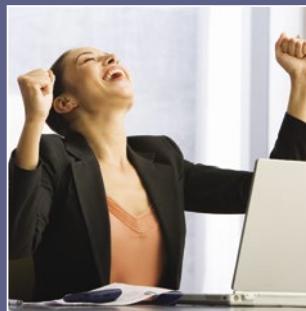
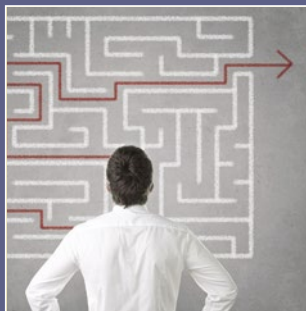
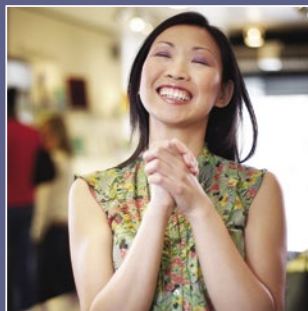




////////////////////
BUILD YOUR FUTURE WITH CONFIDENCE

CATALOG

THE GRADUATE SCHOOL | 2014–2015

www.umuc.edu/graduateprograms



UMUC IN MARYLAND AND AROUND THE WORLD

At University of Maryland University College (UMUC), a high-quality education is always within reach. UMUC is dedicated to offering on-site and online courses and resources to adult students in Maryland and around the world. Under contract to the U.S. Department of Defense, UMUC is one of the largest providers of education to the U.S. military worldwide and serves 55,000 active-duty military servicemembers, reservists, veterans, and their families. With more than 125 worldwide locations in more than 20 countries and territories and nearly 100 undergraduate and graduate degree and certificate programs offered entirely online, UMUC makes it possible to earn a widely respected degree from just about anywhere.

UMUC's commitment to students around the globe extends far beyond providing access to excellent degree programs. An online academic and administrative services portal, MyUMUC, makes it simple for students to register for courses, pay tuition, and order textbooks and other supplies when it's convenient for them. Students can also access academic and career advising, financial aid counseling, library services, and much more online via the university's website or by phone or e-mail. All over the world, UMUC gives its students what they need to succeed.

This catalog provides the degree requirements and recommended curriculum for students who begin continuous study on or after August 1, 2014. (Details are listed on p. 6.) Students should keep their catalog available for easy reference throughout their degree program.

From the Dean



Welcome to The Graduate School at University of Maryland University College (UMUC).

This catalog is the embodiment of what I hope is a very exciting premise—that UMUC provides the next step in the achievement of your career aspirations. In these pages, you'll find our programs and policies. But don't just look at the words, think about what this book represents.

We meet regularly with employers from every sector—large and small, government and private—to find out what you need to know and be able to do to be successful in your career. The courses and programs listed here are continuously updated and renewed to make sure that they are, in fact, preparing you in ways that are relevant and important.

This catalog, then, represents a map—a map designed to lead you from where you are today to the career you've wanted. The programs it describes will challenge you, but that's because we want you to achieve your career and personal aspirations. Employers everywhere search for highly talented people, who can think, learn, make decisions, and innovate. And with an investment of your time and energy, and the guidance of our outstanding faculty, we'll help you master these rare abilities.

Explore our programs, and pick the one that gets you to where you want to go with your career—and get started as soon as possible. Your journey begins here.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Aric Krause', with a long horizontal flourish extending to the right.

Aric Krause, PhD
Vice Provost and Dean
The Graduate School
E-mail: graddean@umuc.edu

POLICY STATEMENT

This publication and its provisions do not constitute, and should not be regarded as, a contract between UMUC and any party or parties. At the time of publication, reasonable effort was made to ensure the factual accuracy of the information. However, this publication is not a complete statement of all policies, procedures, rules, regulations, academic requirements, and tuition and fees applicable to UMUC, its students, or its programs. In addition, changes or additions may be made to the policies, procedures, rules, regulations, and academic requirements set out in this publication. UMUC reserves the right to make these changes and additions to the information in this publication without prior notice. When a curriculum or graduation requirement is changed, it is not made retroactive unless the change is to the student's advantage and can be accommodated within the span of years normally required for graduation.

See additional policies on inside back cover.

Table of Contents

INTRODUCTION

4

- 4 Welcome to UMUC
- 5 About The Graduate School
- 6 Preparing for Graduate Study
- 8 Program Overview

DOCTORAL PROGRAM

10

- 10 Doctor of Management
- 11 Doctor of Management in Community College Policy and Administration

ACCOUNTING AND FINANCE PROGRAMS

13

- 13 Master of International Management:
International Financial Management
- 15 Master of Science in Accounting and Financial Management
- 18 Master of Science in Accounting and Information Systems
- 21 Master of Science in Financial Management and Information Systems
- 23 Master of Science in Management:
Accounting
Financial Management

BUSINESS AND MANAGEMENT PROGRAMS

27

- 27 Master of Business Administration
- 32 Master of Business Administration—
One-Year Program
- 34 Master of International Management:
International Enterprise Management
- 36 Master of Science in Data Analytics
- 38 Master of Science in Management:
Acquisition and Supply Chain Management
Human Resource Management
Interdisciplinary Studies in Management
Nonprofit and Association Management
Project Management

CYBERSECURITY PROGRAMS

46

- 46 Master of Science in Cybersecurity
- 48 Master of Science in Cybersecurity Policy
- 50 Master of Science in Digital Forensics and Cyber Investigation

EDUCATION AND TEACHING PROGRAMS

52

- 52 Master of Arts in Teaching
- 54 Master of Distance Education and E-Learning:
Distance Education Policy and Management
Distance Education Teaching and Training
Distance Education Technology
- 60 Master of Education in Instructional Technology

HEALTH CARE AND SCIENCE PROGRAMS

63

- 63 Master of Science in Biotechnology:
Bioinformatics
Biosecurity and Biodefense
Biotechnology Management
Biotechnology Regulatory Affairs
- 69 Master of Science in Environmental Management
- 71 Master of Science in Health Care Administration
- 73 Master of Science in Health Informatics Administration
- 75 Master of Science in Management:
Health Care Administration

INFORMATION TECHNOLOGY PROGRAMS

77

- 77 Master of Science in Information Technology:
Database Systems Technology Informatics
Information Assurance
Project Management
Software Engineering
Systems Engineering
Telecommunications Management
- 87 Master of Science in Management:
Information Systems and Services

MARKETING AND COMMUNICATION PROGRAMS

90

- 90 Master of International Management:
International Marketing Management
- 92 Master of Science in Management:
Marketing
Public Relations

PUBLIC SAFETY AND INTELLIGENCE PROGRAMS

96

- 96 Master of International Management:
International Emergency Management
- 99 Master of Science in Information Technology:
Homeland Security Management
- 102 Master of Science in Management:
Criminal Justice Management
Emergency Management
Homeland Security Management
Intelligence Management

COURSE DESCRIPTIONS

109

ADMINISTRATION

148

CONTACT INFORMATION

152

ACADEMIC AND ADMINISTRATIVE REQUIREMENTS

156

ADMISSION AND ENROLLMENT

162

- 162 General Information and Orientation
- 162 Admission
- 163 Registration
- 165 Financial Information

SERVICES AND RESOURCES

167

- 167 Availability of Services
- 168 General Information
- 168 Admission Assistance
- 168 Automated Services
- 168 Advising
- 169 Accessibility Services
- 169 Transcript Services
- 169 Graduation Clearance and Services
- 170 Verification Services
- 170 Golden ID Program
- 170 Student Advisory Council
- 171 Financial Aid
- 172 Veterans Benefits
- 174 Other Resources

UNIVERSITY POLICIES

176

APPENDIX

178

INDEX

179

Welcome to UMUC

A UNIQUE INSTITUTION

University of Maryland University College (UMUC) is unique among institutions of higher education. From its founding in 1947, UMUC was designed to meet the educational needs of adult students—students who must balance study with the demands of work and family life.

Today UMUC has grown to be the largest public university in the nation, serving students throughout the state, the nation, and the world. Yet its focus on providing open access to high-quality educational programs and services—eliminating the barriers that can keep students from achieving their educational goals—remains unchanged.

CARRYING OUT THE MISSION

Students First

At UMUC, student success is of paramount importance. The university seeks not only to help students fulfill their current education goals but also to create an educational partnership that will last throughout their lives.

To that end, the university looks first for ways to ensure that students can easily access programs and services. Admission policies are designed to simplify the process (standardized tests are not generally required), making it possible for students to apply and register at the same time.

As a global university, UMUC makes it possible for students to take classes any time, any place, by offering the largest selection of online programs available—in addition to classes at sites throughout Maryland and the Washington, D.C., metropolitan area and at military sites in Europe and Asia. Student services can also be accessed online and by phone, as well as on-site.

Convenience and flexibility are not the only concerns, however. UMUC seeks to create a learning environment that students will find respectful of their diverse backgrounds—inclusive, responsive, and relevant.

Recognizing that financial concerns are often the biggest obstacle to higher education, UMUC also strives to keep tuition costs low and provides numerous financial aid opportunities, including scholarships for military and community college students.

Excellence

A regionally accredited university, UMUC is dedicated to providing the highest quality programs and services to its students and ensuring excellence in its online and on-site courses.

In providing these programs, UMUC relies on a renowned faculty of scholars—practitioners—teachers who bring real-world experience to courses—and the use of the latest technologies. UMUC also is able to provide a wealth of resources to its students because of its place within the University System of Maryland.

The success of UMUC's efforts is evident. Year after year, UMUC continues to garner awards from such notable organizations as the University Continuing Education Association, the Sloan Consortium, and the Maryland Distance Learning Association.

Innovation

UMUC has always looked for new and better ways to serve students. Long before the online revolution, UMUC was delivering courses to students at distant locations, using any and all available technologies—from interactive television to voice mail. Today, students access both courses and services online, using the university's learning management system and MyUMUC, its online gateway to services and informa-

tion. UMUC's faculty members also strive to find new ways to best use these technologies to assist their students' learning.

FACILITIES AND PROGRAMS

UMUC offers degree programs from the associate's level to the doctorate. Most undergraduate and graduate programs are available online. These academic programs are administered by The Undergraduate School and The Graduate School. UMUC also offers noncredit leadership development training through its National Leadership Institute.

