concentration:

Required Core Courses (15 hours)

Select one of the following plans:

Plan A

EDU 660 - Methods of Educational Research 3(3-0)
EDU 682/PSY 682 - Psychology of Child Development 3(3-0)
EDU 698 - Thesis 1-6(Spec)
EDU 755 - Advanced Research Design and Interpretation 3(3-0)
Plan B
EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
EDU 613/MLE 613 - Current Educational Issues 3(3-0)
EDU 614 - Advanced Educational Psychology 3(3-0)
EDU 662 - Applied Educational Measurement and Evaluation 3(3-0)
EDU 780/MLE 780 - Master of Arts Capstone Experience 3(3-0)

Note: EDU 780 is offered on the Mt. Pleasant campus only and should be the last course taken to fulfill the Plan B requirements before taking the comprehensive written examination.

Residence Requirement for Plan A and Plan B: Students are required to complete a minimum of 12 semester hours of credit in graduate courses taken at the Mt. Pleasant campus or from Teacher Education Professional Development tenure and tenure/track faculty in coursework offered by the CMU Global Campus.

Required Cognate Courses (15 hours)
Select 15 hours from the following:
EDU 506 - Principles and Techniques for Individualizing Instruction 3(3-0)
EDU 540 - Literacy Education: Theory and Practice 3(3-0)
EDU 620 - Problems of Teaching Mathematics in the Elementary School 3(3-0)
EDU 635 - Problems in Language Arts in the Elementary School 3(3-0)
EDU 636 - Classroom Reading and Writing Instruction 3(3-0)
EDU 640 - History and Trends in Elementary Social Studies Education 3(3-0)
EDU 645 - Advanced Science Teaching Methods 3(3-0)

Electives (0-3 hours)
Select with approval of advisor for Plan B only.

Total: 30-33 semester hours

Note: Plan A requires students to complete at least 30 hours of total credit. Plan B requires students to complete at least 33 hours of total credit.

Early Childhood Concentration

Required Core Courses (15 hours)
Select one of the following plans:

Plan A
EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
EDU 660 - Methods of Educational Research 3(3-0)
EDU 698 - Thesis 1-6(Spec)
SPE 585 - Early Childhood Special Education 3(3-0)

Plan B
ECE 777 - Seminar: Current Issues in Early Childhood Education 3(3-0)
EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
EDU 662 - Applied Educational Measurement and Evaluation 3(3-0)
EDU 780/MLE 780 - Master of Arts Capstone Experience 3(3-0)
SPE 585 - Early Childhood Special Education 3(3-0)

Note: EDU 780 is offered on the Mt. Pleasant campus only and should be the last course taken to fulfill the Plan B requirements before taking the comprehensive written examination.

Residence Requirement for Plan A and Plan B: Students are required to complete a minimum of 12 semester hours of credit in graduate courses taken at the Mt. Pleasant campus or from Teacher Education Professional Development tenure and tenure/track faculty in coursework offered by the CMU Global Campus.

Required Cognate Courses (18 hours)
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)

Total: 33 semester hours
Master of Arts (M.A.) in Secondary Education

Minimum Totals for Graduation: 30 - 33 hours

Admission Requirements, Retention & Termination Standards

In addition to meeting the university’s general admission requirements, the student must have a valid Michigan secondary teaching certificate or the equivalent. Courses taken to meet this admission requirement shall not count toward the master’s degree. Those who do not possess the secondary teaching certificate should contact the Center for Student Services for information on how to meet certification requirements.

Advisors for the master’s program are assigned only after the student has been regularly or conditionally admitted to the College of Graduate Studies and has selected an option.

Regular admission in the program requires an undergraduate grade point average of at least 2.70 (on a 4-point scale). Students with a GPA below 2.50 will not be considered for candidacy for the graduate program in teacher education. A maximum of 9 hours taken before signing the master’s program may be counted on the program. Students must earn a B- or better in each graded course.

Program Requirements

All candidates for the M.A. must fulfill requirements for scholarly activity under Plan A (thesis) or Plan B (comprehensive written exam). Plan A requires a minimum of 24 hours of coursework and a thesis (6 hours of thesis credit).

Plan B requires a minimum of 30 hours of coursework, a 3 hour capstone experience (EDU 780) which explores research pertinent to all Master of Arts in Secondary Education students, and a comprehensive four (4) hour examination over the coursework in the student’s M.A. Program. The examination over the coursework must be taken early in the term following the completion of EDU 780. Students will not need to register for a class or pay fees for the examination. The examination may be taken a maximum of two times.

Degree Requirements:

Required Core Courses

Select one of the following plans:

Plan A (18 hours)
- EDU 609 - History of Education 3(3-0)
- EDU 628 - Secondary School Programs and Practices 3(3-0)
- EDU 660 - Methods of Educational Research 3(3-0)
- EDU 698 - Thesis 1-6(Spec)
- EDU 755 - Advanced Research Design and Interpretation 3(3-0)

Plan B (12 hours)
- EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
- EDU 613/MLE 613 - Current Educational Issues 3(3-0)
- EDU 614 - Advanced Educational Psychology 3(3-0)
- EDU 662 - Applied Educational Measurement and Evaluation 3(3-0)
- EDU 780/MLE 780 - Master of Arts Capstone Experience 3(3-0)

Required Courses (6 hours)

Select one of the following courses:
- EDU 714 - Advanced Educational Psychology
- EDU 752 - Advanced Research Design and Interpretation
- EDU 753 - Advanced Research Methods
- EDU 754 - Advanced Research Procedures
- EDU 755 - Advanced Research Design
- EDU 756 - Advanced Research Policies
- EDU 757 - Advanced Research Administration

Program Electives (6 hours)

Electives (6 hours)

To be selected with advisor’s approval.

Total: 30-33 semester hours

Note: Plan A requires students to complete at least 30 hours of total credit. Plan B requires students to complete at least 33 hours of total credit.

Master of Arts (M.A.) in Reading and Literacy K-12 (EDU)

Minimum Totals for Graduation: 33 - 36 hours

The Master of Arts in Reading and Literacy K-12 has been developed based on teacher preparation standards written by the International Reading Association (IRA) and the National Council of Teachers of English (NCTE) and adopted by the National Council for the Accreditation of Teacher Education (NCATE). In addition, the course work contains components to meet the standards approved by the Michigan State Board of Education for the Reading Specialist (BR) Endorsement (July 20, 2000). Any certified teacher meeting the requirements for entry into graduate studies at Central Michigan University is eligible to enter the program.

The Master of Arts in Reading and Literacy K-12 provides students with knowledge and skills in reading and writing programs K-12. The major objectives of the program will enable students to:
1. organize and implement school literacy programs
2. diagnose and treat difficulties in literacy
3. implement appropriate reading and writing instruction.
4. develop interdisciplinary and integrated units involving literacy.
5. conduct research about current issues of literacy.
6. develop technological and viewing skills related to literacy programs.

Admission Requirements, Retention & Termination Standards

Admission

In addition to the university’s general admission requirements, the student must have a valid K-12 teaching certificate or equivalent. Regular admission into the program requires an undergraduate grade point average of at least 2.70 (on a four point scale). Students with a GPA below 2.70 will not be considered for admission to the program.

A maximum of 9 hours taken before signing the master’s program may be counted toward the program. Students must earn a B- or better in each graded course.
**Program Requirement**

**Residence Requirement for Plan A and Plan B:** Students are required to complete a minimum of 12 semester hours of credit in graduate courses taken at the Mt. Pleasant campus or from Teacher Education Professional Development tenure and tenure/track faculty in course work offered by CMU Global Campus.

**Required Courses - Reading & Literacy Concentration**
(18 hours)

- EDU 630 - Organization and Implementation of School Literacy Programs 3(3-0)
- EDU 632 - Practicum in the Diagnosis and Treatment of Difficulties in Literacy 3(3-0)
- EDU 636 - Classroom Reading and Writing Instruction 3(3-0)
- EDU 641 - Interdisciplinary Processes and Strategies for Teaching Literacy 3(3-0)
- EDU 730 - Seminar: Issues in Literacy 3(3-0)

**Core Courses**

Select one of the following plans:

**Plan A (15 hours)**
- EDU 613/MLE 613 - Current Educational Issues 3(3-0)
- EDU 660 - Methods of Educational Research 3(3-0)
- EDU 698 - Thesis 1-6(Spec)
- EDU 755 - Advanced Research Design and Interpretation 3(3-0)

**Plan B (18 hours)**

**Required Core (15 hours)**
- EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
- EDU 613/MLE 613 - Current Educational Issues 3(3-0)
- EDU 614 - Advanced Educational Psychology 3(3-0)
- EDU 662 - Applied Educational Measurement and Evaluation 3(3-0)
- EDU 780/MLE 780 - Master of Arts Capstone Experience 3(3-0)

**Electives for Plan B (3 hours)**

An elective course may be selected from the following:
- EDU 528 - Emergent Literacy: Theory and Practice 3(3-0)
- EDU 538 - Coordination of the Language Arts with Reading 3(3-0)
- EDU 540 - Literacy Education: Theory and Practice 3(3-0)
- EDU 635 - Problems in Language Arts in the Elementary School 3(3-0)
- ENG 517 - Reading and the English Classroom 3(3-0)
- ENG 573 - Linguistics and Reading 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 681 - Seminar in Children's Literature 3(3-0)
- COM 569 - Communication in the Classroom 3(3-0)
- SPE 577 - Introduction to Specific Learning Disability 3(3-0)
- TAI 585 - Creative Dramatics 3(2-2)

**Note:** Plan B students must also take a comprehensive four (4) hour examination over the course work in the student's M.A. program. This exam must be taken early in the term following the completion of EDU 780. Students will not need to register or pay fees for this exam. The exam may be a taken a maximum of two times. Specific descriptions of the program and exam requirements are available in EHS 421 or online.

**Total:** 33-36 semester hours

**Note:**
- Plan A requires a total of 33 hours.
- Plan B requires a total of 36 hours.

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**Graduate Certificate in Educational Technology**

**Minimum Totals for Graduation:** 15 hours

The Graduate Certificate in Educational Technology program prepares educators and other educational professionals to effectively utilize new learning technologies. The technologies addressed in this program include multimedia, handheld devices, distance, and telecommunications in education. Designed to meet the needs of educators and other educational professionals, this program also prepares individuals for classroom technology support roles.

**Required Courses**
- EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
- EDU 595 - Telecommunication in Education 3(2-2)
- EDU 642 - Instructional Multimedia 3(3-0)
- EDU 643 - Instructional Design 3(3-0)
- EDU 707 - Seminar: Issues in Educational Technology 3(3-0)

**Total:** 15 credit hours

**Note:** This Graduate Certificate in Educational Technology is not related to earning a teaching certificate.

**Course Descriptions: ECE**

**ECE 625 Foundations of Early Childhood Education 3(3-0)**

Examination of philosophical, historical, social, theoretical, and ethical factors that have shaped and continue to shape early childhood education; implications for effective professional practice.

**ECE 628 Language and Literacy Development of Young Children 3(3-0)**

Analysis, synthesis, and application of theories and research in language and literacy development in the education of young learners.

**ECE 629 Promoting Parent Involvement in Early Childhood Education 3(3-0)**

Analysis of current research findings on how teachers can increase parent involvement in early childhood programs. Action research on improving parent-school partnership.

**ECE 630 Culturally Responsive Early Childhood Programs 3(3-0)**

An analysis of current research findings on multicultural education and implementation of culturally responsive practice in early childhood programs.

**ECE 644 Early Childhood Concept Development and Creativity 3(3-0)**

Examination of theory, research, and practice related to concept development and creativity in young children.

**ECE 657 Cognitive and Psycho-Motor Development of Young Children: Theory & Practice 3(3-0)**

An analysis of current research findings on cognitive and psycho-motor development of young children.

**ECE 777 Seminar: Current Issues in Early Childhood Education 3(3-0)**

Analysis of existing and emerging current issues in early childhood education with opportunities for in-depth study of areas of concern. Prerequisite: Elementary Teaching Certificate.
Course Descriptions: EDU

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 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 standing.

EDU 532 Reading in the Content Areas 3(3-0)
Focuses on teaching 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(3-0)
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)
Focuses on the 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 instructional approach and authentic contexts. 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 prospective driver education instructors to conduct instruction which develops vehicle operational skills for the novice driver. Prerequisites: EDU 551.

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 prospective driver education instructors; classroom and in-car instruction in approved driver education programs under mentoring of cooperating driver education teachers. Prerequisites: EDU 552.

EDU 566 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)
Examination, development, assessment, and practical usage of methods and materials in the teacher’s subject area at middle school, high school, or community college level. This course is approved for offering in a distance learning format.

EDU 603 Elementary Diagnosis, Remediation and Differentiation of Reading Instruction 3(3-0)
Diagnosing and implementing research-based intervention practices designed to improve literacy in the elementary classroom.

EDU 605 History and Trends in Elementary School Curriculum Development 3(3-0)
History and trends in elementary school curriculum development. This course is approved for offering in a distance learning format.

EDU 606 Secondary Advanced Reading Diagnosis and Instruction 3(3-0)
Diagnosing and implementing research-based intervention practices designed to improve literacy in the secondary classroom.

EDU 608 Projects in Education 1-6(Spec)
Investigating, analyzing, and reporting on special problems, innovative programs, changing curricula, and new techniques in elementary education. Subject to credit limitations.

EDU 609 History of Education 3(3-0)
Development of modern education in Western civilization.

EDU 613 Current Educational Issues 3(3-0)
Identification and analysis of significant, persistent issues in education in the United States and the relationship to student achievement and teacher effectiveness. Identical to MLE 613. Credit may not be earned in more than one of these courses. This course has been approved for offering in a distance learning format.

EDU 614 Advanced Educational Psychology 3(3-0)
Theories of learning and application to instruction. This course is approved for offering in a distance learning format. Prerequisite: EDU 493.
EDU 615 Survey of Science Education 3(3-0)
Exploration of current issues in science teaching and learning; foundational science education literature; projects based on classroom practice; relevant science education resources. Prerequisites: Admission to the Master of Arts in Teaching Integrated Science.

EDU 618 The Nature of Science in Science Teaching 3(3-0)
The philosophy, history, and sociology of science; the methods and goals of science; implications for teaching the nature of science. Prerequisites: EDU 615.

EDU 619 Continuing Registration for Final Research Project 1(1-0)
An non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

EDU 620 Problems of Teaching Mathematics in the Elementary School 3(3-0)
Exploring cognitive issues, history, research, problem solving, technology, innovative programs, basic skills, and state and national standards in mathematics education. Prerequisite: Teaching Certificate.

EDU 622 Advanced Adolescent Psychology 3(3-0)
Advanced analysis of growth, development, and behavior during adolescence.

EDU 628 Secondary School Programs and Practices 3(3-0)
Organization, content and philosophies underlying the establishment and operation of secondary schools. This course is approved for offering in a distance learning format.

EDU 630 Organization and Implementation of School Literacy Programs 3(3-0)
Design, implementation and evaluation of school reading and writing programs, staff development, and the change process. Prerequisites: EDU 632 or EDU 636, or concurrent enrollment in EDU 632 or EDU 636.

EDU 632 Practicum in the Diagnosis and Treatment of Difficulties in Literacy 6(Spec)
Diagnostic procedures and materials; supervised work with K-12 students or adolescents; development and implementation of remediation procedures. Prerequisites: teaching certificate, one year teaching experience.

EDU 633 Clinical Practice in Reading 3(1-4)
Continuation of EDU 632. Prerequisites: EDU 533 and EDU 632 plus permission of instructor.

EDU 635 Problems in Language Arts in the Elementary School 3(3-0)
Trends in writing, spelling, listening, and speaking; research and activities for children. Prerequisite: EDU 330.

EDU 636 Classroom Reading and Writing Instruction 3(3-0)
Students examine the reading and writing process in classroom instruction and learn about techniques and materials appropriate for specific reading and writing approaches. Prerequisite: teaching certificate.

EDU 640 History and Trends in Elementary Social Studies Education 3(3-0)
Analysis of history and trends in elementary social studies education. This course is approved for offering in a distance learning format.

EDU 641 Interdisciplinary Processes and Strategies for Teaching Literacy 3(3-0)
This course will reinforce content teaching strategies and provide a conceptual framework for integrating reading, writing, and thinking for learning throughout the curriculum. Prerequisite: Elementary Teaching Certificate.

EDU 642 Instructional Multimedia 3(3-0)
Students will study, practice, and apply how to appropriately and effectively implement multimedia technologies in classroom environments. Prerequisites: EDU 590. This course is approved for offering in a distance learning format.

EDU 643 Instructional Design 3(3-0)
A study of the principles of instructional design. Designing instructional systems, processes in learning and instruction, delivery systems and evaluating instruction are considered. Prerequisites: EDU 590. This course is approved for offering in a distance learning format.

EDU 645 Advanced Science Teaching Methods 3(3-0)
Planning, assessment, and evaluation of K-12 science teaching and learning; evaluation of science curriculum materials; exploration of effective science teaching practices. Prerequisites: EDU 615.

EDU 651 Supervision of Student and Intern Teaching 3(3-0)
Development of knowledge and skills needed for supervising and mentoring in school settings. This course is approved for offering in a distance learning format. Prerequisite: two years of teaching experience.

EDU 653 The Read/Write Web 3(3-1)
Development of Read/Write Web resources with PK-12 students in a classroom setting. This course is approved for offering in a distance learning format. Prerequisites: EDU 590, EDU 642, and EDU 643.

EDU 655 The Community College 3(3-0)
History, philosophy, programs, and practices of community and junior colleges. This course is approved for offering in a distance learning format.

EDU 658 Practicum in the Community College 3-6(Spec)
Opportunity to observe/teach, or work in library, counseling center or with community college administrators. Arrangements made at beginning of semester prior to course registration. CR/NC only. This course is approved for offering in a distance learning format. Prerequisites: EDU 655 or current employment at a community college.

EDU 660 Methods of Educational Research 3(3-0)
Interpreting research findings, planning and conducting scientific studies in education. This course may be offered in an online or hybrid format.

EDU 662 Applied Educational Measurement and Evaluation 3(3-0)
Applications of measurement and evaluation principles to educational settings with emphasis on construction and use of achievement tests. This course is approved for offering in a distance learning format. Prerequisite: admission to a graduate degree program in education.

EDU 670 Reading in the Secondary School II 3(Spec)
Materials and techniques of instruction employed by secondary school teachers and supervisors of reading. Prerequisites: EDU 330 and EDU 431, or EDU 450.

EDU 682 Psychology of Child Development 3(3-0)
Facts and generalizations concerning the growth of children from birth to maturity. Identical to PSY 682. Credit may not be earned in more than one of these courses. This course is approved for offering in a distance learning format. Prerequisites: Graduate status.

EDU 687 Independent Study 1-3(Spec)
Prerequisites: 15 hours of graduate work and permission of department chairperson. Subject to credit limitation.

EDU 688 Independent Study 1-3(Spec)
Prerequisites: 15 hours of graduate work and permission of department chairperson. Subject to credit limitation.
Course Descriptions: MLE
MLE 570 Issues in Middle Level Education 1-3(Spec)
A focus on current issues in middle level education. Students will help select specific topics for in-depth study. Prerequisites: MLE 383 or 643.
MLE 613 Current Educational Issues 3(3-0)
Identification and analysis of significant, persistent issues in education in the United States and the relationship to student achievement and teacher effectiveness. Identical to EDU 613. Credit may not be earned in more than one of these courses. This course has been approved for offering in a distance learning format.
MLE 641 Young Adolescent Needs and Characteristics 3(3-0)
An orientation to the unique developmental needs and characteristics of young adolescents.
MLE 642 Concepts, Structures, and Programs for Middle Level Schools 3(3-0)
An orientation to middle level education which focuses on the middle level school concept, structures, and programs. Prerequisite or Coerequisite: MLE 641.
MLE 643 Student Diversity Issues in the Middle Level Classroom 3(3-0)
An orientation to the multiple aspects of human diversity in the middle level classroom. Prerequisite or Co-requisite: MLE 641.
MLE 644 Issues in Meeting the Diverse Needs of Middle Level Learners 3(3-0)
Instructional strategies and assessment/evaluation methods and materials for middle level classroom teachers appropriate for the unique developmental needs and characteristics of young adolescents. Prerequisites: MLE 641, MLE 642, and MLE 643.
MLE 645 Middle Level School Curriculum 3(3-0)
Curriculum for middle level classroom teachers to meet the unique developmental; needs and characteristics of young adolescents. Prerequisites: MLE 641, MLE 642, and MLE 643.
MLE 646 Middle Level Field Experience 3(3-0)
Students develop and implement action plans for their classrooms in the field-based culminating activity of their Michigan Middle Level Endorsement. Prerequisites: MLE 644, 645.
MLE 687 Independent Study in Middle Level Education 1-6(Spec)
An opportunity for students to undertake specialized study in middle level education. Prerequisites: approval of Program Advisor and Department Chairperson.
MLE 780 Master of Arts Capstone Experience 3(3-0)
Students complete research projects appropriate to their degree programs that produce results applicable to their current practice. Should be last course taken in student’s program. Identical to MLE 780. Credit may not be earned in more than one of these courses.
Interdisciplinary and Interdepartmental Programs

INTERDEPARTMENTAL AND INTERDISCIPLINARY PROGRAMS

This section describes programs that are interdepartmental or interdisciplinary. Please contact the director listed in each program for more information.

Interdisciplinary Graduate Programs

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 and emphasize 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
- Learn about creative solutions to some of today’s most challenging problems
- Become an interdisciplinary thinker who analytically and creatively embraces new 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
### Certificate in Data Mining

**College of Science and Technology**

- This is an interdepartmental program. Contact the Mathematics, Computer Science, or Geography department for more information.
- **Minimum Totals for Graduation: 15 - 18 hours**
  - The Data Mining Certificate program is designed to give each student a comprehensive training of basic foundation, advanced knowledge and applications of data mining. The primary goal is to develop a high quality program and a creative learning environment that enable students to acquire advanced data mining knowledge and experience in real world applications, team work and presentations that are essential in work place.

**Admission Requirements, Retention & Termination Standards**

**Admission Requirements**

Admission is dependent upon a student having completed at least three years of undergraduate program with a minimum GPA of 3.0 overall and at least 3 credit hours of basic statistics or equivalent. An international student must satisfy the required minimum TOEFL score as specified in the Graduate Bulletin. The consideration of admission deadline is the same as the University policy as specified in the Graduate Bulletin. The application deadline for consideration of a graduate teaching assistantship is March 1st. The materials include (1) undergraduate transcript or graduate transcript, if a student is already in a graduate program, (2) the graduate assistantship application form, and (3) three letters of recommendation.

**Certificate Requirements**

The Data Mining certificate program requires a successful completion of 15 to 18 credit hours of graduate course work. Students must have CMU graduate student status. If a student has taken at least one course (or equivalent course) from the list of required and primary elective courses, the student is required to have a total of 15 credit hours. If a student has taken more than one of these courses, the student will have to take courses from the secondary electives in order to fulfill the 15 hours requirement. If a student has not taken any of these courses, the student is required to take all the 18 credit hours. Students must have an earned Bachelor’s degree before receiving the certificate.

**Required Core Courses (9 hours)**

- CPS 685 - Pattern Recognition and Data Mining 3(3-0)
- GEO 503 - Geographic Information Systems 3(2-2)
- STA 591 - Data Mining Techniques I 3(3-0)

**Primary electives (6-9 hours)**

- Choose at least two out of the following courses. Primary electives are to be chosen in consultation with and approval of a data mining program advisor. The choice of two courses depends on the background a student has prior to joining the program.
  - CPS 541 - Databases 3(3-0)
  - CPS 585 - Applied Data Engineering 3(3-0)
  - GEO 512 - Quantitative Methods for Spatial Analysis 3(2-2)
  - STA 580 - Applied Statistical Methods I 3(3-0)

**Notes:** You may select CPS 585 OR 541, but not both. CPS 541 is recommended for Computer Science Majors.

**Secondary Electives (0-6 hours)**

- Any graduate level quantitative or computational course. Secondary electives are to be chosen in consultation with and approval of a data mining program advisor.

**Total:** 15-18 semester hours

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### Master of Arts (M.A.) in Education

**College of Education and Human Services**

- **Global Campus, 802 Industrial Drive, Mount Pleasant 48859; 989-774-3144**
  - **Note:** Currently the M.A. degree in Education is only offered through Global Campus.

#### Minimum Totals for Graduation: 33-34 hours

The Master of Arts degree in Education is designed to provide knowledge and skills for individuals required to function effectively in various positions of educational leadership. This is not a certification program for public school teachers, as it presumes the individual is already trained and qualified in the technical aspects of her or his field.

The MA degree in Education program requires the student to complete a core of 18 semester hours, which includes an integrating experience (Capstone Project). An additional 15-16 semester hours must then be completed with specific courses determined by the academic advisor. All candidates for the MA must complete a minimum of 33-34 semester hours.

**Admission Requirements, Retention & Termination Standards**

**Admission**

Applicants holding a baccalaureate or equivalent degree from a college or university of recognized standing may be granted regular admission, provided they have an overall cumulative undergraduate grade point average of 2.7 or higher (on a 4.0 scale). Conditional admission may be granted when the applicant does not meet the requirements for regular admission and evidence exists to support the applicant’s potential for success in the program. Admission decisions are governed by the policies of the College of Graduate Studies.

**Note:** For the Integrated Science concentration, applicants must have completed an undergraduate degree with at least 20 semester hours of undergraduate science, including biology, chemistry, geology (or the equivalent) and possess a current teaching certificate with a science endorsement. An applicant who does not meet the foregoing requirements may be granted Conditional Admission with the understanding that additional coursework may be required. Please note: the total number of credit hours for the MA in Education: Integrated Science is 34 hours.

**Program Requirements**

To qualify for graduation, candidates for the Master of Arts (MA) degree in Education must meet all of the following requirements found in the Graduate Degree Requirements and the following requirements:

1. Earned a minimum of 33 or 34 semester hours of acceptable graduate credit (15 or 16 semester hours of which must be in the area of concentration/emphasis).
2. Earned a minimum of 18 semester hours from Central Michigan University.
3. Submitted evidence of scholarship by meeting the Plan B paper requirements.

**Degree Requirements**

**Program Core I (15 hours)**

- EDU 590/SPE 510 - Advanced Technology in Education 3(2-3)
- EDU 614 - Advanced Educational Psychology 3(3-0)
- EDU 660 - Methods of Educational Research 3(3-0)
- EDU 705 - Theory and Practice in Curriculum Development 3(3-0)
- EDU 776 - Seminar: Issues in Education 3(3-0)

**Note:** EDU 776 Seminar: Issues in Education - Following accepted guidelines toward the end of their degree program, students are required to research, analyze and provide a plan of action relevant to a problem or opportunity within their own organization or professional field.
Program Core II (3 hours)
Select one of the following:
CED 555 - Human Relations Skills 3(3-1)
MSA 501 - Managing Change with Emotional Intelligence 3(3-0)

Concentrations
Select one of the following:
Adult Education Concentration
This program is designed to provide knowledge and skills for individuals to function effectively in positions of leadership or teaching in the adult education environment. This is not a certification program for teachers or administrators but may be utilized for professional advancement.

Required Courses (15 hours)
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)
EDU 613 - Current Educational Issues 3(3-0)

Total: 33 semester hours

Community College Concentration
This program is designed to provide knowledge and skills for individuals to function effectively in positions of leadership or teaching in a community college environment. This is not a certification program for teachers or administrators but may be utilized for professional advancement or as a base for a doctoral program in Community College Education.

Required Courses (15 hours)
CED 502 - Student Development in Higher Education 3(3-1)
EDL 676 - Administration of Community Colleges 3(3-0)
EDL 778 - Contemporary Issues in Higher Education 3(3-0)
EDU 602 - Strategies and Techniques for Teaching 3(3-0)
EDU 613 - Current Educational Issues 3(3-0)
EDU 655 - The Community College 3(3-0)

Total: 33 semester hours

Guidance and Development Concentration
This program is designed to provide knowledge and skills for individuals to function effectively in schools, businesses or in the nonprofit sector with special emphasis on managing relationships, making appropriate referrals and recognizing special needs of students, clients or co-workers. It is not a certification program for teachers, counselors or administrators as it presumes the participants are already certified and qualified in the technical aspects of their respective positions. It is designed for educators or practitioners who do not desire to be fully certified counselors but are seeking counseling skills to enhance their teaching competencies. This non-certification program is designed to improve practitioners' skills in communicating with their students, colleagues, clients, and supervisors. The classes in this program focus directly on involving participants in skill-building and integration activities. Participants regularly test skills and ideas from courses taught at their work sites and refine the use of these skills through feedback from the instructor, supervisors, and other program participants. Many of the classes require that participants interact with their students, colleagues, clients, or supervisors outside of the university setting. EDU 776 is a capstone course in which participants conduct field or action-oriented research which is then reported in the form of a Plan B paper or project.

Note: This MA will not qualify the graduate for endorsement as a School Counselor.

Required Courses (15 hours)
CED 580 - Seminar: Professional Topics 1-12(Spec)
CED 608 - Understanding and Working with Couples and Families 3(3-0)
CED 612 - Work and Career in a Global Society 3(3-0)
CED 621 - Orientation to a Culturally Diverse Society 3(3-0)
CED 684 - Grief, Loss and Trauma 3(3-0)

Total: 33 semester hours

Instruction Concentration
This program is designed to provide knowledge and skills for individuals to function effectively in positions of leadership or the teaching environment. This is not a certification program for teacher or administrators but may be utilized for professional advancement.

Required Courses (15 hours)
EDU 602 - Strategies and Techniques for Teaching 3(3-0)
EDU 613/MLE 613 - Current Educational Issues 3(3-0)
EDU 662 - Applied Educational Measurement and Evaluation 3(3-0)
EDU 706 - Theory and Practice of Instruction 3(3-0)
EDU 770 - Practicum in Systematic Curriculum Development 3(3-0)

Total: 33 semester hours

Integrated Science Concentration
This program is designed to provide knowledge and skills for individuals to function effectively in positions of leadership or the teaching environment. Specifically, it is designed to enhance the knowledge and skills of sciences educators. This is not a certification program for teachers or administrators but may be utilized for professional advancement.

Required Courses (16 hours)
BIO 670 - Concepts in Biological Areas for Educators 3(2-2)
CHM 509 - Environmental Chemistry for Science Teachers 4(3-3)
EDU 615 - Survey of Science Education 3(3-0)
EDU 645 - Advanced Science Teaching Methods 3(3-0)
GEL 650 - Geology for Science Teachers 3(2-2)

Total: 34 semester hours
Master of Arts (M.A.) in Humanities
College of Humanities and Social & Behavioral Sciences

Susan Schiller, Ph.D., Director
241 Anspach Hall, 989-774-3117

Minimum Totals for Graduation: 30 hours

The Master of Arts in Humanities is a degree designed for generalists, for those more interested in synthesis than specialization. It provides an integrated study of the humanities in a cross-disciplinary format. Because the various areas of the humanities are naturally interrelated, this format emphasizes connection rather than fragmentation. The courses for the 30-semester hour program are generally selected from such traditional areas of the humanities as history, literature, philosophy, religion, music and art; they may, however, also include such areas as women’s studies, political science, sociology, and anthropology.

The program is flexible enough to meet the needs of a great variety of students. It is an appropriate degree choice for students seeking a graduate degree which offers educational development or a focus on interdisciplinary knowledge.

Note: Some courses listed are not offered on a regular basis and some courses may only be offered by Global Campus. Several courses are available in an online format.

Admission Requirements, Retention & Termination Standards

Admission requirements are the same as those for admission to the College of Graduate Studies (baccalaureate degree and overall GPA of 2.7) and a minimum of 20 hours of coursework in areas of the Humanities (history, literature, philosophy, etc.) with GPA of 2.7.