The university's administrative headquarters are located in Adelphi, Maryland, and also serve as home to a prestigious art collection and a conference facility, the College Park Marriott Hotel and Conference Center at UMUC. The Academic Center at Largo houses both The Undergraduate School and The Graduate School, as well as all related academic support units. Most classes and services, however, are provided at more than 125 sites worldwide, as well as through cutting-edge technology—online via the university's website, the learning management system, and MyUMUC.

FOR ASSISTANCE

Assistance is available by e-mail at info@umuc.edu or by phone at 800-888-UMUC (8682).

About The Graduate School

MISSION STATEMENT

UMUC's Graduate School prepares students for effective leadership and citizenship in a global environment characterized by workforce diversity, increasing competition, and technological innovation. Programs are designed to extend educational access to adult students through multiple formats.

The Graduate School strives for excellence in the quality of programs offered and innovative delivery formats. The curriculum provides knowledge of the disciplines with emphasis on leadership, communication, technology, globalization, diversity, systems thinking, critical thinking, information literacy, research competency, and ethical practices. The Graduate School challenges students and faculty to continuously demonstrate effective leadership as they apply what they study to their professions and their daily lives.

ACADEMIC PROGRAMS

UMUC's graduate degrees are designed to provide a career-focused curriculum. Many of the programs offer an opportunity for further specialization within the general field.

The Graduate School currently offers 19 graduate degree programs, including a doctor of management program, more than 30 specializations, and more than 45 certificate programs. Most of these programs are available online, so students can pursue their degrees from anywhere in the world.

Students can also enroll in one of 20 dual degree programs. These options enable students to acquire two graduate degrees for substantially fewer credits than would be required if each degree were earned separately. Because the two programs share and build upon core content, students

generally need take no more than 18 credits of coursework in the second degree. However, both degrees must be earned within the established time limit (described on p. 158).

A complete list of graduate programs can be found on pp. 8–9.

Over the years, many of these programs have won awards for excellence. Most recently, UMUC's Master of Science in Biotechnology won the Sloan Consortium (Sloan-C) award for Outstanding Online Program of 2013.

UMUC offers courses on-site at Maryland-area locations, online, and in a hybrid format that combines on-site attendance with online study. For more information, students should e-mail gradinfo@umuc.edu or call 800-888-UMUC.

ACADEMIC RELATIONSHIPS

The Graduate School has established academic relationships with a number of academic and government institutions, some of which are listed below.

The Undergraduate School

Articulation agreements between The Graduate School and UMUC's Undergraduate School allow students who completed their undergraduate degree at UMUC with majors in accounting, computer science, criminal justice, cybersecurity, English, history, and social science and minors in emergency management and homeland security to reduce their total coursework for certain related graduate degrees. Details on each of these agreements are provided under the individual program descriptions.

Military Relationships

UMUC has established special relationships with a number of the military's institutions of higher education: Air War College, Air University, Defense

Acquisition University, Defense Information School, Naval War College, National Defense University Information Resources Management College (iCollege), and Marine Corps College of Distance Education and Training. In most of these academic relationships, students complete military specializations at the partner school as part of a master's degree program at UMUC. More information on these academic relationships is available online at military.umuc.edu or by e-mail at MilitarySupportServices@umuc.edu.

Oldenburg University

The Master of Distance Education and E-Learning (MDE) program is offered in partnership with Oldenburg University, Germany, a leading German institution with extensive experience in distance education. The participation of Oldenburg University helps ensure that the program has a broad, global perspective that is critical for distance educators in today's world.

Oldenburg University and UMUC have partnered to develop a certificate program and several courses in the degree program, as well as a series of books that include important reflective research on the program (including historical analysis of the program development and detailed cost analysis).

Preparing for Graduate Study

As most students know, more is expected at the graduate level than what is normally required at the undergraduate level. In addition, there are usually special requirements that must be completed at the end of the student's program. UMUC requires students to complete comprehensive exams and a dissertation only at the doctoral level. UMUC's master's degree programs require completion of an integrative end-of-program capstone course in which students must demonstrate mastery of content covered throughout the program.

Students who remain in continuous enrollment should refer to the catalog of the year in which they began graduate study for the specific requirements related to their program of study. Continuous enrollment is defined on p. 154.

All graduate students must maintain a cumulative grade point average (GPA) of 3.0 and receive no grade of F to remain in good academic standing. Academic progress is assessed at the end of each term. Other requirements—such as time limits to degree completion and minimum GPA—also apply; details are provided on p. 153.

While UMUC's course formats offer considerable flexibility, students entering graduate-level programs should know that graduate study requires a significant time commitment. Most courses involve group projects. Each week, graduate students should expect to devote at least 3 hours of outside study for every credit in which they are enrolled. According to that calculation, graduate students need to devote to outside study, research, and reading a minimum of 9 to 12 hours per week per 3-credit course.

NONPROGRAM COURSES

Because UMUC graduate students often enter graduate study with academic backgrounds in very different fields and return to study after a gap of many years, UMUC offers a number of courses outside the usual required program courses that are designed to help students succeed in their graduate studies. Most of these courses are noncredit and optional; the orientation and library research skills course, however, is required for all students entering graduate study at UMUC. Complete course descriptions are provided on pp. 97–142.

Required Graduate Study and Library Research Skills Course

UCSP 615 Orientation to Graduate Studies at UMUC is designed to help students develop the skills and techniques needed to understand and manage the challenges involved in successfully completing a graduate program at UMUC and to familiarize students with research strategies and online library resources—material that is critical for 21st-century professionals.

This noncredit course is required for all new graduate students. The grading method is pass/fail. UCSP 615 must be completed within the first 6 credits of graduate study. It is recommended that students take this as their first course before beginning program coursework.

Optional Credit Course in Writing

Students who have been out of academia for a period of time or who do not write often in their professions are encouraged to enroll in COMM 600 Academic Writing for Graduate Students in their first term. COMM 600 is specially designed to reinforce and strengthen the writing skills necessary for success in UMUC's graduate degree programs.

Although COMM 600 is a 3-credit course, those credits do not apply to any individual program requirements.

Optional Noncredit Courses

Noncredit courses (designated UCSP) are available in economics, financial accounting, and research methods and generally last eight weeks. Although these courses carry no UMUC credit, they appear on the students' official academic transcript. At the successful conclusion of the course, a grade of P (Pass) is posted. UMUC graduate students must be admitted or have an application on file before registering for noncredit courses.

Current information about fees for noncredit courses is available at www.umuc.edu/tuition.

COURSE FORMATS

UMUC offers courses online, on-site at a number of Maryland locations, and in a hybrid format that combines on-site and online instruction.

Hybrid classes meet on-site at a UMUC location for about half the class sessions; the remainder of the course material is covered in the online classroom. The schedule of on-site sessions is provided by the faculty member at the beginning of the term. Hybrid courses are identified in the most current graduate schedule of classes.

Online courses maintain the same academic standards as on-site courses. Course content, texts, requirements, assignments, and class participation are comparable for online and on-site courses; for example, students need to adhere to a course schedule for assignment deadlines.

Computer and Internet Access

UMUC is committed to ensuring that students acquire the level of technological fluency needed for active participation in contemporary society and have access to up-to-date resources.

All UMUC students must be prepared to participate in asynchronous, computer-based class discussions; study groups; online database searches; course evaluations; and other online activities. This policy applies to students in both classroom-based and online courses.

All UMUC students must therefore ensure that they have some type of Internet access. Barring individual course requirements, this access may be through use of a UMUC computer lab; university or public library; or other readily available, reliable source if the student does not have home access. However, it should be regularly available, and the student must have a current e-mail address. Information on students' UMUC e-mail addresses is available at www.umuc.edu/umucgmail.

Some academic programs may have specific technical requirements.

Taking Online Classes

Before registering for an online course, students may want to consider the following:

1. Online students need to be prepared to write extensively, because nearly all communication is written. Online students need strong reading and writing skills in English.
2. Online students need to be competent in the use of computers and commonly used software programs.

3. Since the online classroom is asynchronous and students are expected to be active participants, students are encouraged to log in frequently to check what has transpired in their online classroom (in lieu of classroom meetings).
4. Online students need disciplined work habits, effective time management skills, and the ability to work both alone and collaboratively.

Technical Requirements

Certain minimum technical requirements must be met to take graduate online courses; these requirements are subject to change. Current information about technical requirements is available online at www.umuc.edu/techreq. Students are responsible for their own Internet access costs.

Some academic programs may have additional technical requirements, such as requiring the student to download and install computer programs. To determine whether such requirements apply to an individual program, students should consult the program director (listed under Contact Information).

Course Evaluations

UMUC uses student feedback to make decisions about future courses. Individual responses are kept confidential. For online and hybrid classes, the notice appears in the online classroom when three-quarters of the class has been completed.

The following pages provide descriptions of the degree and certificate programs available through the UMUC Graduate School, including all course requirements and any academic or professional preparation required or recommended beyond general graduate admission requirements.

Most degree and certificate programs follow a very specific curriculum with little or no choice. However, in some cases students may substitute a single 6-credit course that covers the same content as two required 3-credit courses. These options are listed in the course requirements.

* Certain project management courses require the use of a PC.

Program Overview

DOCTORAL PROGRAM

Doctor of Management *

Doctor of Management in
Community College Policy
and Administration ○

ACCOUNTING AND FINANCE PROGRAMS

Master of International Management

- International Financial Management

Master of Science in Accounting and Financial Management

Master of Science in Accounting and Information Systems

Master of Science in Financial Management and Information Systems

Master of Science in Management

- Accounting
- Financial Management

BUSINESS AND MANAGEMENT PROGRAMS

Master of Business Administration

Master of Business Administration— One-Year Program

Master of International Management

- International Enterprise
Management

Master of Science in Data Analytics

Master of Science in Management

- Acquisition and Supply Chain
Management
- Human Resource Management
- Interdisciplinary Studies in
Management
- Nonprofit and Association
Management
- Project Management

CYBERSECURITY PROGRAMS

Master of Science in Cybersecurity

Master of Science in Cybersecurity Policy

Master of Science in Digital Forensics and Cyber Investigation

EDUCATION AND TEACHING PROGRAMS

Master of Arts in Teaching **

Master of Distance Education and E-Learning

- Distance Education Policy
and Management
- Distance Education Teaching
and Training
- Distance Education Technology

Master of Education in Instructional Technology

HEALTH CARE AND SCIENCE PROGRAMS

Master of Science in Biotechnology

- Bioinformatics
- Biosecurity and Biodefense
- Biotechnology Management
- Biotechnology Regulatory Affairs

Master of Science in Environmental Management

Master of Science in Health Care Administration

Master of Science in Health Informatics Administration

Master of Science in Management

- Health Care Administration

INFORMATION TECHNOLOGY PROGRAMS

Master of Science in Information Technology

- Database Systems Technology
- Informatics
- Information Assurance
- Project Management
- Software Engineering
- Systems Engineering
- Telecommunications Management

Master of Science in Management

- Information Systems and Services

MARKETING AND COMMUNICATIONS PROGRAMS

Master of International Management

- International Marketing Management

Master of Science in Management

- Marketing
- Public Relations

PUBLIC SAFETY AND INTELLIGENCE PROGRAMS

Master of International Management

- International Emergency
Management

Master of Science in Information Technology

- Homeland Security Management

Master of Science in Management

- Criminal Justice Management
- Emergency Management
- Homeland Security Management
- Intelligence Management

* Offered online with mandatory residencies or course meetings at UMUC headquarters in Adelphi, Maryland.