Degree Requirements
Requirements I

A minimum of 24 hours of graduate credit in the Humanities including:

History Requirements (6-9 hours)
Select 6-9 hours in consultation with advisor. See Structure (Core Courses) below.

Literature Requirements (6-9 hours)
Select 6-9 hours in consultation with advisor. See Structure (Core Courses) below.

Other Requirements (6-9 hours)
Select 6-9 hours of coursework in any of the following areas approved by the student’s faculty advisor:

Art
Music (non-studio/non-performance)
Religion
Philosophy
Cinema
See Structure (Core Courses) below.

Note: A minimum of 15 hours of the above courses must be in courses numbered 600 or above.

Requirements II

Select one of the following plans:

Plan A (6 hours)
Thesis with oral defense:
HUM 799 - Thesis 1-6(Spec)

Plan B (6 hours)
6 hours of elective coursework approved by faculty advisor, 3 hours of which may be in a curriculum development course (e.g., HST 601, ENG 615).

Students electing Plan B must submit a paper prepared in connection with a seminar or as an independent study that will serve as evidence of the student’s scholarship.

Structure (Core Courses)

In order to ensure both coherence and the advantage of complementary disciplinary approaches in the program of studies, each student’s coursework must be approved in advance by a faculty advisor. Coursework leading to the degree will be organized around a core (15-18 hours) of courses that are integrated by topic or theme.

The following is a list of representative topics that have been approved by the M.A. in Humanities Council.

Core Courses I: The Rise of Industrial Society
Students selecting this core of courses would select five or six of the following:

BCA 525 - Film Genre Study 3-9(Spec)
BLR 597 - Special Topics 1-6(Spec)
ENG 656 - Seminar in American Literature 3-9(Spec)
HST 525 - The Industrialization of America 3(3-0)
HST 603 - Colloquium in U.S. History Since 1865 3-6(3-0)
MUS 597 - Special Studies 1-6(Spec)
PHL 597 - Special Topics in Philosophy 1-2(Spec)
REL 501 - Seminar in the Study of Religion 3(3-0)

Note: Seminar Topics for seminars listed above:
BCA 525: Cautionary Tales for the Industrial Age: Science and the Individual in Cinema
BLR 597: Transformation of American Law
ENG 656: The Twenties and Thirties OR Realism and Naturalism
MUS 597: Music and Technology
PHL 597: Philosophical Problem in Industrial Society
REL 501: Religious Issues in the 20th Century

Core Courses II: Images and Ideas of Self

Students selecting this core of courses would select five or six of the following:

ENG 656 - Seminar in American Literature 3-9(Spec)
ENG 665 - Seminar in World Literature 3-9(Spec)
HST 603 - Colloquium in U.S. History Since 1865 3-6(3-0)
HUM 610 - Seminar in American Individualism 3(3-0)
MUS 597 - Special Studies 1-6(Spec)
MUS 713 - The Development of Jazz Through 1945 3(3-0)
PHL 525 - Philosophical Problems of the Self 3(3-0)
PHL 597 - Special Topics in Philosophy 1-2(Spec)
REL 501 - Seminar in the Study of Religion 3(3-0)
Core Courses III: Contemporary Issues in the Humanities: Race, Class and Gender

Students selecting this core of courses would select five or six of the following:

- ANT 588 - Special Topics in Anthropology 1-0(Spec)
- ART 586 - Seminar in Art History 3(3-0)
- BCA 525 - Film Genre Study 3-9(Spec)
- ENG 656 - Seminar in American Literature 3-9(Spec)
- HST 715 - Seminar in the Civil War and Reconstruction 3(3-0)
- HUM 797 - Special Topics in Humanities 1-2(Spec)
- PHL 597 - Special Topics In Philosophy 1-2(Spec)
- REL 501 - Seminar in the Study of Religion 3(3-0)
- SOC 502 - Theories of Race Relations in Sociology 3(3-0)

Note: Seminar Topics for seminars listed above:

- ANT 588: Native American Culture
- ART 586: Native American Art
- BCA 525: Women in Film
- ENG 656: African-American Writers OR Women Writers
- HUM 797: Moral Issues in America: Race, Class and Gender OR Race, Class and Power: South Africa in the 20th Century
- PHL 595: Women in Philosophy
- REL 501: Religion, Race and Discrimination in America OR Women in Religion

Core Courses IV: Popular Culture Studies

Students selecting this core of courses would select five or six of the following:

- ANT 588 - Special Topics in Anthropology 1-0(Spec)
- BCA 503 - Critiquing Mass Media 3(3-0)
- BCA 525 - Film Genre Study 3-9(Spec)
- BCA 625 - Film and Video Theory and Criticism 3(3-0)
- ENG 656 - Seminar in American Literature 3-9(Spec)
- ENG 665 - Seminar in World Literature 3-9(Spec)
- HST 717 - Seminar in the History of Twentieth Century America 3-6(3-0)
- HUM 610 - Seminar in American Individualism 3(3-0)
- MUS 713 - The Development of Jazz Through 1945 3(3-0)
- PHL 597 - Special Topics In Philosophy 1-2(Spec)
- REL 501 - Seminar in the Study of Religion 3(3-0)

Note: Seminar Topics for seminars listed above:

- ANT 588: High Technology and Sociocultural Change
- BCA 525: Cautionary Tales for the Industrial Age: Science and the Individual in the Cinema
- ENG 656: Issues in American Popular Culture
- ENG 665: Themes in Science Fiction and Fantasy
- HST 717: History of Rock and Roll OR History of Anti-War Movements
- PHL 597: Philosophical Ideas in Popular Culture
- REL 501: Religious Issues in Popular Culture

Total: 30 semester hours
Master of Arts in Teaching Integrated Science (M.A.T.)

Contact: John Scheide, Dept. of Biology
         989-774-3291; scheide@cmich.edu

Minimum Totals for Graduation: 30 - 36 hours

The Master of Arts in Teaching Integrated Science is designed for K-12 teachers with a major in Integrated Science (Di endorsement) or Science (Dx endorsement) who want to balance and strengthen their science content knowledge and skills in the broad arena of science. Secondary teachers with an endorsement in a particular science area (biology, chemistry, earth science, physics) may find this degree useful for the eventual addition of a new endorsement. However, these teachers should also consider a masters program (MS, MA, or MAT) in their area of specialty (e.g., Biology, Chemistry, etc.). Completion of the MAT in the Integrated Science program by itself does not involve any new endorsement. Teachers will apply new content knowledge to their classrooms through the design of instructional materials and experiments that emphasize student learning through inquiry. They will also gain pedagogical skills required to teach inquiry-based science.

Students may choose to pursue either a Plan A thesis option (a 30 semester hour degree) or a Plan B non-thesis option (a 36 semester hour degree). Fifteen credits must be earned at the 600-level or above. The thesis or research project is completed under the direction of the major advisor and the student’s advisory committee. Students interested in the thesis option should identify a faculty member who has appropriate scientific and academic qualifications and is willing to commit appropriate time to thesis supervision, and define a project of mutual interest. A thesis proposal must be prepared in collaboration with the faculty advisor and the committee before the research project is to begin. Approval from other committees and oversight bodies (e.g., IRB, Safety Officer) may be required before the thesis research can begin.

Admission Requirements, Retention & Termination Standards
To be eligible for Regular Admission to the Master of Arts in Teaching Integrated Science applicants should have:

1. completed an undergraduate degree with a major in integrated science, science, biology, chemistry, earth science, physical science or physics (or the equivalent) with a 2.7 or better grade point average in their major and a 3.0 grade point average overall.
2. taken at least 30 semester hours of undergraduate science.
3. current teacher certification with a science endorsement.
4. completed at least one year of teaching at the level of their certification in a permanent (not substitute) teaching position.

Applicants are required to submit a statement of interests, transcripts, evidence of teacher certification, and three letters of recommendation. An applicant who does not meet the foregoing requirements may be granted Conditional Admission with the understanding that additional coursework may be required. Applicants from non-English speaking countries are required to demonstrate proficiency in English via the TOEFL exam. Applicants for graduate teaching assistantships (Biological department only) are required to submit GRE General scores (contact the Department of Biology for application materials and deadline dates.) All degree requirements must be completed in 7 years or less. Since most courses will need to be taken in the summer, full-time teachers may take up to 5 years to complete the degree.

Plans
Select one of the following Plans:

Plan A (30 hours)
Thirty semester hours of graduate work including 6 credit hours of thesis and at least one credit hour in seminar. Since the thesis is an extensive research project, students planning further graduate study in science education may choose this option as a prelude to doctoral work.

Required Science Education Courses (9 hours)
EDU 615 - Survey of Science Education 3(3-0)
EDU 618 - The Nature of Science in Science Teaching 3(3-0)
EDU 645 - Advanced Science Teaching Methods 3(3-0)

Elective Science Content Courses (12-14 hours)
The electives must be 500- or 600-level science courses in astronomy, biology, chemistry, earth science, engineering, environmental education, geology, physical science, or physics chosen with the approval of your advisor. These courses should strengthen your teaching expertise or apply toward a new area of endorsement. Students with elementary certification may choose to take courses that are specifically designed to provide content and hands-on science appropriate for K-8 classrooms. Students who are certified at the secondary level are encouraged to focus on graduate-level courses in one of the sciences. All students must identify and take at least one course at a field station or participate in a significant field experience, laboratory research experience or internship-like experience approved by the advisor.

Required Capstone Courses (7-9 hours)
Required Capstone Course I (6 hours)
Select one of the following:
EDU 698 - Thesis 1-6(Spec)
SCI 798 - Thesis 1-6(Spec)

Required Capstone Course II (1-3)
Select one of the following:
EDU 780/ME 780 - Master of Arts Capstone Seminar 3(3-0)
SCI 730 - Seminar 1(1-0)

Plan B (36 hours)
Thirty-six semester hours of graduate-level coursework approved by the advisory committee. In addition, students must submit an approved Plan B paper demonstrating either research or independent study in an area of science or science education. The Plan B paper might focus on improving the teaching of science in your school including improvements in curriculum, instruction, or leadership in science teaching. Or it might focus on answering a particular question in any one of the science disciplines, for example, someone might look at the various ferns found at Neithercut Woodland and then develop a guide to be used by those visiting the property.

Required Science Education Courses (9 hours)
EDU 615 - Survey of Science Education 3(3-0)
EDU 618 - The Nature of Science in Science Teaching 3(3-0)
EDU 645 - Advanced Science Teaching Methods 3(3-0)

Elective Science Education Courses (23-25 hours)
The electives must be 500- or 600-level science courses in astronomy, biology, chemistry, earth science, engineering, environmental education, geology, physical science, or physics chosen with the approval of your advisor. These courses should strengthen your teaching expertise or apply toward a new area of endorsement. Students with elementary certification may choose to take those courses that are specifically designed to provide content and hands-on science appropriate for K-8 classrooms. Students who are certified at the secondary level are encouraged to focus on graduate-level courses in one of the sciences. All students must identify and take at least one course at a field station or participate in a significant field experience, laboratory research experience or internship-like experience approved by the advisor.

Required Capstone Course (2-4 hours)
SCI 790 - Research in Science Education 2-4(Spec)

Total: 30-36 semester hours

Examination: Students must pass a comprehensive oral and/or written examination over the coursework and administered by the advisory committee.

Transfer Credit: A maximum of 10 semester credits are accepted for transfer, with the approval of the advisory committee.
Master of Science in Administration (M.S.A.)
College of Graduate Studies

Lesley Withers, Ph.D., Interim Director
222 Rowe Hall; 989-774-6525

Minimum Totals for Graduation: 36 hours

The Master of Science in Administration degree is an interdisciplinary program developed to meet the educational needs and interests of administrators in organizations. The primary focus of the degree program is applied action grounded in theory. The principal elements of this degree are knowledge, competencies, and practical processes needed for successful careers in administration.

The program includes a core of courses that provides the students with a base of common knowledge and competencies required for successful administration. In addition, the program provides a concentration of specialized courses in the student’s area of professional interest. The program culminates in an integrative applied project that links the concepts of the program to the world of work and demonstrates the unity and coherence of the student’s course of study. Specific courses will be selected by an academic advisor in consultation with the student.

This program leads to an MSA degree and is identical whether on-campus or through Global Campus. Credit for course work in either program is interchangeable.

Admission Requirements, Retention & Termination Standards (For On-Campus Students)

Admission

To be admitted to the Master of Science in Administration program, a candidate must meet the requirements for regular admission to the College of Graduate Studies (a baccalaureate degree from a college or university of recognized standing with a cumulative GPA of at least 2.7 or, optionally, 3.0 in the final sixty semester hours of graded coursework toward the bachelor’s degree). At least sixty semester hours of undergraduate coursework must be graded. Applicants who possess an undergraduate GPA less than 2.7 may be considered for conditional admission. A maximum of six hours taken before admission to the MSA program may be counted toward the degree.

Competencies Required

Several MSA administrative core courses and cognate courses have prerequisites. These prerequisite courses are Accounting 201 or 203 and Statistics 282 or their equivalents. Students can satisfy the prerequisites for MSA 600, MSA 602, MSA 634, and MSA 640 in the following ways:

1. Successful completion of the course (grade of C or better) or its equivalent within three years prior to admission to the MSA program;
2. Pass a competency assessment exam, only offered if the student has previously taken the course and earned a grade of "C" or better. Examinations may be taken twice and must be passed with at least 70% accuracy;
3. Take the course or its equivalent at CMU or another accredited institution and earn a "C" or better. Submit an official transcript if the course is not taken at CMU or
4. Take either the CLEP Financial Accounting test and submit official results of 50 or better or take the DSST Principles of Financial Accounting exam and submit official results of 47 or better. Take the DSST Principles of Statistics exam and submit official results of 48 or better or 400 or better on the revised version.

Satisfactory Progress

Students must maintain a cumulative GPA of 3.0 or higher to remain in good standing. If a student’s cumulative GPA falls below 3.0, the student will be placed on academic probation. Students on probation will be allowed an opportunity to raise the cumulative GPA to 3.0 according to College of Graduate Studies policy. Students dismissed from the program may petition for readmission no sooner than one academic year after the semester they were dismissed. Coursework which is over seven years old may not be used toward the MSA degree and certificates.

English Language Requirements for International Students

Applicants with TOEFL scores of 213 CBT, 550 PBT or 79 iBT and above or IELTS scores of 6.5 and above may be granted Regular admission to the MSA Program. Students with TOEFL scores between 500 and 549 PBT or 173 and 210 CBT or 61-78 iBT or IELTS scores of 5.5 or 6 should review the International Student Admission section on TOEFL scores in this Bulletin.

Advising

Upon admission to the MSA program, the student will be assigned an advisor.

The student is required to meet with his or her advisor to determine prerequisite(s) and core area requirements and to select the courses to meet the concentration’s requirements. A record of the program authorization will be placed in the student’s file in the College of Graduate Studies. Any course taken without the express written consent of the MSA Director may not be approved for fulfillment of the degree requirements.

Program Requirements

All Master of Science in Administration degree students are required to take six core courses: MSA 600, MSA 601, MSA 602, MSA 603, MSA 604, and MSA 699.

To qualify for graduation, candidates for the Master of Science in Administration degree or Graduate Certificates must meet all of the requirements found in the Academic Information “Degree Requirements” section of the Graduate Bulletin and the following requirements (https://bulletins.cmich.edu/2012/gr/administrative/academic/degree-candidacy.asp?yr=2012&level=GR&loc=onc) for the Graduate Bulletin or https://bulletins.cmich.edu/2012/cel/academic/graduation.asp?yr=2012&level=GR&loc=cel for Global Campus:
1. Earned a minimum of 36 semester hours of acceptable graduate credit (15-18 semester hours of which must be in the area of concentration).
2. Earned a minimum of 18 semester hours from Central Michigan University.
3. Submitted evidence of scholarship by meeting the Plan B paper requirement by completing the Integrating experience (MSA 699). This includes all Institutional Review Board (IRB) or research review application requirements.
4. Successfully completed these required courses: MSA 600, MSA 601, MSA 602, MSA 603, MSA 604, and MSA 699.
5. Applied no more than 15 semester hours of College of Business Administration courses on the program plan. College of Business Administration courses are:
   a. Courses carrying designators ACC, BIS, BLR, FIN, HSA, MGT and MKT.
   b. MSA 601, MSA 602 OR MSA 634 or MSA 635, and MSA 660.
   c. Prior learning assessment credits identified as having business school content (applies to Global Campus only).
   d. Courses transferred from a school of business or management which would be considered College of Business Administration courses at CMU.
6. Have an approved program plan on file.
7. Completed all requirements for the degree within seven years of the awarding of the master’s degree.

(Continued)
In addition:

a. MSA Certificate programs may not use more than 12 credits in College of Business Administration courses;
b. MSA Certificate programs must be completed within seven years prior to the awarding of the graduate certificate;
c. Business courses taken on any certificate program will not apply to any business degree at CMU; and

d. Courses with MSA designators may not be used toward an MBA degree at CMU and CMU courses with MBA designators may not be used toward the MSA degree.

ACCELERATED MASTER OF SCIENCE IN ADMINISTRATION

Undergraduate students majoring in Integrated Leadership Studies can pursue a Master of Science in Administration degree in any selected concentration, while fulfilling the final year requirements for their Bachelor’s degree. The Accelerated Master of Science in Administration program allows students to reduce the total number of credits to complete their undergraduate degree and graduate level degrees by applying up to 12 credits toward the graduation requirements on both degree programs.

Admission Criteria:
To be eligible for the Accelerated Master of Science in Administration program, the student must have an overall undergraduate grade point average (GPA) of at least 3.0 and have a minimum of 86 credit hours towards a Bachelor’s degree, including all General Education requirements (including transfer and AP credits), the semester that they apply for admission to the Accelerated MSA program. During the final academic year, students will complete 12 credits of coursework that will be counted toward both the undergraduate and graduate degrees. 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 of Science degree requirements during the final year. The student must earn a minimum of a 3.0 or higher in each course below to count toward the graduate program. If the student doesn’t earn a 3.0 or higher in each course that is intended to be applied to the graduate degree they must reapply for admission to the MSA program. The following courses are used for dual counting for the Bachelor’s degree and the Accelerated MSA Program:

Fall semester
- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)

Spring semester
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)

Note: Early undergraduate advising required. STA 282 is required for enrollment in MSA 600. Other undergraduate courses may be recommended by advisor.

Degree Requirements
Concentrations
Note: Some concentrations are not available at the main campus location.
Select one of the following:

Acquisitions Administration
The Acquisitions Administration concentration prepares administrators with a focus on acquisitions by providing a knowledge base in purchasing, regulatory concepts and related factors in acquisitions administration. Students will select 15-18 credits in consultation with their advisor.

Required Core (18 hours)
- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

Required Courses (6 hours)
- MGT 533 - Purchasing Strategy 3(3-0)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

Electives (9-12 hours)
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 634 - Managerial Accounting Concepts 3(3-0)
- MSA 635 - Financial Management 3(3-0)
- MSA 640 - Quantitative Applications in Decision Making 3(3-0)
- MSA 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(Spec)

Note: MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus.

Total: 36 semester hours

General Administration
Statement of Purpose for the Concentration
The General Administration concentration is designed to serve the needs of a very heterogeneous group of students. The intent is to offer a program of study which provides moderate structure through study in areas that are applicable to a wide variety of administrative settings. In addition, the student is afforded considerable flexibility in designing a program of study which avoids duplication of previous course work, training, or experience by allowing additional study in areas of choice.

Required Core (18 hours)
- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

General Administration Concentration Areas (15-18 hours)

Guide to Choosing Courses
Students are encouraged to complete courses listed within a broad range of categories.

Note: Students may substitute up to six (6) credits of courses on this concentration providing the courses are consistent with one or more of the categories listed below. The use of the substitutes must be recommended by the advisor and approved by the MSA Director.
Concentration Courses I
Information Systems and Analysis
- The integration of computer and production systems into administrative decision making.
  BIS 601 - Management Information Systems 3(3-0)
  CPS 603 - Computer Information Systems 3(3-0)
  IET 500 - Production Concepts 3(3-0)
  MKT 555 - Market and Sales Forecasting 3(3-0)
  MSA 640 - Quantitative Applications in Decision Making 3(3-0)

Concentration Courses II
International Systems, Issues, and Problems
- The study of systems, issues, and problems that impact upon dynamic organizations operating within a global environment.
  COM 667 - Seminar in Intercultural Communication 3(3-0)
  FIN 573 - International Finance 3(3-0)
  MGT 667 - International Business 3(3-0)
  MKT 560 - International Marketing 3(3-0)
  MSA 510 - Global Leadership Perspectives 3(3-0)
  PSC 555 - International Law I 3(3-0)

Concentration Courses III
Legal and Political Systems
- The nature of legal and political systems and how they impact the operation of organizations and individual decision making.
  ECO 515 - Collective Bargaining and Labor Law 3(3-0)
  PSC 514 - American Public Policy Making 3(3-0)
  PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

Concentration Courses IV
Organizational Behavior/Human Resources Administration
- The study of individuals within the work organization and the systems and processes that affect their behavior.
  CED 555 - Human Relations Skills 3(3-1)
  COM 665 - Seminar in Communication and Negotiation in Employee Relations 3(3-0)
  MGT 643 - Human Resource Management 3(3-0)
  MGT 646 - Labor Relations Issues 3(3-0)
  MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
  PSC 711 - Public Personnel Administration Practice 3(3-0)
  PSC 785 - Strategic Leadership 3(3-0)
  PSY 535 - Organizational Psychology 3(3-0)

Concentration Courses V
Organizational Communications
- Improving communication of individuals and groups within and between organizations.
  COM 560 - Communication and Social/Organizational Change 3(3-0)
  COM 561 - Communication in Conflict Management 3(3-0)
  COM 667 - Seminar in Intercultural Communication 3(3-0)
  EDL 610 - Grants and Fund Procurement 3(3-0)
  JRN 670 - Public Relations Management 3(3-0)
  MKT 555 - Market and Sales Forecasting 3(3-0)
  MSA 660 - Marketing Administration 3(3-0)

Concentration Courses VI
Social and Economic Systems
- The nature of social and economic systems and how they constrain, control, and impact the operational effectiveness of operations.
  IET 524 - Technology and Environment 3(3-0)
  MSA 634 - Managerial Accounting Concepts 3(3-0)
  MSA 635 - Financial Management 3(3-0)
  PHL 518 - Professional Ethics 3(3-0)
  PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
  SOC 512 - Industrial Sociology 3(3-0)

Note: Students may not count both ECO 515 and MGT 646 on a certificate or degree program.

Cognate Courses (0-3 hours)
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 634 - Managerial Accounting Concepts 3(3-0)
- MSA 635 - Financial Management 3(3-0)
- MSA 640 - Quantitative Applications in Decision Making 3(3-0)
- MSA 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(Spec)

Note: MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus.

Total: 36 semester hours

Health Services Administration
The Health Services Administration concentration is designed to provide the knowledge and skills required for directors, administrators and supervisors in health services. Students will select 15-18 credits in consultation with their advisor.

Required Core (18 hours)
- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

Required Courses (12 hours)
- HSC 507 - Introduction to Health Service Organizations and Systems 3(3-0)
- HSC 520 - Health Services Administration 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)

Note: Advisors may recommend to MSA Director the substitution of another course for HSC 520, if the student has appropriate management experience.

Electives (3-6 hours)
Select from the following:
- HSC 516 - Travel Course in Health Education 1-15(Spec)
- 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 552 - International Health Systems, Organizations, and Policy 3(3-0)
- HSC 572 - Quality Improvement in Health Services 3(3-0)
- HSC 581 - Managed Care: Origins, Organizations, and Operations 3(3-0)
- HSC 617 - Community and Public Health 3(3-0)
- HSC 700 - Program Evaluation in the Health Fields 3(3-0)

Cognate Courses (0-3 hours)
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 634 - Managerial Accounting Concepts 3(3-0)
- MSA 635 - Financial Management 3(3-0)
- MSA 640 - Quantitative Applications in Decision Making 3(3-0)
- MSA 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(Spec)

Note: MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus.

Total: 36 semester hours
Human Resources Administration

The Human Resources Administration concentration provides a program of study for the student who is pursuing, or intends to pursue, a career in the field of Human Resources. The concentration is designed to provide students with an overall background in the field as well as in the specific areas of Labor Relations, Staffing, Training, and Organization Development. Students will select 15-18 credits in consultation with their advisor.

Required Core (18 hours)
- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

Electives (3-6 hours)

Guideline to Choosing Courses:

Students are required to take one course from Category 1, preferably before taking other courses in the concentration. In order to produce the strongest preparation, it is recommended that students take one course from Categories 2 and 3 and two courses from Category 4.

Category 1 - Survey of Human Resources Administration Courses (Required)
Take one of the following, preferably before taking other courses in the concentration.
- MGT 643 - Human Resource Management 3(3-0)
- PSC 711 - Public Personnel Administration Practice 3(3-0)

Category 2 - Labor Relations Courses
It is recommended that students take one of the following:
- COM 665 - Seminar in Communication and Negotiation in Employee Relations 3(3-0)
- ECO 515 - Collective Bargaining and Labor Law 3(3-0)
- MGT 646 - Labor Relations Issues 3(3-0)

Note: Students may not count both ECO 515 and MGT 646 on a certificate or degree program.

Category 3 - Training & Organization Development Courses
It is recommended that students take one of the following:
- CED 555 - Human Relations Skills 3(3-1)
- COM 560 - Communication and Social/Organizational Change 3(3-0)
- COM 561 - Communication in Conflict Management 3(3-0)
- MGT 649 - Seminar in Organizational Development 3(3-0)

Note: Students may not count both COM 560 and COM 561 within the HRA concentration.

Category 4 - Staffing Courses
It is recommended that students take two of the following:
- MGT 645 - Personnel Compensation Practice and Process 3(3-0)
- MGT 647 - Employee Selection and Evaluation 3(3-0)
- PSY 536 - Personnel Psychology 3(3-0)
- PSY 636 - Organizational Applications of Personnel Psychology 3(3-0)

Note: Students may not count both MGT 647 and PSY 536 on a certificate or degree program.

Cognate Courses (0-3 hours)
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 634 - Managerial Accounting Concepts 3(3-0)
- MSA 635 - Financial Management 3(3-0)
- MSA 640 - Quantitative Applications in Decision Making 3(3-0)
- MSA 660 - Marketing Administration 3(3-0)

Information Resource Management

The Information Resource Management Concentration is designed to enable students to develop a comprehensive management approach to the introduction of information systems in an organization, in order to ensure that the information technology solution which is chosen will be deemed the one most appropriate. Students will select 15-18 credits in consultation with their advisor.

Required Core (18 hours)
- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

Required Courses I (3 hours)
- BIS 634 - Information Resources Management 3(3-0)

Required Courses II (3 hours)
Select one of the following:
- BIS 601 - Management Information Systems 3(3-0)
- CPS 603 - Computer Information Systems 3(3-0)

Note: Students may not count both CPS 603 and BIS 601 on an IRM concentration or certificate.

Required Courses III (3 hours)
Select one of the following:
- BIS 630 - Systems Analysis and Design 3(3-0)
- CPS 510 - Software Systems Engineering 3(3-0)

Note: Students may not count both CPS 510 and BIS 630 on an IRM concentration or certificate.

Required Courses IV (3 hours)
Select one of the following:
- BIS 635 - Business Systems Applications 3(3-0)
- CPS 612 - Software Project Management 3(3-0)

Note: Students may not count both CPS 612 and BIS 635 on an IRM concentration or certificate.

Electives (3-6 hours)
One to two specialized courses determined by the MSA Director.

Cognate Courses (0-3 hours)
Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:
- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 634 - Managerial Accounting Concepts 3(3-0)
- MSA 635 - Financial Management 3(3-0)
- MSA 640 - Quantitative Applications in Decision Making 3(3-0)
- MSA 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(Spec)

Note: MSA 681 and MSA 690 are only available to students admitted to Central Michigan University’s Mount Pleasant campus.

Total: 36 semester hours
International Administration

The International Administration concentration is designed to provide the appropriate educational background for students who are interested in practicing administration in international settings. Those who have administrative responsibilities with international dimensions, but work in the United States, would also find it helpful.

Students will demonstrate a sensitivity to contemporary cultural variations and the need for understanding them. This may be evidenced by graduate or undergraduate coursework, experience or other appropriate means.

Required Core (18 hours)

- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

Required Courses (15-18 hours)

Select from the following:

- ANT 506/SOC 506 - Comparative Cultural Systems 3(3-0)
- COM 667 - Seminar in Intercultural Communication 3(3-0)
- FIN 573 - International Finance 3(3-0)
- MGT 667 - International Business 3(3-0)
- MKT 560 - International Marketing 3(3-0)
- MSA 510 - Global Leadership Perspectives
- PSC 551 - Seminar in International Relations 3(3-0)
- PSC 555 - International Law I 3(3-0)
- PSC 642 - Problems and Processes of International Development I 3(3-0)
- PSC 651 - Comparative Political & Economic Systems 3(3-0)

Note: When appropriate, other courses may be substituted with the approval of the MSA Director.

Cognate Courses (0-3 hours)

Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:

- MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus.

Total: 36 semester hours

Leadership

The Leadership Concentration enables students to enhance their knowledge and skills in the area of leadership, group dynamics, organizational change, management of conflict, negotiation, cultural diversity and communication. Students will select 15-18 credits in consultation with their advisor.

Required Core (18 hours)

- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

Required Course (3 hours)

- PSC 785 - Strategic Leadership 3(3-0)

Electives (12-15 hours)

- CED 555 - Human Relations Skills 3(3-1)
- COM 560 - Communication and Social/Organizational Change 3(3-0)
- COM 561 - Communication in Conflict Management 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)
- ECO 515 - Collective Bargaining and Labor Law 3(3-0)
- MGT 646 - Labor Relations Issues 3(3-0)
- MGT 649 - Seminar in Organizational Development 3(3-0)
- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 510 - Global Leadership Perspectives 3(3-0)
- MSA 696 - Special Topics 3(Spec)
- PHL 518 - Professional Ethics 3(3-0)
- PSY 531 - Group Dynamics 3(3-0)
- PSY 535 - Organizational Psychology 3(3-0)

Plus one specialized course determined by the MSA Director

Note: Students may not count both ECO 515 and MGT 646 on a certificate or degree program.

Cognate Courses (0-3 hours)

Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:

- MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus.

Total: 36 semester hours

Long-Term Care Administration

Note: CMU is not currently accepting students into this program.

The Long-Term Care Administration concentration enables students to enhance their knowledge and skills in the areas of health services administration, long-term care administration, and resident care issues. This program is offered through Global Campus only.

Required Core (18 hours)

- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

Required Courses (18 hours)

- GRN 632 - Public Policy and Aging 3(3-0)
- HSC 520 - Health Services Administration 3(3-0)
- HSC 570 - Financial Aspects of Health Services Organizations 3(3-0)
- HSC 591 - Legal & Regulatory Aspects of Long-Term Care 3(3-0)
- HSC 592 - Administration Issues in Long-Term Care 3(3-0)
- HSC 593 - Resident Care Issues in Long-Term Care Administration 3(3-0)

Note: Students who have taken HSC 520 and/or HSC 570 as part of another concentration may select substitutes from the following courses: GRN 631, HSC 506, HSC 507, HSC 545, HSC 572, or HSC 581.

Total: 36 semester hours
Public Administration

The Public Administration Concentration is designed to prepare students for careers in public sector administration. Broadly, the objectives of the program are to provide students with background and competency in five areas including:

1. the political, social, and economic environment of public administration;
2. public management process;
3. public policy analysis;
4. research and analytic methods; and
5. organization theory and behavior.