○ Not available to Maryland residents. Offered online with mandatory residencies or course meetings at UMUC headquarters in Adelphi, Maryland.

** On-site teaching field experiences and practicum required.

DUAL DEGREE PROGRAMS

Either Degree May Be Earned First:

Master of Business
Administration With

Master of Distance Education and E-Learning

Master of International Management

Master of Science in Biotechnology

Master of Science in Cybersecurity Policy

Master of Science in Environmental
Management

Master of Science in Financial
Management and Information Systems

Master of Science in Health Care
Administration

Master of Science in Information Technology

Master of Science in Management

Other Dual Degree Combinations

Master of Distance Education and
E-Learning/Master of Science
in Management

Master of Education in Instructional
Technology/Master of Distance
Education and E-Learning

Master of Science in Accounting
and Financial Management/
Master of Science in Accounting and
Information Systems

Master of Science in Accounting
and Financial Management/
Master of Science in Financial
Management and Information Systems

Master of Science in Accounting
and Information Systems/
Master of Science in Financial
Management and Information Systems

Degrees Must Be Earned in Order Listed:

Master of Arts in Teaching/Master
of Education in Instructional
Technology

Master of Science in Cybersecurity/Master
of Business Administration

Master of Science in Data Analytics/
Master of Business Administration

Master of Science in Data Analytics/
Master of Science in Management:
Marketing Specialization

Master of Science in Digital Forensics and
Cyber Investigation/Master of Business
Administration

Master of Science in Information
Technology/Master of Science
in Cybersecurity Policy

CERTIFICATE PROGRAMS

Accounting

Accounting and Information
Systems

Acquisition and Supply Chain
Management

Bioinformatics

Biosecurity and Biodefense

Biotechnology Management

Biotechnology Regulatory Affairs

Criminal Justice Management

Cybersecurity Policy

Cybersecurity Technology

Database Systems Technology

Digital Forensics and Cyber
Investigation

Distance Education, Globalization,
and Development

Distance Education Leadership

Emergency Management

Environmental Management

Financial Management
in Organizations

Foundations in Business Analytics

Foundations of Cybersecurity

Foundations of Distance Education
and E-Learning

Foundations of Human Resource
Management

Foundations of Information
Technology

Health Informatics Administration

Health Care Administration

Homeland Security Management

Informatics

Information Assurance

Instructional Design for E-Learning

Instructional Technology Integration

Integrated Direct Marketing

Intelligence Management

International Marketing

International Trade

Leadership and Management

Library and Intellectual Property
in Distance Education and
E-Learning

Nonprofit and Association Financial
Management

Policy and Management in Distance
Education and E-Learning

Predictive Analytics

Project Management

Public Relations

Software Engineering

Systems Analysis

Systems Engineering

Teaching and Training at a Distance

Technology in Distance Education
and E-Learning

Telecommunications Management

• A joint program with University of Maryland, Baltimore County.

More information about certificate programs, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

DOCTORAL PROGRAM

DOCTOR OF MANAGEMENT

Today's leaders require a sophisticated level of knowledge and analysis to guide their organizations through the complexities of a rapidly changing global environment. The Doctor of Management (DM) program is a practitioner-scholar doctoral program for experienced professionals in the field of leadership and management. Focus is on developing competencies in integrating scholarly work with a practitioner perspective to translate management concepts into effective strategies in organizations. The curriculum covers the principles of evidence-based management, including applied secondary research methods. It is designed to help students develop skills in critical thinking, conceptual and logical fluency, and information literacy.

Program Objectives

The program is designed to help students

- Function as organizational leaders to translate explanations of management concepts into practice.
- Understand management research methods and assess the quality and reliability of published research.
- Interpret critically and express management theories in both scholarly and professional practice communities.
- Understand the nature and influence of key trends, such as globalization, sustainability, and technology, as they shape management activities in public- and private-sector organizations.

Career Paths

- Management/expertise consultant
- Management analyst
- Higher education faculty member or administrator
- Senior-level manager

Program Overview

The DM program requires the completion of 48 credits of coursework, including 36 credits in academic content coursework and 12 credits of dissertation coursework, comprehensive examinations, and a scholar-practitioner dissertation. Attendance at a two-day residency on-site in Maryland each term is mandatory. DMGT 600 (described on p. 123) is prerequisite to the program but may be waived for applicants who submit recent (within the last five years) GRE (verbal and quantitative) or GMAT scores (verbal and quantitative) scores in the 75th percentile or higher in each section.

Application Procedures

DM applicants must submit

- A completed doctoral program admission application with the \$100 application fee
- An official transcript indicating completion of a master's degree or higher from a regionally accredited university or college (students educated abroad should see www.umuc.edu/internationalstudent for additional requirements)
- An up-to-date résumé indicating professional leadership and management experience
- Two letters of reference—one professional and one academic
- A personal statement that outlines the applicant's interest in doctoral study and future goals
- Five reviews of scholarly, peer-reviewed, academic research-based articles that pertain to the applicant's area of interest in management research

Details on the supplemental documents listed above are available online at www.umuc.edu/applydm. The complete admission file must be reviewed before the applicant can enroll in DMGT 600. Applicants must earn a grade of B or higher in DMGT 600 for official admission to the program. Admission criteria are provided online and on p. 162.

Degree Requirements

Doctor of Management

INITIAL REQUIREMENTS

(to be taken within the first 6 credits of study)

UCSP 815 Introduction to Library Research Skills for Doctoral Studies (0)

DMGT 600 Foundations of Doctoral Study (3)

REQUIRED MAIN COURSES

DMGT 800 Foundations of Management Theory (6)

DMGT 830 Research Methods I (6)

DMGT 835 Research Methods II (6)

DMGT 890 Dissertation Part I (4)

DMGT 810 Leadership and Change (6)

DMGT 845 Organizational Environments in a Global Context (6)

DMGT 891 Dissertation Part II (4)

DMGT 850 Innovation Process and Strategy (6)

DMGT 892 Dissertation Part III (4)

Course descriptions are found on pp. 110–47.

DOCTOR OF MANAGEMENT IN COMMUNITY COLLEGE POLICY AND ADMINISTRATION

The growing importance of the community college to the nation's future reinforces the need for highly prepared administrators for this sector of higher education. Enrollment growth and the projected retirement of a large number of administrators are creating vast opportunities within community college leadership. The Doctor of Management (DM) with a concentration in Community College Policy and Administration is designed for those who aspire to provide strong leadership in a community college and advance in administrative careers. The program focuses on practical leadership and management tools and the development of the skills necessary to lead effectively in the community college environment. Emerging issues that affect today's community college and the students who choose to pursue their education in that environment are examined.

Program Objectives

The program is designed to help students

- Synthesize management theory and practice and their applications to the community college environment.
- Articulate and advocate the community college mission.
- Outline the processes of educational policy formulation and academic governance.
- Develop skills that enable the development of plans and the assessment of institutional and student learning outcomes.
- Articulate the major challenges and opportunities facing community colleges and propose strategies to address those challenges.
- Function effectively in progressively more senior leadership positions in community colleges.

Career Path

Leadership position in a community college

Program Overview

The DM program with a concentration in Community College Policy and Administration requires the completion of 48 credits of coursework, including comprehensive examinations and a practitioner dissertation. DMGT 600 is prerequisite to the program but may be waived for applicants who meet certain academic or professional criteria (detailed online at www.umuc.edu/dmccpa). A comprehen-

sive leadership development program, which includes a battery of individual assessments and career coaching, is an integral part of the program. Attendance at a two-day residency on-site in Maryland each term is mandatory.

Application Procedures

The DM in Community College Policy and Administration is not available to Maryland residents. In addition to a completed doctoral program admission application and payment of the \$100 application fee, DM applicants must submit

- An official transcript indicating completion of a master's degree or higher from a regionally accredited university or college (students educated abroad should see www.umuc.edu/internationalstudent for additional requirements)
- An up-to-date résumé indicating professional management experience in a community college environment or its equivalent
- Two letters of reference—one professional and one academic
- A personal statement that outlines the applicant's interest in doctoral study (guidelines for statement are available at www.umuc.edu/applydmccpa)
- Five reviews of scholarly research articles

Details on the supplemental documents listed above are available online at www.umuc.edu/applydmccpa. The complete admission file must be reviewed before the applicant can enroll in DMGT 600. Applicants must earn a grade of B or higher in DMGT 600 for official admission to the program. Admission criteria are provided online and on p. 162.

DOCTORAL PROGRAM

Degree Requirements

DM in Community College Policy and Administration

INITIAL REQUIREMENTS

(to be taken within the first 6 credits of study)

- UCSP 815 Introduction to Library Research Skills for Doctoral Studies (0)
- DMGT 600 Foundations of Doctoral Study (3)

REQUIRED MAIN COURSES

- DMCC 810 Leadership and Change (6)
- DMCC 800 Foundations of Management Theory (6)
- DMCC 830 Research Methods (6)
- DMCC 890 Dissertation Part I (4)
- DMCC 821 Higher Education Policy (6)
- DMCC 891 Dissertation Part II (4)
- DMCC 841 Institutional Assessment in the Community College Environment (6)
- DMCC 851 Community College Advocacy, Advancement, and Entrepreneurism (6)
- DMCC 892 Dissertation Part III (4)

Course descriptions are found on pp. 110–47.