**Required Core (18 hours)**

- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

**Required Courses (15-18 hours)**

Select five or six from the following:

- ECO 515 - Collective Bargaining and Labor Law 3(3-0)
- COM 665 - Seminar in Communication and Negotiation in Employee Relations 3(3-0)
- MGT 646 - Labor Relations Issues 3(3-0)
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
- PSC 561 - American State Government and Administration 3(3-0)
- PSC 563 - Politics and Policy in Urban Communities 3(3-0)
- PSC 565 - Managing Modern Local Government 3(3-0)
- PSC 566 - Intergovernmental Relations in the United States 3(3-0)
- PSC 610 - Foundations of Public Administration 3(3-0)
- PSC 711 - Public Personnel Administration Practice 3(3-0)
- PSC 713 - Public Budgeting and Finance 3(3-0)
- PSC 714 - Program Analysis and Evaluation 3(3-0)
- PSC 774 - Strategic Planning for Public/Non-Profit Organizations 3(3-0)
- PSC 775 - Organization Theory in Public Administration 3(3-0)
- PSC 785 - Strategic Leadership 3(3-0)

**Electives (6-9 hours)**

- RPL 508 - Budgeting for Leisure Service Agencies 3(3-0)
- RPL 511 - Liability and Risk Management in Leisure Services 3(3-0)
- RPL 521 - Fund Development & Grant Writing for Public & Non-Profit Organizations 3(3-0)
- RPL 545 - Marketing of Leisure Services 3(3-0)
- RPL 552 - Environmental Interpretation 3(3-0)
- RPL 600 - Advanced Issues in Recreation 1-6(Spec)
- RPL 620 - Planning for Parks and Recreation Facilities 3(3-0)
- RPL 652 - Outdoor Recreation 3(3-0)
- RPL 791 - Independent Study 2(Spec)

**Cognate Courses (0-3 hours)**

Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:

- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 634 - Managerial Accounting Concepts 3(3-0)
- MSA 635 - Financial Management 3(3-0)
- MSA 640 - Quantitative Applications in Decision Making 3(3-0)
- MSA 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(Spec)

**Note:** Only one of the following may be used to fulfill concentration requirements: ECO 515, COM 665, or MGT 646.

**Cognate Courses (0-3 hours)**

Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:

- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 634 - Managerial Accounting Concepts 3(3-0)
- MSA 635 - Financial Management 3(3-0)
- MSA 640 - Quantitative Applications in Decision Making 3(3-0)
- MSA 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(Spec)

**Note:** Only one of the following may be used to fulfill concentration requirements: ECO 515, COM 665, or MGT 646.

**Recreation & Park Administration**

The Recreation, Parks, and Leisure Administration concentration is designed to provide students with background and competencies in administration, grant writing, evaluation, current issues, as well as areas of individualized interest. Students will select 15-18 credits in consultation with their advisor.

**Required Core (18 hours)**

- MSA 600 - Foundations of Research Methods in Administration 3(3-0)
- MSA 601 - Organizational Dynamics and Human Behavior 3(3-0)
- MSA 602 - Financial Analysis, Planning and Control 3(3-0)
- MSA 603 - Strategic Planning for the Administrator 3(3-0)
- MSA 604 - Administration, Globalization and Multiculturalism 3(3-0)
- MSA 699 - Applied Research Project in Administration 3(Spec)

**Required Courses (9 hours)**

- RPL 605 - Administration of Leisure Services Systems 3(3-0)
- RPL 611 - Evaluation in Recreation and Leisure Services 3(3-0)
- RPL 618 - Issues in Leisure 3(3-0)

**Cognate Courses (0-3 hours)**

Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:

- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 634 - Managerial Accounting Concepts 3(3-0)
- MSA 635 - Financial Management 3(3-0)
- MSA 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(Spec)

**Note:** Only one of the following may be used to fulfill concentration requirements: ECO 515, COM 665, or MGT 646.

**Cognate Courses (0-3 hours)**

Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:

- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 634 - Managerial Accounting Concepts 3(3-0)
- MSA 635 - Financial Management 3(3-0)
- MSA 660 - Marketing Administration 3(3-0)
- MSA 681 - Administrative Practicum 1-3(Spec)
- MSA 690 - Internship 1-3(Spec)
- MSA 696 - Special Topics 3(Spec)

**Note:** Only one of the following may be used to fulfill concentration requirements: ECO 515, COM 665, or MGT 646.

**Total: 36 semester hours**
Research Administration

The purpose of the concentration is to provide an appropriate educational experience to Research Administration professionals that will allow them to gain insight into the most recent developments in the field, gain practical experience, meet the growing data and informational needs and demands in their respective organizations, and to advance in the research administration profession.

Required Core (18 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits (Lecture-Tutorial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSA 600</td>
<td>Foundations of Research Methods in Administration</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 601</td>
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<td>Financial Analysis, Planning and Control</td>
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</tr>
<tr>
<td>MSA 603</td>
<td>Strategic Planning for the Administrator</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 604</td>
<td>Administration, Globalization and Multiculturalism</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 699</td>
<td>Applied Research Project in Administration</td>
<td>Spec</td>
</tr>
</tbody>
</table>

Required Courses (12 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits (Lecture-Tutorial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSA 611</td>
<td>Contract Administration</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 612</td>
<td>Grants Fiscal Administration</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 613</td>
<td>Project Administration</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 614</td>
<td>Ethics in Research Administration</td>
<td>3(3-0)</td>
</tr>
</tbody>
</table>

Electives (6 hours)

Select from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits (Lecture-Tutorial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSA 615</td>
<td>Sponsored Project Administration</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 616</td>
<td>The Practice of Research Administration</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 617</td>
<td>Clinical Research Administration</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 622</td>
<td>Research Facilities Administration and Cost</td>
<td>3(3-0)</td>
</tr>
</tbody>
</table>

Total: 36 semester hours

Sport Administration

The Sport Administration concentration is designed to prepare the student for a career in administration in college, professional, or commercial sport. 15-18 hours to be selected with the consent of a PES Graduate Faculty Advisor. Course substitutions may be made upon recommendation of the PES Graduate Advisor and approval of the Graduate Office if the course content of the course to be substituted is essentially the same as the course it will replace.

Required Core (18 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits (Lecture-Tutorial)</th>
</tr>
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<td>MSA 600</td>
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<td>MSA 601</td>
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</tr>
<tr>
<td>MSA 604</td>
<td>Administration, Globalization and Multiculturalism</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 699</td>
<td>Applied Research Project in Administration</td>
<td>Spec</td>
</tr>
</tbody>
</table>

Required Courses (15-18 hours)

Select from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits (Lecture-Tutorial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PES 603</td>
<td>Administration of Sport and Physical Education</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>PES 620</td>
<td>Sport - An Interdisciplinary Study</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>PES 625</td>
<td>Facilities for Sport and Physical Education</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>PES 640</td>
<td>Sport and the Law</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>PES 650</td>
<td>Sport Marketing</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>PES 690</td>
<td>Practicum</td>
<td>1-4(Spec)</td>
</tr>
</tbody>
</table>

Cognate Courses (0-3 hours)

Select any course offered within any MSA degree program concentration or one of the following courses, in consultation with an academic advisor and approved by the MSA Director:

<table>
<thead>
<tr>
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<th>Credits (Lecture-Tutorial)</th>
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<tr>
<td>MSA 501</td>
<td>Managing Change with Emotional Intelligence</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 634</td>
<td>Managerial Accounting Concepts</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 635</td>
<td>Financial Management</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 640</td>
<td>Quantitative Applications in Decision Making</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 660</td>
<td>Marketing Administration</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 681</td>
<td>Administrative Practicum</td>
<td>1-3(Spec)</td>
</tr>
<tr>
<td>MSA 690</td>
<td>Internship</td>
<td>1-3(Spec)</td>
</tr>
<tr>
<td>MSA 696</td>
<td>Special Topics</td>
<td>Spec</td>
</tr>
</tbody>
</table>

Note: MSA 681 and MSA 690 are only available to students admitted to Central Michigan University's Mount Pleasant campus. Total: 36 semester hours

Vehicle Design & Manufacturing Administration

The Vehicle Design and Manufacturing Administration (VDMA) concentration prepares students to take leadership responsibility in vehicle design and manufacturing administration.

Required Core (18 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits (Lecture-Tutorial)</th>
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<tbody>
<tr>
<td>MSA 600</td>
<td>Foundations of Research Methods in Administration</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 601</td>
<td>Organizational Dynamics and Human Behavior</td>
<td>3(3-0)</td>
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<td>Administration, Globalization and Multiculturalism</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MSA 699</td>
<td>Applied Research Project in Administration</td>
<td>Spec</td>
</tr>
</tbody>
</table>

Required Courses (18 hours)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits (Lecture-Tutorial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IET 500</td>
<td>Production Concepts</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>IET 501</td>
<td>Application of Industrial Management Principles</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>IET 524</td>
<td>Technology and Environment</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>IET 527</td>
<td>Industrial Safety Management</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MGT 542</td>
<td>Inventory and Materials Management</td>
<td>3(3-0)</td>
</tr>
<tr>
<td>MGT 543</td>
<td>Management and Control of Quality</td>
<td>3(3-0)</td>
</tr>
</tbody>
</table>

Note: No more than a total of 15 hours of College of Business courses may be used on the program plan.

Total: 36 semester hours
MSA Graduate Certificates

The following MSA Graduate Certificates are offered:

- Acquisitions Administration
- General Administration
- Health Services Administration
- Human Resources Administration
- Information Resources Administration
- International Administration
- Leadership
- Long-Term Care Administration
- Public Administration
- Research Administration
- Vehicle Design and Manufacturing Administration

Note: Not all certificates are available at the main campus location.

The 15-18 credit MSA Graduate Certificate program is designed for regularly admitted graduate students who desire advanced training in the field of administration. Credits successfully earned with the certificate program may be used toward the MSA degree, if the concentration is the same. A maximum of six (6) semester hours from a previous or concurrent graduate degree or certificate can be transferred towards a graduate certificate. Students may substitute courses only with the approval of the MSA Director. Students may use up to 6 transfer credits providing they meet the criteria for transfer credit outlined in this bulletin. Coursework and other requirements must be completed within seven years prior to the awarding of a graduate certificate. Prior learning credit may not be used on the certificate program.

Note: Students may not use more than 12 credits of College of Business courses. Required courses: 5-6 courses from the appropriate concentration.

Acquisitions Administration Certificate

Minimum Totals for Graduation: 15 hours

Required Courses (6 hours)
- MGT 533 - Purchasing Strategy 3(3-0)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)

Electives (9 hours)
Select three of the following:
- IET 500 - Production Concepts 3(3-0)
- IET 527 - Industrial Safety Management 3(3-0)
- MGT 542 - Inventory and Materials Management 3(3-0)
- MGT 543 - Management and Control of Quality 3(3-0)
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 712 - Implementation and Reform of Public Programs 3(3-0)
- PSC 714 - Program Analysis and Evaluation 3(3-0)

Total: 15 semester hours

Health Services Administration Certificate

Minimum Totals for Graduation: 15 hours

Required Courses (12 hours)
- HSC 507 - Introduction to Health Service Organizations and Systems 3(3-0)
- HSC 520 - Health Services Administration 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)

Note: Advisors may recommend to the MSA Director the substitution of another course for HSC 520, if the student has appropriate management experience.

Elective Courses (3 hours)
Select one of the following:
- HSC 516 - Travel Course in Health Education 1-15(Spec)
- 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 552 - International Health Systems, Organizations and Policy 3(3-0)
- HSC 572 - Quality Improvement in Health Services 3(3-0)
- HSC 581 - Managed Care: Origins, Organizations, and Operations 3(3-0)
- HSC 582 - Community and Public Health 3(3-0)
- HSC 700 - Program Evaluation in the Health Fields 3(3-0)

Total: 15 semester hours
Human Resources Administration Certificate

Minimum Totals for Graduation: 15 hours

Course Requirements (15 hours)
- Students are required to take one course from Category I, preferably before taking other courses in the concentration. It is recommended that students take one course from Categories 2 and 3, and two courses from Category 4.

Category 1 - Survey of Human Resources Administration (Required) (3 hours)
- Take one of the following, preferably before taking other courses in the concentration:
  - MGT 643 - Human Resource Management 3(3-0)
  - PSC 711 - Public Personnel Administration Practice 3(3-0)

Category 2 - Labor Relations Courses
- It is recommended that students take one of the following:
  - COM 665 - Seminar in Communication and Negotiation in Employee Relations 3(3-0)
  - ECO 515 - Collective Bargaining and Labor Law 3(3-0)
  - MGT 646 - Labor Relations Issues 3(3-0)
- Note: Students may not count both ECO 515 and MGT 646 on a certificate or degree program.

Category 3 - Training & Organization Development Courses
- It is recommended that students take one of the following:
  - CED 555 - Human Relations Skills 3(3-1)
  - COM 560 - Communication and Social/Organizational Change 3(3-0)
  - COM 561 - Communication in Conflict Management 3(3-0)
  - MGT 649 - Seminar in Organizational Development 3(3-0)
- Note: Students may not count both COM 560 and COM 561 within the HRA certificate or concentration.

Category 4 - Staffing Courses
- It is recommended that students take two of the following:
  - MGT 645 - Personnel Compensation Practice and Process 3(3-0)
  - MGT 647 - Employee Selection and Evaluation 3(3-0)
  - PSY 536 - Personnel Psychology 3(3-0)
  - PSY 636 - Organizational Applications of Personnel Psychology 3(3-0)
- Note: Students may not count both MGT 647 and PSY 536 on a certificate or degree program.

Total: 15 semester hours

Information Resource Management Certificate

Minimum Totals for Graduation: 15 hours

Required Courses I (3 hours)
- BIS 634 - Information Resources Management 3(3-0)

Required Courses II (3 hours)
- BIS 601 - Management Information Systems 3(3-0)
- CPS 603 - Computer Information Systems 3(3-0)
- Note: Students may not count both BIS 601 and CPS 603 on an IRM concentration or IRM certificate.

Required Courses III (3 hours)
- BIS 630 - Systems Analysis and Design 3(3-0)
- CPS 510 - Software Systems Engineering 3(3-0)
- Note: Students may not count both BIS 630 and CPS 510 on an IRM concentration or IRM certificate.

Required Courses IV (3 hours)
- BIS 635 - Business Systems Applications 3(3-0)
- CPS 612 - Software Project Management 3(3-0)
- Note: Students may not count both BIS 635 and CPS 612 on an IRM concentration or IRM certificate.

Required Courses V (3 hours)
- One specialized course determined by the MSA Director.

Total: 15 semester hours

International Administration Certificate

Minimum Totals for Graduation: 15 hours

Required Courses (15 hours)
- ANT 506/SOC 506 - Comparative Cultural Systems 3(3-0)
- COM 667 - Seminar in Intercultural Communication 3(3-0)
- FIN 573 - International Finance 3(3-0)
- MGT 667 - International Business 3(3-0)
- MKT 560 - International Marketing 3(3-0)
- MSA 510 - Global Leadership Perspectives 3(3-0)
- PSC 551 - Seminar in International Relations 3(3-0)
- PSC 555 - International Law I 3(3-0)
- PSC 642 - Problems and Processes of International Development I 3(3-0)
- PSC 651 - Comparative Political & Economic Systems 3(3-0)

Total: 15 semester hours

Leadership Certificate

Minimum Totals for Graduation: 15 hours

Required Course
- PSC 785 - Strategic Leadership 3(3-0)

Electives (12 hours)
- CED 555 - Human Relations Skills 3(3-1)
- COM 560 - Communication and Social/Organizational Change 3(3-0)
- COM 561 - Communication in Conflict Management 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)
- ECO 515 - Collective Bargaining and Labor Law 3(3-0)
- MGT 646 - Labor Relations Issues 3(3-0)
- MGT 649 - Seminar in Organizational Development 3(3-0)
- MSA 501 - Managing Change with Emotional Intelligence 3(3-0)
- MSA 510 - Global Leadership Perspectives 3(3-0)
- MSA 696 - Special Topics 3(Spec)
- PHL 518 - Professional Ethics 3(3-0)
- PSY 531 - Group Dynamics 3(3-0)
- PSY 535 - Organizational Psychology 3(3-0)
- Note: Students may not count both ECO 515 and MGT 646 on a certificate or degree program.

Total: 15 semester hours

Note: when appropriate, other courses may be substituted with the approval of the MSA Director.

Long-Term Care Administration Certificate

Note: CMU is not currently accepting students into this program.

Minimum Totals for Graduation: 18 hours

Required Courses (18 hours)
- GRN 632 - Public Policy and Aging 3(3-0)
- HSC 520 - Health Services Administration 3(3-0)
- HSC 570 - Financial Aspects of Health Services Organizations 3(3-0)
- HSC 591 - Legal & Regulatory Aspects of Long-Term Care 3(3-0)
- HSC 592 - Administration Issues in Long-Term Care 3(3-0)
- HSC 593 - Resident Care Issues in Long-Term Care Administration 3(3-0)
- Note: Students who have taken HSC 520 and/or HSC 570 as part of another concentration may select substitutes from the following courses: GRN 631, HSC 506, HSC 507, HSC 545, HSC 572, or HSC 581.

Total: 18 semester hours
Public Administration Certificate

Minimum Totals for Graduation: 15 hours

Required Courses (15 hours)
- ECO 515 - Collective Bargaining and Labor Law 3(3-0)
- COM 665 - Seminar in Communication and Negotiation in 
  Employee Relations 3(3-0)
- MGT 646 - Labor Relations Issues 3(3-0)
- PSC 514 - American Public Policy Making 3(3-0)
- PSC 522 - Regulatory Processes and Administrative Law 3(3-0)
- PSC 561 - American State Government and Administration 3(3-0)
- PSC 563 - Politics and Policy in Urban Communities 3(3-0)
- PSC 565 - Managing Modern Local Government 3(3-0)
- PSC 566 - Intergovernmental Relations in the United States 3(3-0)
- PSC 610 - Foundations of Public Administration 3(3-0)
- PSC 711 - Public Personnel Administration Practice 3(3-0)
- PSC 713 - Public Budgeting and Finance 3(3-0)
- PSC 714 - Program Analysis and Evaluation 3(3-0)
- PSC 774 - Strategic Planning for Public/Non-Profit 
  Organizations 3(3-0)
- PSC 775 - Organization Theory in Public Administration 3(3-0)
- PSC 785 - Strategic Leadership 3(3-0)

Note: Only one of the following may be used to fulfill certificate requirements: ECO 515, COM 665, or MGT 646.

Total: 15 semester hours

Research Administration Certificate

Minimum Totals for Graduation: 18 hours

Required Courses (12 hours)
- MSA 611 - Contract Administration 3(3-0)
- MSA 612 - Grants Fiscal Administration 3(3-0)
- MSA 613 - Project Administration 3(3-0)
- MSA 614 - Ethics in Research Administration 3(3-0)

Electives (6 hours)
Select from the following:
- MSA 615 - Sponsored Project Administration 3(3-0)
- MSA 616 - The Practice of Research Administration 3(3-0)
- MSA 617 - Clinical Research Administration 3(3-0)
- MSA 622 Research Facilities Administration and Cost 3(3-0)

Total: 18 semester hours

Vehicle Design and Manufacturing 
Administration Certificate

Note: CMU is not presently accepting on-campus students into this program.

Minimum Totals for Graduation: 18 hours

Required Courses (18 hours)
- IET 500 - Production Concepts 3(3-0)
- IET 501 - Application of Industrial Management Principles 3(3-0)
- IET 524 - Technology and Environment 3(3-0)
- IET 527 - Industrial Safety Management 3(3-0)
- MGT 542 - Inventory and Materials Management 3(3-0)
- MGT 543 - Management and Control of Quality 3(3-0)

Total: 18 semester hours

Course Descriptions: MSA

MSA 501 Managing Change with Emotional Intelligence 3(3-0)
An examination of organizational leadership utilizing emotional intelligence as a foundation for managing change. This course is approved for offering in a distance learning format. Prerequisites: LDR 200 and 86 semester hours completed; or Graduate Standing.

MSA 510 Global Leadership Perspectives 3(3-0)
An examination of established and emerging perspectives on global leadership. The student will focus on geo-leadership models which impact administration across borders and cultures. This course may be offered in an online or hybrid format. Prerequisites: LDR 200 and 86 semester hours completed; or Graduate Standing.

MSA 600 Foundations of Research Methods in Administration 3(3-0)
An introduction to research methods designed to build the skills and knowledge necessary to conduct and interpret primary research in the field of administration. This course is approved for offering in a distance learning format. Prerequisite: Statistics competency.

MSA 601 Organizational Dynamics and Human Behavior 3(3-0)
An examination and application of organizational theories aimed at developing a conceptual framework for the understanding and analysis of human behavior in complex organizations. This course is approved for offering in a distance learning format.

MSA 602 Financial Analysis, Planning and Control 3(3-0)
Study of financial analysis, planning, and control techniques/methods emphasizing mechanisms used to determine the overall financial health of private, public and non-profit organizations. This course is approved for offering in a distance learning format. Prerequisites: Accounting competency.

MSA 603 Strategic Planning for the Administrator 3(3-0)
An examination of processes and approaches used by administrators to analyze internal and external environments to establish and accomplish long-term strategic organizational goals. This course is approved for offering in a distance learning format.

MSA 604 Administration, Globalization and Multiculturalism 3(3-0)
Focuses on theoretical and applied concepts and skills essential to successfully managing an environment of workplace diversity and multiculturalism within domestic and global organizations. This course is approved for offering in a distance learning format.

MSA 610 Environments in Administration 3(3-0)
Studies the impact of the economic, legal, political, technical, international, and social environments on administration. Presents the relevant concepts from these areas and analyzes their interrelationships. This course is approved for offering in a distance learning format.

MSA 611 Contract Administration 3(3-0)
Analysis of theories and applied concepts of federal and commercial contracts, planning contracts, budgeting and negotiating contracts and best practices in contracts. This course may be offered in an online or hybrid format.

MSA 612 Grants Fiscal Administration 3(3-0)
Study of practical applications of grants accounting/financial-related tasks on federal, foundation, institutional and private awards. This course may be offered in an online or hybrid format. Prerequisites: MSA602 or the permission of MSA Director.

MSA 613 Project Administration 3(3-0)
Intensive coverage of project administration and applications from concept through operations. Course focuses on planning, scheduling, controlling, economic analysis, evaluation/control and customer satisfaction. This course may be offered in an online or hybrid format.
MSA 614 Ethics in Research Administration 3(3-0)
Covers the ethical, legal, social issues and best practices involved in the administration and conduct of research and the application of products from research. This course may be offered in an online or hybrid format.

MSA 615 Sponsored Project Administration 3(3-0)
Examination of core aspects of sponsored project administration: institutional compliance, proposal creation, review and submission, contract negotiations, sub-award review, and post-award financial administration. This course may be offered in an online or hybrid format.

MSA 616 The Practice of Research Administration 3(3-0)
Examines the theory and foundations of research administration in the context of departmental administration, tools for successful department administration, and the role of Research Administrator. This course may be offered in an online or hybrid format.

MSA 617 Clinical Research Administration 3(3-0)
This course examines clinical research as science as well as the administration of clinical research processes and programs. Covers protocol, budgets, ethics and funding. This course may be offered in an online or hybrid format.

MSA 619 Continuing Registration for Final Research Project 1(1-0)
An non-credit course intended for students who have completed all program credits but still need to use university resources to complete their degree requirements.

MSA 620 Effective Administration and Organizational Behavior 3(3-0)
To develop an understanding of human problems and processes which help or hinder successful task completion. To improve interpersonal and diagnostic skills as well as theoretical knowledge. This course is approved for offering in a distance learning format.

MSA 622 Research Facilities Administration and Cost 3(3-0)
Study of the planning, operation, and costs associated with managing physical plants specific to research facilities. This course may be offered in an online or hybrid format.

MSA 634 Managerial Accounting Concepts 3(3-0)
Study of how accounting information can be used in planning, coordinating, and controlling the activities of an organization. Prerequisite: Accounting competency. This course is approved for offering in a distance learning format.

MSA 635 Financial Management 3(3-0)
Study of financial management and financial management techniques for administrators of private and public organizations. Emphasis is on financial planning and control. Prerequisite: Accounting competency. This course is approved for offering in a distance learning format.

MSA 640 Quantitative Applications in Decision Making 3(3-0)
This course studies stochastic and quantitative analytical tools and concepts which can be used to make optimal decisions in the pursuit of such organizational goals as cost efficiency, service delivery, and profit. Concepts include probability theory, statistics, decision theory, inventory control, linear models, linear programming, network analysis, and simulation. Prerequisite: Statistics competency. This course is approved for offering in a distance learning format.

MSA 650 Organization Theory: Strategy and Structure 3(3-0)
A systems approach to studying the design and administration of complex organizations. Diverse organizational settings require the capacity to develop appropriate decision-making and planning strategies to produce the desired organizational goals, given the organization’s environment. This course is approved for offering in a distance learning format.

MSA 660 Marketing Administration 3(3-0)
This course is concerned with the application of appropriate marketing concepts and techniques to the private sector business and nonprofit organizations’ marketing and communication activities. This course is approved for offering in a distance learning format.

MSA 661 Diversity and Multiculturalism in the Workplace 3(3-0)
An examination of the skills needed to successfully administer an environment that facilitates workplace diversity and multiculturalism within the contexts of domestic and global organizations.

MSA 675 Strategic Policy Administration 3(3-0)
Applies decision-making models for policy analysis and implementation in the private and public sector environments. A case study course covering organizational analysis and operational programming. Prerequisite: Minimum of 9 semester credit hours of MSA core courses, including MSA 634 or MSA 635. This course is approved for offering in a distance learning format.

MSA 681 Administrative Practicum 1-3(Spec)
Provides students with an introductory professional experience of an administrative/supervisory nature in an administrative setting. For students with limited or no administrative experience. Prerequisite: Permission of MSA Director.

MSA 685 Integrative Analysis of Administration 3(Spec)
MSA 685 builds upon the information and skills learned in the core and concentration course work, and the student’s employment experiences. The course trains the student in application of administrative theory and research to practical issues and problems found in occupational situations. In these senses of joining theory, research and practice with the practical workday world, the course is truly integrative of the student’s knowledge, skills, and professional life. This course is approved for offering in a distance learning format. Prerequisites: MSA 600, MSA 602 or MSA 634 or MSA 635, MSA 640 all with a grade of C or better; 21 hours of graduate credit.

MSA 690 Internship 1-3(Spec)
Provides a supervised, practical, in-depth administrative experience in an organization related to the MSA student’s concentration area. Prerequisites: 18 hours completed in the MSA program and permission of the MSA Director.

MSA 691 Independent Study 1-2(Spec)
Directed reading or research on an approved topic in administration. Prerequisite: permission of instructor and director of MSA program.

MSA 696 Special Topics 3(Spec)
Selected topics of interest to students which are not included in existing courses. Specific topic will be listed on the student’s transcript.

MSA 699 Applied Research Project in Administration 3(Spec)
Research project on a practical organizational administrative issue and/or problem integrating theoretical, methodological, and applied knowledge from core and concentration coursework with student’s professional experience. This course is approved for offering in a distance learning format. Prerequisites: MSA 600; MSA 602 or 634 or 635; MSA 603 or 640 all with a grade of C or better; 24 hours of graduate credit.
Neuroscience

College of Humanities and Social & Behavioral Sciences

Michael Sandstrom, Co-Director
Health Professions Bldg. 2179; 989-774-2881

Gary Dunbar, Co-Director
Health Professions Building 2182; 989-774-3282

Richard W. Backs, Ph.D., University of Southern California. Human factors, psychophysiology, aging, attention, and emotion

Gary Dunbar, Ph.D., Clark University. Stem cell, dietary supplements, and pharmacological therapies for neurodegenerative diseases, including Huntington’s, Alzheimer’s, and Parkinson’s diseases

Justin Oh-Lee, Ph.D., University of California Los Angeles. Experimental analysis of behavior, operant/respondent conditioning, animal learning, quantitative models, behavioral pharmacology, and substance abuse

Julien Rossignol, Ph.D., Nantes University, France. Molecular biology, cellular biology, and immunology. Optimizing adult stem cell transplantation technology in the context of neurodegenerative diseases.

Michael Sandstrom, Ph.D., Ohio State University. Assessing brain plasticity, compensatory neuronal activity, or neurochemical control during active behavior at various stages of deteriorative brain diseases such as Parkinson’s and Huntington’s using animal models

Reid Skeel, Ph.D., University of Florida, Neuropsychology.

Michelle Steinhilb, Ph.D., genetic models of human neurodegenerative disease, cellular and molecular neurobiology

Ksenia Ustinova, Ph.D, Russian State University of Sport. Motor control and learning, rehabilitation of patients with neurological diseases including stroke, spinocerebellar ataxia, Parkinson’s disease

Master of Science (M.S.) in Neuroscience

Minimum Totals for Graduation: 30 hours
The Master of Science (M.S.) in Neuroscience Program at Central Michigan University is designed to give each student a comprehensive understanding of the core principles in neuroscience and the requisite training that will prepare students for further, doctoral-level graduate training or for positions in academia, industry, or government that utilize highly trained research skills in specific areas of neuroscience. Throughout the program, all students are expected to be actively involved in research with a Program faculty member, who serves as a mentor. The focus of the M.S. Program in Neuroscience is to build a broad-based and comprehensive understanding of the basic principles of neuroscience and develop a strong background for applied research in some specific area of neuroscience. Current areas of specific research training include studying the causes and potential treatments for Alzheimer’s, Huntington’s, and Parkinson’s diseases, studying the CNS involvement in behavioral learning in the context of abused substances, and understanding the mechanisms underlying rehabilitation from movement disorders. Students are encouraged to contact Program faculty members in their area of research interest prior to submitting application materials.

Admission Requirements, Retention & Termination Standards
Application Deadline for all Materials: March 1

The application deadline for receipt of all materials will be March 1. When applying for the M.S. degree in Neuroscience, applicants must send three letters of reference, official transcripts, and official GRE scores directly to the Program Director. Applicants are expected to complete a Bachelor of Science degree, have at least 15 hours of courses in neuroscience, chemistry, and/or biology (including biologically-based psychology courses), have at least 3 hours of statistics, and have a 3.0 grade point average (on a 4.0 scale) to gain admittance to the program. Preference will be given to students with prior research experience, especially in the area of neuroscience. Students who are deficient in certain subject areas, such as statistics or chemistry, will be expected to make up these deficiencies in addition to the normally prescribed graduate coursework for the degree. A maximum of 9 credit hours earned during non-degree status may be applied toward the M.S. degree in Neuroscience.

The M.S. degree in Neuroscience is based upon the satisfactory completion of a minimum of 30 semester hours of graduate work, including the successful completion of the Principles of Neuroscience courses and successful completion of a thesis (with oral defense). Students who are unable to pass the comprehensive examination for the Principles of Neuroscience courses after three attempts will be dismissed from the program. Students who complete the required coursework and successfully defend their thesis will attain the Master of Science in Neuroscience degree. All other retention and termination standards for the program follow University policy as specified in the Graduate Bulletin.

Required Courses I (18 hours)
NSC 501 - Principles of Neuroscience I 4(4-0)
NSC 502 - Principles of Neuroscience II 4(4-0)
NSC 690 - Research Seminar Neuroscience 1-4(Spec)
NSC 798 - Thesis: Design 1-3(Spec)
NSC 799 - Thesis: Implementation 1-3(Spec)

Note: A minimum of 4 hours of NSC 690 and 6 hours from a combination of NSC 798 and NSC 799 is required.
Required Courses II (3 hours)
Select one of the following:
BIO 500 - Biological Statistics 3(2-2)
PSY 511 - Statistics in Psychology 3(3-1)

Required Courses III (3 hours)
Select one of the following:
BIO 600 - Biological Research Design and Analysis 3(2-2)
PSY 611 - Research Design 3(3-0)

Electives (6 hours)
To be chosen in consultation with an advisor.