ACCOUNTING AND FINANCE PROGRAMS

MASTER OF INTERNATIONAL MANAGEMENT

In our increasingly globalized world, business leaders cannot ignore what occurs beyond U.S. borders. The Master of International Management (MIM) is designed for midcareer professionals who want to delve more deeply into international business and commerce and learn how to overcome obstacles to succeed in the field. The curriculum emphasizes developing skills for assessing the international competitive structure of industries, building marketing and business plans, formulating market-entry strategies, and managing country and global business risk. The goal is to help students develop a working knowledge of transnational business operations and the global environment and an understanding of how both affect their own organization and management.

Program Objectives

The program is designed to help students

- Demonstrate a global perspective in business operations/processes.
- Increase the competitiveness of their organizations.

Degree Requirements

Specific course requirements are detailed under each specialization.

Dual Degree Option

Dual degree options, described on p. 5, require a second application.

Students who complete the MIM may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- DMBA 610 Ethical Leadership in Organizations and Society (6)
- DMBA 620 Effective Financial and Operational Decision Making (6)
- DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

MIM: INTERNATIONAL FINANCIAL MANAGEMENT SPECIALIZATION

Required Core Courses	12
Research Specialization Courses	21
Required Capstone Course	3
Total Credits	42

The International Financial Management specialization helps prepare managers to deal with an organization's financial operations in a global context. The specialization covers international trade and economic policy; strategic investment and partnering; financial management in organizations; capital markets, institutions, and long-term financing; investment valuation; strategic financial management; and multinational financial management. The program emphasizes development of management skills and the use of financial analysis in decision making and performance management in global organizations.

Career Paths

- Controller or treasurer for an international company/organization
- International financial manager
- Capital investment analyst
- Financial liaison with international business units
- Credit or cash manager
- International financial consultant or advisor
- International financial, budget, or management analyst

ACCOUNTING AND FINANCE PROGRAMS

Degree Requirements

MIM: International Financial Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

INITIAL RECOMMENDATION

Students without a background in finance or accounting should take UCSP 620 and 621.

REQUIRED CORE COURSES

IMAN 601 Strategic Management in a Global Environment (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making (3)
IMAN 635 Managing Country Risk (3)

REQUIRED SPECIALIZATION COURSES

IMAN 615 Strategic Investment and Partnering (3)
IMAN 625 International Trade and Economic Policy (3)
FIN 610 Financial Management in Organizations (3)
FIN 620 Long-Term Financial Management (3)
FIN 630 Investment Valuation (3)
FIN 640 Multinational Financial Management (3)
FIN 660 Strategic Financial Management (3)

REQUIRED CAPSTONE COURSE

IMAN 670 Managing Overseas Operations (3)

COURSE SEQUENCING

- IMAN 601 must be completed during the first term of enrollment.
- MGMT 640 is prerequisite to FIN 610.
- FIN 610 is prerequisite to all other FIN courses.
- FIN 620 and 630 are prerequisite to FIN 660.
- Students must complete 30 credits of program coursework, including all core courses, before enrolling in IMAN 670.

Dual Degree Option

Students who have complete the MIM may then complete the following degree as part of a dual degree option:

- Master of Business Administration

Details are provided on p. 13.

Course descriptions are found on pp. 110–47.

MASTER OF SCIENCE IN ACCOUNTING AND FINANCIAL MANAGEMENT

According to the Bureau of Labor Statistics, demand will continue to grow for professionals and managers who possess specialized skills, knowledge, and abilities in both the accounting and financial management disciplines. The Master of Science (MS) in Accounting and Financial Management is designed to help those individuals who want to increase their knowledge base in these areas, rather than seek a general management or general business-related degree, to move either into a position in the chief financial officer (CFO) career path or simply to move into another career field without becoming so specialized that they lose flexibility.

The program emphasizes understanding the financial reporting process and its effect on financial markets, as well as using and analyzing financial information to make informed management decisions. Subject matter from the accounting and finance disciplines is integrated in a capstone course that focuses on the application of principles, theories, and techniques previously covered in the curriculum. The goal is to prepare students to assume positions of increasing responsibility within the financial operations of an organization.

Program Objectives

The program is designed to help students

- Apply accounting and financial management concepts and principles in the analysis and resolution of strategic and operational problems.
- Utilize technology in the accounting and financial management of their organizations to share access to information for the purpose of improving the quality of decision making enterprise-wide.
- Apply finance and accounting principles in evaluating the costs and benefits of strategic investments.
- Evaluate issues and innovations in accounting and financial management and their effects on managerial decision making.
- Evaluate the effects of international standards and international diversification on accounting and financial management decision making.
- Demonstrate understanding of the ethical problems facing accounting and financial management professionals.
- Assess and evaluate the state of corporate governance and internal controls.

Career Paths

- Chief financial officer
- Accounting or financial manager
- Fraud examiner
- Financial, budget, or management analyst
- Government accountant or auditor
- Internal auditor
- Financial liaison with business units
- Financial consultant or advisor

Required Academic Preparation

Students must have completed 15 credits of undergraduate accounting coursework, with a grade of C or better in each course, before enrolling in any graduate accounting course.

MS IN ACCOUNTING AND FINANCIAL MANAGEMENT

Accounting Courses	15
Financial Management Courses	18
Capstone Course	3
Total Credits	36

Degree Requirements

MS in Accounting and Financial Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

INITIAL RECOMMENDATION

Students without a recent background in finance or accounting should take UCSP 620 and 621.

ACCOUNTING AND FINANCE PROGRAMS

ACCOUNTING COURSES

Students must complete the following three courses:

- ACCT 610 Financial Accounting (3)
- ACCT 612 Auditing (3)
- ACCT 613 Federal Income Taxation (3)

Students must take two of the following for a total of 6 credits:

- ACCT 625 Government and Nonprofit Accounting (3)
- ACCT 630 Fraud Examination (3)
- ACCT 635 Accounting Ethics (3)
- ACCT 640 International Accounting (3)

FINANCIAL MANAGEMENT COURSES

- MGMT 640 Financial Decision Making for Managers (3)
- FIN 610 Financial Management in Organizations (3)
- FIN 620 Long-Term Financial Management (3)
- FIN 630 Investment Valuation (3)
- FIN 645 Behavioral Finance (3)
- FIN 660 Strategic Financial Management (3)

CAPSTONE COURSE

- MSAF 670 Accounting and Financial Management Capstone (3)

COURSE SEQUENCING

- ACCT 610 is prerequisite to all graduate accounting courses.
- Students are strongly encouraged to take ACCT 612 before ACCT 630.
- MGMT 640 is prerequisite to FIN 610.
- FIN 610 is prerequisite to all other FIN courses.
- FIN 620 and 630 are prerequisite to FIN 660.
- FIN 630 is prerequisite to FIN 645.
- Students must complete all program coursework except FIN 645 before enrolling in MSAF 670.

Professional Certification

Successful completion of the program may satisfy the educational requirement for candidacy for the Certified Public Accountant (CPA) exam. Educational requirements to sit for the CPA exam vary among states. Students are responsible for staying abreast of the current requirements for the state in which they will sit for the exam or practice professionally.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major in accounting to reduce their total coursework for the graduate degree by up to 6 credits (two courses) and complete both degrees with a total of 150 credits of coursework.

The Graduate School will accept up to two of the following toward the completion of the MS in Accounting and Financial Management, Accounting and Information Systems, or Management: Accounting Specialization for a maximum of 6 credits:

- ACCT 438 Fraud and Forensic Accounting and ACCT 440 Forensic and Investigative Accounting in lieu of ACCT 630 Fraud Examination
- ACCT 427 Advanced Auditing and ACCT 433 Audit and Control of Information in lieu of ACCT 612 Auditing Process
- ACCT 323 Federal Income Tax I and ACCT 417 Federal Income Tax II in lieu of ACCT 613 Federal Income Taxation

The substitutions listed above are the only ones possible. Credits eligible for sharing must have been completed no earlier than four years before the beginning of graduate studies. A minimum grade of B must have been earned in each of the undergraduate classes for the credits to be accepted at the graduate level. Admission requirements apply to all applicants.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Accounting and Financial Management may earn one of the following degrees by completing the coursework indicated:

MS in Accounting and Information Systems

REQUIRED COURSES

- ISAS 610 Information Systems Management and Integration (3)
- ISAS 630 Systems Analysis and Design (3)
- ISAS 650 Information Technology, the CIO, and Organizational Transformation (3)
- IMAT 637 IT Acquisitions Management (3)
- INFA 610 Foundations of Information Security and Assurance (3)
- MSAS 670 Accounting and Information Systems Capstone (3)

COURSE SEQUENCING

Students must complete all coursework (except INFA 610) before taking MSAS 670.

MS in Financial Management and Information Systems

REQUIRED COURSES

ISAS 610	Information Systems Management and Integration (3)
ISAS 630	Systems Analysis and Design (3)
ISAS 650	Information Technology, the CIO, and Organizational Transformation (3)
IMAT 637	IT Acquisitions Management (3)
INFA 610	Foundations of Information Security and Assurance (3)
MSFS 670	Financial Management and Information Systems Capstone (3)

COURSE SEQUENCING

Students must complete all coursework (except INFA 610) before taking MSFS 670.

ACCOUNTING AND FINANCE PROGRAMS

MASTER OF SCIENCE IN ACCOUNTING AND INFORMATION SYSTEMS

Information systems have become ubiquitous in the world of accounting, and expertise in both areas sets employees apart from their peers. The Master of Science (MS) in Accounting and Information Systems is designed for students who have a background in finance or accounting and want to expand their knowledge of accounting and information systems to advance their careers to either chief financial officer or chief information officer or to serve as liaisons between their organization's information technology department and executive leadership. The program is also an appropriate track for professionals not currently in accounting or information technology who want to develop the skills they need to make a career change. The curriculum focuses on business processes with a broad business outlook and includes fraud examination, federal income taxation, accounting ethics, auditing, systems analysis and design, computer security, and more. The goal of the program is to help students acquire the tools they need to bridge the gap between accounting and information systems in their organization and to develop ways to enhance that relationship.

Program Objectives

The program is designed to help students

- Apply accounting and information systems concepts, principles, and techniques in the analysis of opportunities and resolution of accounting systems problems within their organizations.
- Communicate accounting and information systems ideas, concepts, and solutions.
- Evaluate the effects of technology on an organization's accounting system.
- Evaluate issues and innovations in accounting and in information systems and their effects on managerial decision making.
- Evaluate and design accounting and information systems to meet organizational goals.
- Develop and evaluate alternative solutions to organizational problems.

Career Paths

- Liaison between the chief financial officer and chief information officer
- Public accountant or auditor
- Government accountant or auditor

- Management or systems analyst
- Fraud examiner or internal auditor

Required Academic Preparation

Students must have completed 15 credits of undergraduate accounting coursework, with a grade of C or better in each course, before enrolling in any graduate accounting course.

MS IN ACCOUNTING AND INFORMATION SYSTEMS

Accounting Courses	18
Information Systems Courses	15
Capstone Course	3
Total Credits	36

Degree Requirements

MS in Accounting and Information Systems

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

INITIAL RECOMMENDATION

Students without a recent background in finance or accounting should take UCSP 620 and 621.

ACCOUNTING COURSES

Students must complete the following four courses:

ACCT 610 Financial Accounting (3)
ACCT 612 Auditing (3)
ACCT 613 Federal Income Taxation (3)
ACCT 614 Accounting Information Systems (3)

Students must take two of the following for a total of 6 credits:

ACCT 625 Government and Nonprofit Accounting (3)
ACCT 630 Fraud Examination (3)
ACCT 635 Accounting Ethics (3)
ACCT 640 International Accounting (3)

INFORMATION SYSTEMS COURSES

ISAS 610	Information Systems Management and Integration (3)
ISAS 630	Systems Analysis and Design (3)
ISAS 650	Information Technology, the CIO, and Organizational Transformation (3)
INFA 610	Foundations of Information Security and Assurance (3)
IMAT 637	IT Acquisitions Management (3)

CAPSTONE COURSE

MSAS 670	Accounting and Information Systems Capstone (3)
----------	---

COURSE SEQUENCING

- ACCT 610 is prerequisite to all graduate accounting courses.
- Students are advised to take ACCT 612 before ACCT 630.
- Students must complete all program coursework except INFA 610 before enrolling in MSAS 670.

Professional Certification

Successful completion of the program may satisfy the educational requirement for candidacy for the Certified Public Accountant (CPA) exam. Educational requirements to sit for the CPA exam vary among states. Students are responsible for staying abreast of the current requirements of the state in which they will sit for the exam or practice professionally.

Recognition/Professional Certification

The curriculum for the MS in Accounting and Information Systems is in alignment with the Information Systems Audit and Control Association's *Model Curriculum for IT Audit and Control*, 2nd Edition. Graduates of the program qualify for one year of work experience toward the Certified Information Systems Auditor designation.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major in accounting to reduce their total coursework for the graduate degree by up to 6 credits (two courses). Details are on p. 16.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Accounting and Information Systems may earn one of the following degrees by completing the coursework indicated:

Master of Science in Accounting and Financial Management

REQUIRED COURSES

MGMT 640	Financial Decision Making for Managers (3)
FIN 610	Financial Management in Organizations (3)
FIN 620	Long-Term Financial Management (3)
FIN 630	Investment Valuation (3)
FIN 645	Behavioral Finance (3)
MSAF 670	Accounting and Financial Management Capstone (3)

COURSE SEQUENCING

- MGMT 640 is prerequisite to FIN 610.
- FIN 610 is prerequisite to all other FIN courses.
- FIN 630 is prerequisite to FIN 645.
- Students must complete all coursework (except FIN 645) before taking MSAF 670.

Master of Science in Financial Management and Information Systems

REQUIRED COURSES

MGMT 640	Financial Decision Making for Managers (3)
FIN 610	Financial Management in Organizations (3)
FIN 620	Long-Term Financial Management (3)
FIN 630	Investment Valuation (3)
FIN 645	Behavioral Finance (3)
MSFS 670	Financial Management and Information Systems Capstone (3)

COURSE SEQUENCING

- MGMT 640 is prerequisite to FIN 610.
- FIN 610 is prerequisite to all other FIN courses.
- FIN 630 is prerequisite to FIN 645.
- Students must complete all coursework (except FIN 645) before taking MSFS 670.

ACCOUNTING AND FINANCE PROGRAMS

Related Certificate Program

Accounting and Information Systems

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

ACCT 610 Financial Accounting (3)

ACCT 614 Accounting Information Systems (3)

IMAT 637 IT Acquisitions Management (3)

INFA 610 Foundations of Information Security
and Assurance (3)

COURSE SEQUENCING

ACCT 610 is prerequisite to all graduate accounting courses.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

MASTER OF SCIENCE IN FINANCIAL MANAGEMENT AND INFORMATION SYSTEMS

Today's financial managers are expected to have the knowledge and skills necessary to play an active role in the information systems operations of their organizations. The Master of Science (MS) in Financial Management and Information Systems is designed for midcareer financial professionals who want to learn to effectively manage information systems within their organization and to lead or integrate the specification, design, and implementation of financial systems within the organization. The program is ideal for information systems professionals, chief information officers, and chief financial officers who would like to learn more about the integration of these two fields. It is also appropriate for those not currently working in either field but who have some academic background in business and want to transition into a position that focuses on financial management and information systems. The curriculum covers behavioral finance, investment valuation, financial decision making, capital markets, institutions, long-term financing, and more. The goal of the program is to help graduates develop, implement, and manage effective information systems within a financial organization.

Program Objectives

The program is designed to help students

- Apply financial management and information systems concepts, principles, and analysis techniques in the strategic and operational decision-making processes within their organizations.
- Communicate financial management and information systems ideas, concepts, and solutions.
- Evaluate issues and emerging trends in financial management and information systems technology and their potential impact on managerial decision making.
- Apply financial principles in evaluating the costs and benefits of information systems/technology investment.
- Assess and design financial information systems to meet organizational needs and objectives.

Career Paths

- Chief financial officer
- Chief information officer
- Financial manager

- Liaison between the chief financial officer and the chief information officer or from those offices to the business units
- Financial, budget, or management analyst

MS IN FINANCIAL MANAGEMENT AND INFORMATION SYSTEMS

Required Financial Management Courses	18
Research Information Systems Courses	15
Required Capstone Course	3
Total Credits	36

Degree Requirements

MS in Financial Management and Information Systems

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

INITIAL RECOMMENDATION

Students without a background in finance or accounting should take UCSP 620 and 621.

REQUIRED FINANCIAL MANAGEMENT COURSES

MGMT 640	Financial Decision Making for Managers (3)
FIN 610	Financial Management in Organizations (3)
FIN 615	Financial Analysis and Modeling (3)
FIN 620	Long-Term Financial Management (3)
FIN 630	Investment Valuation (3)
FIN 645	Behavioral Finance (3)

REQUIRED INFORMATION SYSTEMS COURSES

ISAS 610	Information Systems Management and Integration (3)
ISAS 630	Systems Analysis and Design (3)
ISAS 650	Information Technology, the CIO, and Organizational Transformation (3)

ACCOUNTING AND FINANCE PROGRAMS

INFA 610 Foundations of Information Security and Assurance (3)

IMAT 637 IT Acquisitions Management (3)

REQUIRED CAPSTONE COURSE

MSFS 670 Financial Management and Information Systems Capstone (3)

COURSE SEQUENCING

- MGMT 640 is prerequisite to FIN 610.
- FIN 610 is prerequisite to all other financial management courses.
- FIN 630 is prerequisite to FIN 645.
- Students must complete all program coursework (except FIN 645 or INFA 610) before enrolling in MSFS 670.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Financial Management and Information Systems may earn one of the following degrees by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

DMBA 610 Ethical Leadership in Organizations and Society (6)

DMBA 620 Effective Financial and Operational Decision Making (6)

DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Master of Science in Accounting and Financial Management

ACCOUNTING COURSES

Students must complete the following four courses:

ACCT 610 Financial Accounting (3)

ACCT 612 Auditing Process (3)

ACCT 613 Federal Income Taxation (3)

MSAF 670 Accounting and Financial Management Capstone (3)

Students must take two of the following for a total of 6 credits:

ACCT 625 Government and Nonprofit Accounting (3)

ACCT 630 Fraud Examination (3)

ACCT 635 Accounting Ethics (3)

ACCT 640 International Accounting (3)

COURSE SEQUENCING

- ACCT 610 is prerequisite to all other required accounting courses.
- ACCT 612 should be taken before ACCT 630 or ACCT 635.
- All program coursework (except ACCT 630 or ACCT 635, if chosen) must be taken before MSAF 670.

Master of Science in Accounting and Information Systems

ACCOUNTING COURSES

Students must complete the following five courses:

ACCT 610 Financial Accounting (3)

ACCT 612 Auditing Process (3)

ACCT 613 Federal Income Taxation (3)

ACCT 614 Accounting Information Systems (3)

MSAF 670 Accounting and Financial Management Capstone (3)

Students must take one of the following for a total of 3 credits:

ACCT 630 Fraud Examination (3)

ACCT 635 Accounting Ethics (3)

COURSE SEQUENCING

- ACCT 610 is prerequisite to all other required accounting courses.
- ACCT 612 should be taken before ACCT 630 or ACCT 635.
- Students must complete all coursework (except ACCT 630 or ACCT 635) before taking MSFS 670.

Related Certificate Program

Financial Management in Organizations

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

MGMT 640 Financial Decision Making for Managers (3)

FIN 610 Financial Management in Organizations (3)

FIN 615 Financial Analysis and Modeling (3)

FIN 620 Long-Term Financial Management (3)

FIN 630 Investment Valuation (3)

COURSE SEQUENCING

- MGMT 640 is prerequisite to FIN 610.
- FIN 610 is prerequisite to all other financial management courses.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

MASTER OF SCIENCE IN MANAGEMENT

SPECIALIZATIONS IN

Accounting

Financial Management

CERTIFICATES IN

Accounting

Financial Management

The Master of Science (MS) in Management is designed for professionals who are assuming or want to assume greater management responsibilities within their organizations or are planning to pursue management positions at new organizations. Throughout the curriculum, emphasis is on the effects rapid technological change has on organizations and administrative processes and the consequent ethical and moral responsibilities of managers to society at large. The goal of the program is to provide students with the skills and technical expertise that are the basis for success in modern organizations.

Program Objectives

The program is designed to help students

- Utilize methods of and conduct organizational assessments.
- Evaluate the organization/environment relationship.
- Direct strategic planning.
- Demonstrate organizational communication and leadership.
- Budget and allocate resources.
- Manage organizational decision making.