Note: Students need a minimum of 2 credit hours from elective courses at the 600 level.

Total: 30 semester hours

Doctor of Philosophy (Ph.D.) in Neuroscience

Minimum Totals for Graduation: 90 hours

The Doctor of Philosophy (Ph.D.) in Neuroscience Program at Central Michigan University is designed to give each student a comprehensive understanding of the core principles in neuroscience and the requisite training that will prepare students for positions in academics, industry, or government that utilize highly trained research skills in specific areas of neuroscience. The foundation of the Program is provided during the first two years, which encompasses all the requirements for the Master of Science (M.S.) degree in Neuroscience. Throughout the program, all students are expected to be actively involved in research with a Program faculty member, who serves as a mentor. Upon receiving the M.S. degree in Neuroscience (or its equivalent, for students who enter the Ph.D. Program after their second year), students will work closely with their mentor to establish a line of research that will lead to a publishable-quality major paper and dissertation. As such, the focus of the Ph.D. Program in Neuroscience is to build upon the student’s broad-based and comprehensive understanding of the basic principles of neuroscience and develop a strong background for applied research in some specific area of neuroscience. Current areas of specific research training include studying the causes and potential treatments for Alzheimer’s, Huntington’s, and Parkinson’s diseases, studying the CNS involvement in behavioral learning in the context of abused substances, and understanding the mechanisms underlying rehabilitation from movement disorders. Students are encouraged to contact Program faculty members in their area of research interest prior to submitting application materials.

Admission Requirements, Retention & Termination Standards

Application Deadline for all Materials: March 1

The application deadline for receipt of all materials will be March 1. When applying for the Ph.D. degree in Neuroscience, applicants must send three letters of reference, official transcripts, and official GRE scores directly to the Program Director. Applicants are expected to complete a Bachelor of Science degree, have at least 15 hours of courses in neuroscience, chemistry, and/or biology (including biologically-based psychology courses), have at least 3 hours of statistics, and have a 3.0 grade point average (on a 4.0 scale) to gain admittance to the program. Preference will be given to students with prior research experience, especially in the area of neuroscience. Students who are deficient in certain subject areas, such as statistics or chemistry, will be expected to make up these deficiencies in addition to the normally prescribed graduate coursework for the degree. A maximum of 9 credit hours earned during non-degree status may be applied toward the M.S. or Ph.D. degree in Neuroscience.

The Doctor of Philosophy degree in Neuroscience is based upon the satisfactory completion of a minimum of 90 semester hours of graduate work, including the successful completion of the Principles of Neuroscience courses and successful completion of a thesis (with oral defense). Students who are unable to pass the comprehensive examination for the Principles of Neuroscience courses after three attempts will be dismissed from the program. Students who complete the required coursework for the first two years and successfully defend their thesis will attain the Master of Science in Neuroscience degree. Thus, each Ph. D. student must complete the equivalent of all the requirements for the M.S. degree in Neuroscience. Upon completion of the requirements for the M.S. degree in Neuroscience, students will be required to complete NSC 800 (a major paper with oral defense) for their qualifying exam. Upon satisfactory completion of their qualifying exam, the student is an official Ph.D. candidate in the Program. Students who do not successfully defend their major paper by the third attempt will be dismissed from the Program. Upon completion of the remaining course requirements and following the successful oral defense of the dissertation, the student will receive the Ph.D. in Neuroscience degree. All other retention and termination standards for the program follow University policy as specified in the Graduate Bulletin.

Program Requirements

Admission to doctoral candidacy is based upon satisfactory grades (i.e., maintaining a minimum 3.0 grade point average), completion of thesis requirements, and completion of both semesters of the Principles of Neuroscience (NSC 501 and NSC 502) or passing the comprehensive examination for these courses, and successfully completing NSC 800. The doctoral degree is awarded upon the successful completion and defense of the doctoral dissertation.

Required Courses I (48-66 hours)
NSC 501 - Principles of Neuroscience I 4(4-0)
NSC 502 - Principles of Neuroscience II 4(4-0)
NSC 690 - Research Seminar Neuroscience 1-4(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)

Note: A minimum of 4 hours of NSC 690, 6 hours of NSC 789, 6 hours from a combination of NSC 798 and NSC 799, 6 hours of NSC 800, and 18 credit hours from the combination of NSC 898 and NSC 899 is required. In addition to course work, a student must complete an oral examination over the thesis, major paper (NSC 800), and the dissertation.

Required Courses II (3 hours)
Select one of the following:
BIO 500 - Biological Statistics 3(2-2)
PSY 511 - Statistics in Psychology 3(3-1)

Required Courses III (3 hours)
Select one of the following:
BIO 600 - Biological Research Design and Analysis 3(2-2)
PSY 611 - Research Design 3(3-0)

Electives (18-36 hours)
To be chosen in consultation with an advisor.

Total: 90 semester hours
Course Descriptions: NSC

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 history, key cells and molecules, and sensation mechanisms. Prerequisites: Asigned major in Neuroscience Grad-Prep (Opt. B); PSY 387 (3) or BIO 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.

NSC 600 Special Issues in Neuroscience 1-12(Spec)
Subjects of contemporary neuroscience not covered by regular curriculum. May be repeated to a maximum of twelve hours. Prerequisites: Permission of instructor.

NSC 690 Research Seminar Neuroscience 1-4(Spec)
Seminar emphasizing review of the primary literature in several areas of neuroscience. May be repeated for a maximum of four credits. Prerequisites: Graduate standing in the Neuroscience Program.

NSC 696 Directed Research 1-12(Spec)
For students who desire to investigate some research problem in neuroscience. Prerequisites: Graduate standing.

NSC 697 Independent Study 1-8(Spec)
For students who accept the responsibility of studying a specific area of neuroscience with minimal supervision. Prerequisites: Graduate standing.

NSC 789 Graduate Seminar in Neuroscience 1-12(Spec)
In-depth exploration of a specific area in neuroscience through the review of the primary literature. May be repeated up to a maximum of 12 hours. Prerequisites: Permission of instructor.

NSC 798 Thesis: Design 1-3(Spec)
Design of a Master’s thesis. CR/NC only. Prerequisites: Graduate standing in the Neuroscience Program.

NSC 799 Thesis: Implementation 1-3(Spec)
Completion of a Master’s thesis designed in NSC 798. CR/NC only. Prerequisites: NSC 798.

NSC 800 Neuroscience Research for Doctoral Candidacy 1-12(Spec)
Major research course in which students work in close collaboration with instructor in preparing significant research project in a specific area of neuroscience. Prerequisites: NSC 799 and permission of instructor.

NSC 898 Doctoral Dissertation: Design 1-12(Spec)
Design of a doctoral dissertation. CR/NC only. Prerequisites: NSC 800.

NSC 899 Doctoral Dissertation: Implementation 1-12(Spec)
Completion of the doctoral dissertation designed in NSC 898: data collection, analysis, and write-up. CR/NC only. Prerequisites: Completion of NSC 898.

Doctor of Philosophy (Ph.D.) in the Science of Advanced Materials

College of Science and Technology

Jessica Lapp
E&T Building 228, 989-774-4401

Minimum Totals for Graduation: 90 hours

The science of materials combines elements of chemistry, physics and biology, and requires a solid background in mathematics. The CMU Science of Advanced Materials (SAM) Ph.D. program is designed to create a correspondingly interdisciplinary environment that will train effective researchers without erecting artificial boundaries between disciplines. The formal coursework focuses on the scientific framework for studying materials and is organized around the themes of modeling, characterization, and synthesis. These are the key methodologies employed in materials research and the SAM program emphasizes the synergy among them.

The curriculum for the SAM program includes the following components: core courses that establish a solid foundation in the science of materials; advanced courses in a number of specialized areas; seminar courses focusing on the current SAM literature and developing essential skills in scientific communication; and the dissertation.

Students may enter the program with diverse undergraduate backgrounds. To accommodate varied levels of preparation and establish a basis for interdisciplinary training, foundation courses in the chemistry and physics of materials are required. A course in chemical principles (SAM 620) is aimed at students with a strong undergraduate background in physics, but limited training in chemistry; conversely, a course in physical principles (SAM 630) is directed at students with an undergraduate emphasis in chemistry or biochemistry. It is recommended that all students take both courses, using one for an elective.

Students in the SAM program may apply for support as teaching or research assistants. Students will normally work as teaching assistants during their first two years and as research assistants during the final three years of the program.

Admission Requirements, Retention & Termination Standards

Deadline for Admission: February 1 for Summer II admission.

Students with a bachelor’s degree in physics, chemistry, biochemistry, biology, geology, engineering, mathematics or other relevant areas of science will be considered for admission. Applicants must be admitted to both the CMU College of Graduate Studies and the SAM program. Transcripts of previous undergraduate and graduate studies, GRE scores, a statement of research interests and letters of recommendation will be used in evaluating candidates for admission.

Applicants already holding an M.S. degree in a materials-related area may also apply for entry into the program. A completed M.S. thesis on a materials-related topic may be counted toward the directed research credits required for the SAM Ph.D. degree. Although some courses may be transferred or waived based on prior graduate work, no more than 30 credit hours can be transferred. Successful completion of the Ph.D. requires satisfactory completion of a minimum of 90 credit hours beyond the bachelor’s degree.

During the second or third year, Ph.D. students will take a series of cumulative examinations to demonstrate competence in their area of specialization and the science of advanced materials more generally. These exams will be based on coursework, the current scientific literature in the area, and other appropriate material. Students passing these exams will attain dissertator status. Students who fail will be terminated from the program and encouraged to complete the requirements for an appropriate M.S. degree.
Interdisciplinary and Interdepartmental Programs

Students normally will begin directed research work no later than during the first summer of residence. During the first year, students will complete research rotations in three different research groups, to gain exposure to the variety of materials research in process and to gain practical experience. Students will identify a research advisor as early as possible after their rotations, and form a dissertation committee consisting of at least four members. The committee chair (research director) and two other members will come from the program faculty. One of these will have research expertise outside the student’s immediate area of specialization. At least one additional committee member will come from an institution external to CMU, including industrial labs, as appropriate.

During the third year, students will prepare an original research proposal, present it as a seminar to program faculty and students and defend it before the dissertation committee. Students will carry out the bulk of their doctoral research in years 3-5 of the program. The final requirements will be the preparation and oral defense of a scholarly dissertation that presents the results of the student’s dissertation research. The oral defense and the dissertation must be approved by the dissertation committee and by the College of Graduate Studies. A student’s progress through the program will be monitored by an annual review of his or her overall performance by the program director or dissertation committee.

Required Courses I (3 hours)
Science Core
Select one course from the following, after consultation with the program advisor:
SAM 620 - Chemical Principles in the Science of Materials 3(3-0)
SAM 630 - Physical Principles in the Science of Materials 3(3-0)

Note: It is recommended that all students take both courses. One may be used to fulfill elective hours below.

Required Courses II (6 hours)
Materials Core
SAM 700 - Advanced Materials I: Inorganic and Nanomaterials 3(3-0)
SAM 710 - Advanced Materials II: Polymers, Composites and Biomaterials 3(3-0)

Required Courses III (6 hours)
Select two of the following:
SAM 720 - Inorganic and Nanomaterials Laboratory 3(1-6)
SAM 721 - Polymer Characterization Laboratory 3(1-6)
SAM 722 - Material Surface Characterization Laboratory 3(1-6)

Required Courses IV (12 hours)
Specialization
The student must enroll in 12 credit hours of graduate courses in one specialized area of materials such as computational materials modeling, polymeric materials, or materials characterization, selected in consultation with and approved by program advisor.

Required Courses V (6-10 hours)
Current Topics Seminar
SAM 785 - Seminar: Current Topics in the Science of Advanced Materials 1-10(Spec)

Note: The student may enroll multiple times until 6 to 10 credits are earned.

Electives (9 hours)
The student may enroll in up to 9 credit hours of elective graduate courses selected in consultation with and approved by the program advisor.

Research (32-48 hours)
SAM 796 - Directed Research in the Science of Advanced Materials 1-48(Spec)

Dissertation (12 hours)
SAM 899 - Dissertation 1-12(Spec)

Total: 90 semester hours

Course Descriptions: SAM
SAM 560 Introduction to Rheology 3(3-0)
Introduction to the flow and deformation of materials under stress. Applications to polymeric and biological materials. Pre-requirements: MTH 233, 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.

SAM 620 Chemical Principles in the Science of Materials 3(3-0)
Principles of inorganic and organic chemistry relevant to the study of materials. Theories of bonding; important synthesis reactions; standard methods of structure determination; chemical properties. Pre-requirements: CHM 131 and 132, or CHM 161.

SAM 630 Physical Principles in the Science of Materials 3(3-0)

SAM 690 Special Topics in Science of Advanced Materials 1-9(Spec)
Special topics not included in regular courses in the Science of Advanced Materials program. Course may be taken for credit more than once; total credit not to exceed nine hours. Pre-requirements: Admission to SAM program.

SAM 700 Advanced Materials I: 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. Pre-requirements: SAM 620 or SAM 630.

SAM 710 Advanced Materials II: Polymers, Composites and Biomaterials 3(3-0)
Structure, properties, characterization, and synthesis of polymeric materials, biomaterials and derived compositions. Pre-requirements: SAM 620 or SAM 630.

SAM 720 Inorganic and Nanomaterials Laboratory 3(1-6)
Experimental synthesis, characterization, and modeling techniques used for inorganic and nano materials. Pre-requirements: SAM 620 or 630. Pre/Co-requisites: SAM 700 or 710.

SAM 721 Polymer Characterization Laboratory 3(1-6)
Experimental synthesis, characterization, and modeling techniques used for polymeric, biopolymeric, or pharmaceutical materials. Pre-requirements: SAM 620 or 630. Pre/Co-requisites: SAM 700 or 710.

SAM 722 Material Surface Characterization Laboratory 3(1-6)
Surface characterization techniques for a variety of materials. Prerequisites: SAM 620 or 630. Pre/Co-requisites: SAM 700 or 710.
SAM 785 Seminar: Current Topics in the Science of Advanced Materials 1-10(Spec)
One credit graduate seminar focusing on recent advances in the science of advanced materials. May be repeated for a total of up to 10 credits. Prerequisites: Admission to the SAM Ph.D. program.

SAM 790 Independent Study in Advanced Materials 1-3(Spec)
Independent study in the area of advanced materials. A proposal for the independent study prepared in consultation with an advisor is required. Prerequisites: Admission to the Science of Advanced Materials Ph.D. program and permission of instructor.

SAM 795 Internship in the Science of Advanced Materials 1-6(Spec)
Develop competencies in the science of advanced materials in an internship. CR/NC only. Prerequisites: Completion of cumulative examinations. Admission to candidacy.

SAM 796 Directed Research in the Science of Advanced Materials 1-48(Spec)
Directed research supervised by a SAM faculty member. May be repeated for a total of 48 credits. Prerequisites: Admission to the SAM program.

SAM 899 Dissertation 1-12(Spec)
Completion of the doctoral dissertation. May be repeated for a total of 12 credits. CR/NC only. Prerequisites: Admission to the SAM Ph.D. program; successful completion of preliminary exams.
Interdisciplinary and Interdepartmental Programs

Interdisciplinary Courses

These courses are designed to enable students and faculty members to explore areas of special interest and need. In general, each course will be interdisciplinary in nature and under the direction of more than one faculty member. It may utilize such approaches as discussions, readings from basic sources, field trips, workshops, oral and written reports, and invited lectures. Students may be exposed to new areas of knowledge, explore contrasting points of view, or refine basic understandings of value to their development as effective citizens.

At the discretion of his or her advisor, a graduate student may use one or more of these courses to meet cognate or elective requirements on the curriculum. Prerequisite for admission to each of the foregoing courses is permission of the instructor.

ENV 597 Special Topics 1-6(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.

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.