Degree Requirements

Specific course requirements are detailed under each specialization.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Management may earn one of the following degrees by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- | | |
|----------|---|
| DMBA 610 | Ethical Leadership in Organizations and Society (6) |
| DMBA 620 | Effective Financial and Operational Decision Making (6) |
| DMBA 630 | Marketing and Strategy Management in the Global Marketplace (6) |

ACCOUNTING AND FINANCE PROGRAMS

Master of Distance Education and E-Learning

REQUIRED COURSES

OMDE 601	Foundations of Distance Education and E-Learning (3)
OMDE 603	Technology in Distance Education and E-Learning (3)
OMDE 610	Teaching and Learning in Online Distance Education (3)
OMDE 606	Costs and Economics of Distance Education and E-Learning (3)
OMDE 608	Learner Support in Distance Education and Training (3)
DETC 621	Online Learning and Development in the Workplace (3)

MS IN MANAGEMENT: ACCOUNTING SPECIALIZATION

Core Courses	12
Specialization Courses	21
Capstone Course	3
Total Credits	36

The Accounting specialization covers a broad range of accounting-related studies, especially in the areas of financial accounting; fraud examination; accounting; ethics; management accounting; auditing process; income taxation; accounting information systems; and international, government, and nonprofit accounting.

Career Paths

- Public accountant or auditor
- Accounting manager
- Internal control/forensics accounting specialist
- Management accountant
- Government accountant or auditor
- Internal auditor
- Financial, budget, or management analyst
- Fraud examiner

Required Academic Preparation

Students interested in the accounting specialization must have completed 15 credits of undergraduate accounting coursework, with a grade of C or better in each course, before enrolling in any graduate-level accounting course.

Degree Requirements

MS in Management: Accounting Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

INITIAL RECOMMENDATION

Students without a recent background in finance or accounting should take UCSP 620 and 621.

CORE COURSES

MGMT 610 Organizational Theory (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3) *

SPECIALIZATION COURSES

Students must complete the following five courses:

ACCT 610 Financial Accounting (3)
ACCT 611 Management Accounting (3)
ACCT 612 Auditing (3)
ACCT 614 Accounting Information Systems (3)
ACCT 613 Federal Income Taxation (3)

Students must take two of the following for a total of 6 credits:

ACCT 625 Government and Nonprofit Accounting (3)
ACCT 630 Fraud Examination (3)
ACCT 635 Accounting Ethics (3)
ACCT 640 International Accounting (3)

REQUIRED CAPSTONE COURSE

MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

* Research methods/statistics course for the program.

Course descriptions are found on pp. 110–47.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- ACCT 610 is prerequisite to all other accounting courses.
- Students are strongly advised to take ACCT 612 before ACCT 630.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.

Professional Certification

Successful completion of the accounting specialization may satisfy the education requirements for candidacy for the Certified Public Accountant (CPA) examination. Educational requirements to sit for the CPA exam vary among states. Students are responsible for staying abreast of the current requirements of the state in which they will sit for the exam or practice professionally.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major in accounting to reduce their total coursework for the graduate degree by up to 6 credits (two courses). Details are on p. 16.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 23–24.

Related Certificate Program

Accounting

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

ACCT 610 Financial Accounting (3)
ACCT 611 Management Accounting (3)
ACCT 612 Auditing (3)
ACCT 614 Accounting Information Systems (3)

COURSE SEQUENCING

ACCT 610 is prerequisite to all required accounting courses.

REQUIRED ACADEMIC PREPARATION

Students must have 15 credits in undergraduate accounting with a minimum grade of C in each course to enroll in this certificate program.

MS IN MANAGEMENT: FINANCIAL MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Financial Management specialization covers financial management in organizations, financial analysis and modeling, capital markets, institutions and long-term financial management, investment valuation and multinational financial management, behavioral finance and cost management, and strategic financial management. The specialization emphasizes development of management skills and the use of financial analyses in decision making and performance management.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 91–135.

ACCOUNTING AND FINANCE PROGRAMS

Career Paths

- Controller or treasurer
- Financial manager
- Capital investment analyst
- Financial liaison with business units
- Credit or cash manager
- Financial consultant or advisor
- Financial, budget, or management analyst
- Cost analyst or program analyst

Degree Requirements

MS in Management: Financial Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

INITIAL RECOMMENDATION

Students without a background in finance or accounting should take UCSP 620 and 621.

REQUIRED CORE COURSES

MGMT 610 Organizational Theory and Behavior in a Global Environment (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3)*

REQUIRED SPECIALIZATION COURSES

FIN 610 Financial Management in Organizations (3)
FIN 615 Financial Analysis and Modeling (3)
FIN 620 Long-Term Financial Management (3)
FIN 630 Investment Valuation (3)
FIN 645 Behavioral Finance (3)
FIN 660 Strategic Financial Management (3)
FIN 640 Multinational Financial Management (3)

REQUIRED CAPSTONE COURSE

MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 is prerequisite to FIN 610.
- FIN 610 is prerequisite to all other FIN courses.
- FIN 630 is prerequisite to FIN 645.
- FIN 620 and 630 are prerequisite to FIN 660.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 23–24.

Related Certificate Program

- Financial Management in Organizations

Details are available on p. 22.

* Research methods/statistics course for the program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

BUSINESS AND MANAGEMENT PROGRAMS

MASTER OF BUSINESS ADMINISTRATION

Management responsibilities in today's complex multinational business organizations transcend a single functional specialty and require a broad array of specialized knowledge. The Master of Business Administration (MBA) is designed for midcareer professionals whose careers and management responsibilities extend beyond a single functional specialty and require a broad array of specialized knowledge and skills. The emphasis of this interdisciplinary, integrated, and applied degree program is on the significant organizational and management processes that take place in the context of large public or private institutions doing business on a global scale. The goal is to prepare students for upper management and executive-level positions by developing key managerial competencies—including critical thinking, systems thinking, team building, decision making, and ethical leadership—that can be applied in any type of business enterprise.

Students who already have a graduate degree or who meet certain academic or professional certification qualifications may want to consider the one-year program for the MBA, described on p. 32.

Global Focus Option

UMUC offers students the option to focus their business studies on emerging economies and current issues in global business management. More information on this option may be obtained from Business and Management Programs at mba@umuc.edu.

Program Objectives

The program is designed to help students

- Make effective management decisions that exhibit high ethical standards in a global and culturally diverse environment.
- Use oral and written communication skills to express ideas effectively and persuasively with all organizational stakeholders using a variety of tools, including synchronous and asynchronous technologies.
- Develop comprehensive solutions to business problems by synthesizing and evaluating information using qualitative and quantitative analytical reasoning.
- Manage the effective use of technology in an organization to achieve superior performance and operational effectiveness.
- Apply proven management theories and practices to resolve a wide range of organizational issues.

Career Paths

- Mid- to upper-level manager in corporate, government, or non-profit organizations
- Business/organizational consultant
- Corporate planner
- Business owner/entrepreneur

MASTER OF BUSINESS ADMINISTRATION

Required Common Courses	24
Required Focus Courses	18
Total Credits	42

Degree Requirements

MBA

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- UCSP 615 Orientation to Graduate Studies at UMUC (0)
AMBA 600 MBA Fundamentals (3)

REQUIRED COMMON COURSES

- AMBA 610 The Manager in Organizations and Society (6)
AMBA 620 Managing People and Groups in the Global Workplace (6)
AMBA 630 The Economics of Management Decisions (6)
AMBA 640 Managing Projects, Operations, and Information Systems (6)

BUSINESS AND MANAGEMENT PROGRAMS

FOCUS COURSES

Students must complete one of the following groups of courses for a total of 18 credits:

Standard Focus Courses

- AMBA 650 Marketing Management and Innovation (6)
- AMBA 660 Managing Global Business (6)
- AMBA 670 Managing Strategy in the Global Marketplace (6)

Global Focus Courses

- RMBA 650 Environment of Global Business (6)
- RMBA 660 Marketing in the Global Business Environment (6)
- RMBA 670 Formulating and Implementing Global Strategy (6)

COURSE SEQUENCING

All courses must be taken in the order listed.

WAIVER OF PREREQUISITE

AMBA 600 is prerequisite to the program but may be waived for students who already have a graduate degree or who present GMAT scores in the 70th percentile or higher.

Program Recognition/Accreditation

In 2011, the UMUC MBA program won the Best Practices Award (Silver) in Distance Learning Programming—Higher Education from the U.S. Distance Learning Association.

The MBA program has also received specialized accreditation through the International Assembly for Collegiate Business Education (IACBE).

Academic Relationships

UMUC has established academic relationships with universities in Canada, Mexico, and China. The participation of students from these universities in MBA classes provides an international perspective and contributes to class diversity.

Students who complete their undergraduate degree at UMUC with a major in business administration and a grade point average of 3.0, overall and in the major, may waive the prerequisite course, AMBA 600. Admission requirements apply to all applicants.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MBA—in either format—may earn one of the following degrees by completing the coursework indicated:

Master of Distance Education and E-Learning

REQUIRED COURSES

- OMDE 601 Foundations of Distance Education and E-Learning (3)
- OMDE 603 Technology in Distance Education and E-Learning (3)
- OMDE 610 Teaching and Learning in Online Distance Education (3)
- OMDE 606 Costs and Economics of Distance Education and E-Learning (3)
- OMDE 608 Learner Support in Distance Education and Training (3)
- DEPM 622 The Business of Distance Education and E-Learning (3)

Master of International Management

REQUIRED COURSES

- IMAN 601 Strategic Management in a Global Environment (3)
- IMAN 615 Strategic Investment and Partnering (3)
- IMAN 625 International Trade and Economic Policy (3)
- IMAN 635 Managing Country Risk (3)
- FIN 640 Multinational Financial Management (3)
- MRKT 605 International Marketing Management (3)

COURSE SEQUENCING

IMAN 601 must be completed during the first term of enrollment.

Master of Science in Biotechnology

REQUIRED COURSES

- BIOT 601 Introduction to Molecular Biology (3)
- BIOT 640 Societal Issues in Biotechnology (3)
- BIOT 630 Introduction to Bioinformatics (3)
- BIOT 645 The Business of Biotechnology (3)
- BTMN 636 Biotechnology and the Regulatory Environment (3)
- BTMN 670 Capstone in Biotechnology (3)

Master of Science in Cybersecurity Policy

REQUIRED COURSES

CSEC 610	Cybersecurity and Cyberspace (6)
CSEC 635	National Cybersecurity Policy and Law (6)
CSEC 645	Enterprise Cybersecurity Policy (6)

Master of Science in Environmental Management

REQUIRED COURSES

ENVM 646	Environmental/Energy Law and Policy Development (3)
ENVM 641	Environmental Auditing (3)
ENVM 643	Environmental Communications and Reporting (3)
ENVM 647	Environmental Risk Assessment (3)
ENVM 649	Principles of Waste Management and Pollution Control (3)
ENVM 650	Environmental and Natural Resources Economics (3)

Master of Science in Financial Management and Information Systems

REQUIRED COURSES

FIN 620	Long-Term Financial Management (3)
FIN 630	Investment Valuation (3)
ISAS 610	Information Systems Management and Integration (3)
IMAT 637	IT Acquisitions Management (3)
INFA 610	Foundations of Information Security and Assurance (3)
MSFS 670	Financial Management and Information Systems Capstone (3)

COURSE SEQUENCING

Students must complete all program coursework (except INFA 610) before taking MSFS 670.

Master of Science in Health Care Administration

REQUIRED COURSES

HCAD 600	Introduction to Health Care Administration (3)
HCAD 620	The U.S. Health Care System (3)
HCAD 630	Public Health Administration (3)
HCAD 650	Legal Aspects of Health Care Administration (3)
HCAD 660	Health Care Institutional Organization and Management (3)
HCAD 670	Health Care Administration Capstone (3)

COURSE SEQUENCING

- HCAD 600 should be completed as the first course.
- Students must complete at least 12 credits of HCAD coursework before taking HCAD 670.

ACADEMIC AND PROFESSIONAL PREPARATION

Students should have educational or work experience in the health care industry.

Master of Science in Information Technology

REQUIRED COURSES

ITEC 610	Information Technology Foundations (3)
ITEC 626	Information Systems Infrastructure (3)
ITEC 630	Information Systems Analysis, Modeling, and Design (3)
ITEC 640	Information Technology Project Management (3)
ITEC 625	Computer Systems Architecture (3)
INFA 610	Foundations of Information Security and Assurance (3)

Master of Science in Management

ACCOUNTING SPECIALIZATION

Accounting Courses

Students must complete the following five courses:

ACCT 610	Financial Accounting (3)
ACCT 611	Management Accounting (3)
ACCT 612	Auditing (3)
ACCT 614	Accounting Information Systems (3)
ACCT 613	Federal Income Taxation (3)
<i>Students must choose one of the following for a total of 3 credits:</i>	
ACCT 630	Fraud Examination (3)
ACCT 635	Accounting Ethics (3)

Academic Preparation

Students must have 15 undergraduate credits in accounting with a minimum grade of C in each course.

Course Sequencing

- ACCT 610 is prerequisite to all other required accounting courses.
- ACCT 612 should be taken before ACCT 630.

BUSINESS AND MANAGEMENT PROGRAMS

ACQUISITION AND SUPPLY CHAIN MANAGEMENT SPECIALIZATION

Required Courses

- ASCM 626 Purchasing and Materials Management (3)
ASCM 627 Legal Aspects of Contracting (3)
ASCM 628 Contract Pricing and Negotiations (3)
ASCM 629 Strategic Purchasing and Logistics (3)
ASCM 630 Commercial Transactions in a Technological Environment: Law, Management, and Technology (3)
ASCM 631 Integrative Supply Chain Management (3)

Alternate Course

ASCM 650 Legal Aspects of Contracting and Commercial Transactions (6) may be taken instead of ASCM 627 and 630.

CRIMINAL JUSTICE MANAGEMENT SPECIALIZATION

Required Courses

- CJMS 600 Critical Analysis of the Criminal Justice System (3)
CJMS 610 Perspectives in Law Enforcement Management (3)
CJMS 620 Issues in Correctional Administration (3)
CJMS 630 Seminar in Security Management (3)
CJMS 640 Criminal Justice Intelligence Systems and Approaches (3)
CJMS 650 Legal Aspects Within the Criminal Justice System (3)

Course Sequencing

CJMS 600 must be taken as the first specialization course.

FINANCIAL MANAGEMENT SPECIALIZATION

Required Courses

- FIN 615 Financial Analysis and Modeling (3)
FIN 620 Long-Term Financial Management (3)
FIN 630 Investment Valuation (3)
FIN 645 Behavioral Finance (3)
FIN 660 Strategic Financial Management (3)
FIN 640 Multinational Financial Management (3)

Course Sequencing

- FIN 630 is prerequisite to FIN 645.
- FIN 620 and 630 are prerequisite to FIN 660

Recommendation

Students without recent coursework in finance should consider taking UCSP 620 and 621 before enrolling in FIN courses.

HEALTH CARE ADMINISTRATION SPECIALIZATION

Required Courses

- HCAD 610 Information Technology for Health Care Administration (3)
HCAD 620 The U.S. Health Care System (3)
HCAD 630 Public Health Administration (3)
HCAD 640 Financial Management for Health Care Organizations (3)
HCAD 650 Legal Aspects of Health Care Administration (3)
HCAD 660 Health Care Institutional Organization and Management (3)

HUMAN RESOURCE MANAGEMENT SPECIALIZATION

Required Courses

- HRMD 610 Issues and Practices in Human Resource Management (3)
HRMD 620 Employee and Labor Relations (3)
HRMD 630 Recruitment and Selection (3)
HRMD 640 Job Analysis, Assessment, and Compensation (3)
HRMD 650 Organizational Development and Change (3)
HRMD 651 Current Perspectives in Training and Development (3)

Course Sequencing

HRMD 610 should be taken as the first course.

INTELLIGENCE MANAGEMENT SPECIALIZATION

Required Courses

- INMS 600 Managing Intelligence Activities (3)
INMS 610 Intelligence Collection: Sources and Challenges (3)
INMS 620 Intelligence Analysis: Consumers, Uses, and Issues (3)
INMS 630 Espionage and Counterintelligence (3)
INMS 640 Intelligence-Led Enforcement (3)
INMS 650 Intelligence Management and Oversight (3)

Course Sequencing

INMS 600 and 610 must be taken as the first two specialization courses.

MARKETING SPECIALIZATION

Required Courses

- MRKT 601 Legal and Ethical Issues in Global Communications (3)
MRKT 602 Consumer Behavior (3)
MRKT 603 Brand Management (3)
MRKT 604 Marketing Intelligence and Research Systems (3)
MRKT 605 International Marketing Management (3)
MRKT 606 Integrated Direct Marketing (3)

NONPROFIT AND ASSOCIATION MANAGEMENT SPECIALIZATION

Required Courses

- NPMN 600 Nonprofit and Association Organizations and Issues (3)
- NPMN 610 Nonprofit and Association Law and Governance (3)
- NPMN 620 Nonprofit and Association Financial Management (3)
- NPMN 650 Fundamentals of Association Management (3)
- NPMN 655 Outcome and Process Evaluation Management (3)
- NPMN 660 Strategic Management in Nonprofit Organizations and Associations (3)

PUBLIC RELATIONS SPECIALIZATION

Required Courses

- PRPA 600 Public Relations Writing (3)
- PRPA 601 Public Relations Theory and Practice (3)
- PRPA 602 Public Relations Techniques (3)
- PRPA 610 Crisis Communication Management (3)
- PRPA 620 Global Public Relations (3)
- PRPA 650 Public Relations Campaigns (3)

Course Sequencing

- PRPA 600 is prerequisite to all other specialization courses and must be taken first.
- PRPA 601 is prerequisite to PRPA 602.
- PRPA 602 is prerequisite to PRPA 610 and 620.
- Students must complete all other specialization courses before taking PRPA 650.

BUSINESS AND MANAGEMENT PROGRAMS

MASTER OF BUSINESS ADMINISTRATION—ONE-YEAR PROGRAM

People entering the world of business, as well as those assuming greater management responsibilities in their organizations, require a broad array of specialized knowledge. The one-year Master of Business Administration (MBA) offers an accelerated format that provides this knowledge in a highly concentrated curriculum. The one-year format offers an interdisciplinary, integrated, and applied degree program that is designed to prepare graduates for greater management and executive-level positions by developing key managerial competencies—including critical thinking, systems thinking, team building, decision making, and ethical leadership—that can be applied in any type of organization.

Program Objectives

The program is designed to help students

- Make effective management decisions that exhibit high ethical standards in a global and culturally diverse environment.
- Use oral and written communication skills to express ideas effectively and persuasively with all organizational stakeholders by using a variety of tools, including synchronous and asynchronous technologies.
- Develop comprehensive solutions to business problems by synthesizing and evaluating information using qualitative and quantitative analytical reasoning.
- Manage the effective use of technology in an organization to achieve superior performance and operational effectiveness.
- Apply proven management theories and practices to resolve a wide range of organizational issues.

Career Paths

- Mid- to upper-level manager in corporate, government, or non-profit organizations
- Business/organizational consultant
- Corporate planner
- Business owner/entrepreneur

MASTER OF BUSINESS ADMINISTRATION—ONE-YEAR PROGRAM

Required Content Courses	33
Required Practicum Courses	9
Total Credits	42

Admission and Application Requirements

Admission to this program is competitive and is granted to students who meet *one* of the following criteria:

- Possess a graduate degree from a regionally accredited university
- Possess an undergraduate degree from a regionally accredited university or college and certain professional certifications (qualifying certifications are listed online at www.umuc.edu/oneyearmba)
- Have an undergraduate GPA of 3.5 or above from a regionally accredited university *and* a GMAT score in the 75th percentile or higher

Admission may also be granted to applicants with a minimum of five years of professional experience managing projects and/or people in an organization (subject to verification). Applicants seeking admission under this basis are subject to an interview (in-person or via teleconference) and must submit

- A résumé
- A biographical statement detailing how the applicant's professional experience demonstrates his or her ability to succeed in a fast-paced MBA program
- A professional recommendation

Degree Requirements

MBA—One-Year Program

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED CONTENT COURSES

CMBA 615 The Role of Managers in Organizations (4)
CMBA 625 Legal and Ethical Issues in Business (4)
CMBA 635 Leading People and Groups in the Workplace (4)
CMBA 645 Measuring Financial Performance (4)
CMBA 655 Financial Decision Making (4)
CMBA 665 Marketing Management (4)
CMBA 675 Managing Projects and Operations (4)
CMBA 685 Business Strategy in the Global Marketplace (5)

REQUIRED PRACTICUM COURSES

CMBA 695 Business Practicum Part 1 (3)
CMBA 696 Business Practicum Part 2 (3)
CMBA 697 Business Practicum Part 3 (3)

COURSE SEQUENCING

- Students who start in the fall take CMBA 615, 625, 635, and 695 in the first term; CMBA 645, 655, 665, and 696 in the second (spring); and CMBA 675, 685, and 697 in the third (summer).
- Students who start in the spring take CMBA 615, 625, 635, and 695 in the first term; CMBA 645, 655, and 696 in the second (summer); and CMBA 665, 675, 685, and 697 in the third (fall).
- Practicum courses are taken concurrently with content courses.
- CMBA 615 is prerequisite to CMBA 695.
- CMBA 635 is prerequisite to CMBA 696.
- CMBA 665 is prerequisite to CMBA 697.