IPR 555 Public Relations Internship 3-6(Spec)
Directed full-time work experience in a professional public relations environment. Prerequisites: IPR 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 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.

LAR 597 Special Studies in Liberal Arts 1-12(Spec)
Primarily for graduate students. Prerequisite: permission of instructor.

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(0-6)
Experimentation with materials and techniques utilized in the museum profession. Primary emphasis is on exhibit preparation, model-building, and replica-making for educational usage. Prerequisites: MST 546; 56 semester hours of 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 310.

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.

SCI 597 Special Studies in Science 1-12(Spec)
Primarily for graduate students. Prerequisite: permission of instructor.

SCI 730 Seminar 1(1-0)
A formal, public oral presentation of Plan A (thesis) research. Required of students receiving the MAT in Integrated Science on the Plan A option. CR/NC only. Prerequisites: Approval of the Interdisciplinary Science Education Council chair.

SCI 790 Research in Science Education 2-4(Spec)
Provides students with an experience in research techniques for science education. CR/NC only. Prerequisites: Admission to the MAT in Integrated Science and approval of the Interdisciplinary Science Education Council chair.

SCI 798 Thesis 1-6(Spec)
Thesis committee approved research towards a Plan A thesis. CR/NC only. Prerequisites: Approval of the Interdisciplinary Science Education Council chair.

SSC 597 Special Studies in Social Science 1-12(Spec)
Primarily for graduate students. Prerequisite: permission of instructor.

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.
STANDARDS LEADING TO TEACHER CERTIFICATION

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, LEArnner-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.

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 in the Teacher Education Student Handbook (http://www.cmich.edu/academics/educ_humanservices/Units/EHS---CenterforStudentServices/Pages/CSS.aspx) and the requirements of the Michigan Board of Education in effect at the time they complete the application process.

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 in the Teacher Education Student Handbook and 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 have “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. By fulfilling all requirements listed in the EHS Teacher Education Student Handbook and Student Teaching Handbook, candidates are eligible to continue in the program and 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.

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 overturn rules 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 listed in the Teacher Education Student Handbook.

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 signed major and minor of all students to certify that they have met all the requirements before recommending 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 nine semester hours of credit in a planned program as approved by the university when earned after the issuance of the initial certificate. A second three-year renewal may be granted provided the applicant presents 18 semester hours of credit in a planned program as approved by the university when earned after the issuance of the initial certificate.

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 that the applicant presents nine semester hours of credit in a planned program as approved by the university when earned after the issuance of the initial certificate. A second three-year renewal may be granted provided the applicant presents 18 semester hours of credit in a planned program as approved by the university when earned after the issuance of the initial certificate.

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 18 semester hours in a planned course of study beyond the issuance date of the initial certificate. This advanced course of study must be applicable to the applicant’s professional development and signed with an advisor. A copy of this program must be on file in the EHS Center for Student Services.

Elementary applicants for the Professional Education Certification must have completed nine (9) semester hours in the methods of teaching reading, and secondary applicants must have completed six (6) semester hours in the methods of teaching reading, which includes a three-credit course of study with appropriate field experiences in the diagnosis and remediation of reading disabilities and differentiated instruction established by the Michigan Department of Education and was effective July 1, 2009. 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.

If the required reading credit was completed prior to receiving the Provisional Certificate, it need not be repeated within the required credit for the Professional Education Certificate.

Procedures for Professional Education Certification

The Candidate Shall:

1. Submit a planned program of study beyond the bachelor’s degree signed by the advisor and candidate.
   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.

4. Send official transcripts directly to the EHS Center for Student Services for any of the 18 hours of credit not earned at Central Michigan University, including an official transcript of the reading requirement when appropriate.

The University Will:

1. Evaluate the qualifications of the candidate to determine whether he or she satisfies requirements for a Professional Education Certificate.

2. Obtain a statement from an appropriate school official verifying the candidate has three years of successful teaching experience within the validity and grade level of the provisional teaching certificate.

3. Recommend the candidate to the State Department of Education for a Professional Education Certificate if he or her qualifications are found satisfactory.

4. Record issuance of the Professional Education Certificate on the student’s permanent record when notified by the State Department of Education.

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.
CODE OF STUDENT RIGHTS, RESPONSIBILITIES, AND DISCIPLINARY PROCEDURES

1. Preamble
The students, faculty, and staff of Central Michigan University constitute an academic community which 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 correlative 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 which 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, 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, 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 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 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 and the State of Michigan.

2.2.2 All registered student organizations are open to all students without regard 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 which 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. Students 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 will 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 progress of graduate students in thesis or dissertation work or other research projects is based on 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 law enforcement agencies.

2.5 Confidentiality of Information

All information about students’ views, beliefs, and political associations which members of the University acquire in the course of their work as teachers, administrators, advisors, 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 which 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 Provost is the designated officer responsible to the president for conducting disciplinary review of a decision of the Appeals Board to suspend a student for more than one week or to dismiss a student. The Dean of Students 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 Dean of Students or to the persons designated by the Dean 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, 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 which 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. Copies of the Policy on Academic Integrity may be accessed at https://centrallink.cmich.edu/athletics/Business/Pages/AcademicIntegrity.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, he/she 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 obstruct or interfere with another student’s right to teach, learn or complete academic requirements. This includes actions commonly understood to constitute assault, battery, or sexual assault.

3.2.5 Disruption of University Activities. A student shall not obstruct or disrupt, or attempt to obstruct or disrupt, teaching, research, administration, disciplinary procedures, or other University activities. This includes acts to destroy or prevent or limit access to information or records used by other students in connection with their University responsibilities.

3.2.6 Access to Facilities. A student shall not enter, or attempt to enter, closed University facilities or facilities clearly under the control of an 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.

3.2.7 Threat/Endangerment/Assault/Sexual Assault. A student shall take no action which threatens or endangers the safety, health, or life, or impair the freedom of any person, nor shall a student make any verbal threat of such action. This includes actions commonly understood to constitute assault, battery, or sexual assault. Sexual assault includes, but is not limited to, inflicting sexual contact upon another person or sexually penetrating any person without that person’s consent. Conduct will be considered without consent if no clear consent is given, or when the inflicted person is unconscious or otherwise without the physical or mental capacity to consent. Inflicting sexual contact on someone under the influence of alcohol or drugs may be considered “without consent.”

3.2.8 Self-injurious Behavior/Attempted suicide. A student shall take no action, which threatens or endangers his or her own safety, health, or life, nor shall a student make any verbal threat of such action. This includes such behaviors as suicide attempts, cutting, refusing treatment for life threatening illnesses or conditions (e.g., eating disorders).

3.2.9 Property Damage. A student shall take no action which damages or tends to damage property not the student’s own.

3.2.10 Theft. A student shall not appropriate the student’s own use, sale, or other disposition, property not the student’s own without consent of the owner or the person legally responsible for it. This includes embezzlement, misappropriation and/or theft of university and/or student organizational resources and theft of personal information.

(continued)
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.

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.

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 & Controlled Substances Policy is a violation of this section.

Firearms/Explosives/Weapons. A student shall not possess or use firearms, explosives (including fireworks), dangerous chemicals, weapons, knives or items that forcibly eject projectiles (including BB, pellet and air soft guns), and may be injurious to others, except as part of an approved university activity and under the supervision of a university official. Firearms (including BB, pellet and air soft guns) may not be stored in university residences. Firearms used for hunting must be properly registered with the CMU Police Department and stored in compliance with University regulations.

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.

Payment of Fines/Restitution. A student shall pay fines or restitution levied by a proper hearing body or University authority by the deadline established.

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.

Computer Abuse. A student shall not abuse university computer time or equipment. Abuse includes but is not limited to: unauthorized entry or transfer of a file, unauthorized downloading of copyrighted info, 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. A student shall adhere to the rules and practices promulgated by the University Office of Information Technology (https://centrallink.cmich.edu/services/business_facilityservices/information_tech).

Hazing/Harassment/Stalking. A student shall not haze, harass or stalk any person or group of persons. Telephone harassment, e-mail or computer harassment, stalking, racial and sexual harassment are included under this policy.

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.

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, firefighter, member of the Michigan National Guard or any unit of the armed services officially assigned to civil disorder duty in this lawful performance of his/her duty.

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.

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.

Violation of the CMU Nondiscrimination Policy or the Equal Opportunity and Affirmative Action policy shall be treated as an offense under these regulations.

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 may be treated as an offense under these regulations.

Violation of Residence Hall Rules. Violation of “Residence Hall Rules” may be treated as an offense under these regulations.

Collusion. A student who shall share 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.

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.

Violation of Federal/State/Lowal Law. Violation of federal, state or local law in a manner which affects the University shall be treated as an offense under these regulations.

Violation of University Regulations. Violation of other university regulations, policies or established procedures may be treated as an offense under these regulations.

4. Official University Sanctions

Sanctions
Sanctions which may be imposed for violation of University regulations include the following:

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.

University or Community Service. Required 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.

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 and may impose additional sanctions.

Fines. A fine not to exceed $1,000 may be levied. Failure to pay a fine in the time limit prescribed results in further disciplinary action.

Removal from University Housing. Cancellation of contract and requirement to vacate university housing within a specified period of time.

Campus Restrictions. Limitations on the times and/or places where a student may be present on campus.

Educational Programs. Participation in educational programs, i.e., workshops, seminars, or other educational activities may be required. The person or body imposing this sanction may impose another allowed sanction as an alternative if the specified program is not completed within the time stipulated and may impose additional sanctions.

Revocation of the Privilege of being a Registered Student Organization.

Disciplinary Probation. Subject 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, not limited to the following:

a) Withdrawing the privilege of campus registration of a motor vehicle,

b) Withdrawing the privilege of membership in a campus organization,

c) Withdrawing the privilege of holding office in a campus organization,
4.4.12 Violations of Sections 3.2.7 (Threat/Endangerment/Assault/Sexual Assault) or 3.2.9 (Property Damage) during a riot or civil disorder.

4.4.9 Participation in a riot or civil disorder as described in Section 3.2.20.

4.4.6 Administering or causing to be administered to any person of any "Controlled Substance" as defined in the Controlled Substances Act of 1971, as amended.

4.4.2 Willful destruction of property worth more than $1,000.

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, 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 e-mail, 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) days following the date the notice is posted at facilities of the United States Post Office or electronically sent via e-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 received is so delivered shall be deemed the date notice is received. The student will have two (2) days from the date of the receipt in which to respond to this notice. If the student has not responded at the end of this two day period, the Conduct Proceedings Officer will set up a hearing, and cause to be delivered to the student a copy of this document.

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.

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 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.

(continued)
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 time and date of the hearing.

5.1.9 Alternative Resolution
5.1.9.1 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. Agreements will be signed by the student being charged and the Proceedings Officer. Cases not settled in a timely manner shall proceed to a hearing. Mutual settlements may not be appealed.

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 which may 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 Office and the student may agree to referral to a process provided by the Behavior Evaluation Team. This option is available in situations where the alleged conduct of the student appears to be related to a mental disorder or emotional problem.

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 to hear the case.
5.2.1.2 The University Hearing Officer will be assigned by the President or the President's designee 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 suspension.

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 selected by the President or the President's designee in consultation with 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 suspension.

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 tape recorder, will be kept by the Conduct Proceedings Officer at least until the appeal time is exhausted. If either the University or the student requests another type of record of the hearing be made, this may be done at the cost of the requesting party provided the type of recording does not interfere with the hearing.
5.2.3.4 A University Hearing Officer presides at all hearings.
5.2.3.5 Procedures at hearings will be communicated to the student charged 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 three (3) business days stating if a violation has been found, what facts support this finding, and the sanction to be imposed if a violation has been found.
5.2.3.7 A copy of a decision by the University Hearing Body or University Hearing Officer will be mailed to the student within two (2) business days from the date the decision is made. The Conduct Proceedings Officer will coordinate procedures for communicating the decision.

5.3 Complainant's Rights
Central Michigan University recognizes that complainants have rights which 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.
5.4 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 Dean of Students or designee and must participate in the appropriate training sessions regarding the Code of Student Rights, Responsibilities and Disciplinary Proceedings.
5.4.3 An appeal to the Appeals Board may be made by the student, 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 an exception is made by the President or the President's designee.
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 which 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.
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 purpose of the Appeals Board to decide if it would have reached the same decision had it been the Hearing Officer or Body. It is not the function of the Appeals Board to rehear 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:
5.4.11.1 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.
5.4.11.2 Order that a new hearing be held.
5.4.11.3 Change the sanction.
5.4.11.4 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.
5.4.13 A decision of the Appeals Board is final except that a decision to suspend for more than one year or to dismiss a student is subject to discretionary review by the Provost 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 Provost to review such a decision made by the Appeals Board. The application must be received in the Office of the Provost 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 Provost. 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 Provost by the person making application for review.
If the Provost elects to review a decision of the Appeals Board, either in part or entirely, the Provost 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 regular student at Central Michigan University, 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.
5.6.2 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.
5.7 Clarifying Processes
Clarifying processes which are consistent with the Hearing Procedures in this document may be proposed by the Office of (continued)
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.)

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 reason for 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 mail, 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) days following the date the notice is posted at facilities of the United States Post Office. 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 if received.

If the student does not respond at the end of this two day period, the Conduct Proceedings Officer will set up a hearing, and cause to be delivered to the student a copy of this document.

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 issue a sanction.

6.1.6.2 The Conduct Proceedings Officer, who must prove by a preponderance of evidence that a violation occurred, imposes the sanction.

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 reason for 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 **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. Agreements will be signed by the student being charged and the Proceedings Officer.

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 the case will be heard by a Graduate Studies Hearing Officer or Graduate Studies Hearing Body. 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.

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. If either the University or the student requests another type of record of the hearing be made, this may be done at the cost of the requesting party provided the type of recording does not interfere with the hearing.

6.2.3.4 A Graduate Studies Hearing Officer presides at all hearings.

6.2.3.5 Procedures at hearings 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 stating if a violation has been found, what facts support this finding, and the sanction to be imposed if a violation has been found.

6.2.3.7 A copy of a decision by the Graduate Studies Hearing Officer or Graduate Studies Hearing Body will be mailed to the student within two (2) business days from the date the decision is made. The Conduct Proceedings Officer will coordinate procedures for communicating the decision.

6.3 **Instructor’s Rights**

Central Michigan University recognizes that instructors have rights which need to be protected as well as those of the person who is cited.

The instructor has the right to have a person of his or her choice accompany him or her throughout the disciplinary hearing.

6.3.1 The instructor has the right to remain present during the entire proceeding.
The instructor has the right to make an “impact statement” and to suggest an appropriate sanction if the person cited is found in violation.

The instructor has the right to be informed in a timely manner of the outcome of the hearing regarding the findings and the sanction.

The instructor has the right to appeal either the findings or the sanction.

Appeals

The following matters may be appealed to the Graduate Studies Appeals Board:

1. The decision of a Graduate Studies Hearing Body or a Graduate Studies Hearing Officer as provided in Section 6.2.
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.
3. 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.
4. The Graduate Studies Appeals Board consists of a graduate student appointed by the Chair of the Graduate Committee, the Chairperson of the Academic Senate or designee, and the Dean of the College of Graduate Studies or designee.
5. An appeal to the Graduate Studies Appeals Board may be made by the student involved, by the person or group first brought the charge, or by the University.
6. 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 an exception is made by the President or the President’s designee.
7. 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.
8. 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.
9. 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.
10. The Conduct Proceedings Officer 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. Order that a new hearing be held.
17. Change the sanction.
18. 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.
19. 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.
20. 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 Provost. 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 Provost to review a decision made by the Appeals Board. The application must be received in the Office of the Provost 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 Provost. 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 Provost by the person making application for review.
21. If the Provost elects to review a decision of the Graduate Studies Appeals Board, either in part or entirely, the Provost may establish whatever procedures are deemed appropriate and consistent with fairness to govern the review.
22. 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.

Changes in Procedures

The procedures 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.

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.

Clarifying Processes

Clarifying processes which are consistent with the Hearing Procedures in this Section may be proposed by the College of Graduate Studies.
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