Dual Degree Options

Students who complete the one-year MBA may then complete one of the following degrees as part of a dual degree option:

- Master of Distance Education and E-Learning
- Master of International Management
- Master of Science in Biotechnology
- Master of Science in Cybersecurity Policy
- Master of Science in Environmental Management

- Master of Science in Financial Management and Information Systems
- Master of Science in Health Care Administration
- Master of Science in Information Technology
- Master of Science in Management

Details are available on pp. 28–31.

BUSINESS AND MANAGEMENT PROGRAMS

MASTER OF INTERNATIONAL MANAGEMENT

SPECIALIZATION IN

International Enterprise Management

CERTIFICATES IN

International Trade

In our increasingly globalized world, business leaders cannot ignore what occurs beyond U.S. borders. The Master of International Management (MIM) is designed for midcareer professionals who want to delve more deeply into international business and commerce and learn how to overcome obstacles to succeed in the field. The curriculum emphasizes developing skills for assessing the international competitive structure of industries, building marketing and business plans, formulating market-entry strategies, and managing country and global business risk. The goal is to help students develop a working knowledge of transnational business operations and the global environment and an understanding of how both affect their own organization and management.

Program Objectives

The program is designed to help students

- Demonstrate a global perspective in business operations/ processes.
- Increase the competitiveness of their organizations.

Career Paths

- Senior-level manager in a multinational enterprise
- International business generalist
- International business consultant
- Director of an international business unit
- Senior policy analyst for a multinational enterprise

Degree Requirements

Specific course requirements are detailed under each specialization.

Dual Degree Option

Dual degree options, described on p. 5, require a second application.

Students who complete the MIM may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- | | |
|----------|---|
| DMBA 610 | Ethical Leadership in Organizations and Society (6) |
| DMBA 620 | Effective Financial and Operational Decision Making (6) |
| DMBA 630 | Marketing and Strategy Management in the Global Marketplace (6) |

Course descriptions are found on pp. 110–47.

MIM: INTERNATIONAL ENTERPRISE MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	42

The International Enterprise Management specialization helps prepare managers to plan and execute strategies in a global environment, as well as to identify and take advantage of global business opportunities. The specialization covers international trade and economic policy, strategic investment and partnering, issues and practices in human resource management, financial management in organizations, multinational financial management, information systems for managers, and international marketing management.

Degree Requirements

MIM: International Enterprise Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED CORE COURSES

IMAN 601 Strategic Management in a Global Environment (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making (3)
IMAN 635 Managing Country Risk (3)

REQUIRED SPECIALIZATION COURSES

IMAN 615 Strategic Investment and Partnering (3)
IMAN 625 International Trade and Economic Policy (3)
HRMD 610 Issues and Practices in Human Resource Management (3)
FIN 610 Financial Management in Organizations (3)
FIN 640 Multinational Financial Management (3)
ISAS 600 Information Systems for Managers (3)
MRKT 605 International Marketing Management (3)

REQUIRED CAPSTONE COURSE

IMAN 670 Managing Overseas Operations (3)

COURSE SEQUENCING

- IMAN 601 must be completed during the first term of enrollment.
- MGMT 640 is prerequisite to FIN 610.
- FIN 610 is prerequisite to FIN 640.
- Students must complete 30 credits of program coursework, including all core courses, before enrolling in IMAN 670.

Dual Degree Option

Students who complete the MIM may then complete the following degree as part of a dual degree option:

- Master of Business Administration

Details are provided on p. 34.

Related Certificate Program

International Trade

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

IMAN 601 Strategic Management in a Global Environment (3)
IMAN 615 Strategic Investment and Partnering (3)
IMAN 625 International Trade and Economic Policy (3)
MRKT 605 International Marketing Management (3)

COURSE SEQUENCING

Students must take IMAN 601 as the first course, followed by IMAN 615. The remaining courses can be taken in any order.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

BUSINESS AND MANAGEMENT PROGRAMS

MASTER OF SCIENCE IN DATA ANALYTICS

In today's increasingly competitive marketplace, organizations need individuals with the requisite skills to transform the growing amount of industry, product, and customer (behavior) data into actionable information to support strategic and tactical decision making. The Master of Science (MS) in Data Analytics is designed to meet the rising need for highly skilled professionals who can transform the growing amount of data confronting all organizations into usable information for use by their decision makers. Students have the opportunity to gain hands-on experience with a variety of analytical tools available for the purpose of structuring large data sets to unearth hidden information to allow their organizations to build and sustain a long-term competitive advantage. The curriculum covers sophisticated software tools and functions such as data mining, predictive modeling, and visual analytics using large data sets.

Program Objectives

The program is designed to help students

- Design and implement databases, dimensional models, and data warehousing strategies.
- Transform large data sets into actionable information in an easy-to-understand format to support organizational decision making through the use of advanced analytical tools.
- Manage the quality, security, and privacy of data relevant to an organization to enhance its value.
- Manage data analytics projects to ensure delivery of a successful data analytics initiative throughout its life cycle.
- Apply advanced methods of data warehousing and data mining in a variety of organizational environments.
- Assess alternative approaches and infrastructures for implementing big data analytics.
- Evaluate the appropriate methods and tools for data analysis in specific organizational contexts, including selecting a modeling approach, building a model using appropriate tools, validating the model, and deploying the model for prediction and analysis.
- Develop experience tackling industry- and organization-specific problems and challenges using advanced analytics and computational methods.

Career Paths

- Data analytics specialist
- Data analyst
- Data scientist
- Business intelligence analyst
- Business analyst
- Marketing analyst

Admission Requirements

To be admitted to the program, students must provide one of the following:

- A score in the 75th percentile on the quantitative section of the Graduate Record Exam (GRE) or the Graduate Management Aptitude Test (GMAT)
- One of the following industry certifications:
 - IBM certification in Cognos, Risk Analytics, or SPSS
 - SAS certification in Foundation, Analytics, Administration, Data Management, or Enterprise Business Intelligence
 - Microsoft certification (e.g., MCITP, MCSA, MCSE, MCSM, MCDBA)
 - Certified Business Intelligence Professional
 - Certified Analytics Professional
 - Certified Data Management Professional
 - Certified Health Data Analyst
- Coursework (200-level or higher) in linear algebra, calculus, discrete mathematics, probability, statistics, hypothesis testing, estimation, computer programming, data structures, database development, or data mining from a regionally accredited college or university (official transcript required) with a minimum grade of B

MS IN DATA ANALYTICS

Required Main Courses	33
Required Practicum Course	6
Total Credits	39

Degree Requirements

MS in Data Analytics

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED MAIN COURSES

DATA 600 Foundations in Data Analytics (3)
DATA 610 Decision Management Systems (6)
DATA 620 Data Management and Visualization (6)
DATA 630 Data Mining (6)
DATA 640 Predictive Modeling (6)
DATA 650 Big Data Analytics (6)

REQUIRED PRACTICUM COURSE

DATA 670 Data Analytics Practicum (6)

COURSE SEQUENCING

Courses must be taken in the order listed.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Data Analytics may earn one of the following degrees by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

DMBA 610 Ethical Leadership in Organizations and Society (6)
DMBA 620 Effective Financial and Operational Decision Making (6)
DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

MS in Management: Marketing Specialization

REQUIRED COURSES

MRKT 600 Marketing Management (3)
MRKT 602 Consumer Behavior (3)
MRKT 603 Brand Management (3)
MRKT 604 Marketing Intelligence and Research Systems (3)
MRKT 606 Integrated Direct Marketing (3)
MRKT 671 Special Projects in Marketing Analytics (3)

Related Certificate Programs

Foundations in Business Analytics

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

DATA 600 Foundations in Data Analytics (3)
DATA 610 Decision Management Systems (6)
DATA 620 Data Management and Visualization (6)

COURSE SEQUENCING

Courses must be taken in the order listed.

ADMISSION REQUIREMENTS

Students must meet the same admission requirements as those for the degree in data analytics.

Predictive Analytics

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

DATA 600 Foundations in Data Analytics (3)
DATA 630 Data Mining (6)
DATA 640 Predictive Modeling (6)

COURSE SEQUENCING

Courses must be taken in the order listed.

ADMISSION REQUIREMENTS

Students must meet the same admission requirements as those for the degree in data analytics.

BUSINESS AND MANAGEMENT PROGRAMS

MASTER OF SCIENCE IN MANAGEMENT

SPECIALIZATIONS IN

Acquisition and Supply Chain Management
Human Resource Management
Interdisciplinary Studies in Management
Nonprofit and Association Management
Project Management

CERTIFICATES IN

Acquisition and Supply Chain Management
Foundations of Human Resource Management
Leadership and Management
Nonprofit and Association Management
Project Management

The Master of Science (MS) in Management is designed for professionals who are assuming or want to assume greater management responsibilities within their organizations or are looking to pursue management positions at new organizations. Throughout the curriculum, emphasis is on the effects rapid technological change has on organizations and administrative processes and the consequent ethical and moral responsibilities of managers to society at large. The goal of the program is to provide students with the skills and technical expertise that are the basis for success in modern organizations.

Program Objectives

The program is designed to help students

- Utilize methods of and conduct organizational assessments.
- Evaluate the organization/environment relationship.
- Manage strategic planning.
- Demonstrate organizational communication and leadership.
- Budget and allocate resources.
- Manage organizational decision making.

Degree Requirements

Specific course requirements are detailed under each specialization.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Management may earn one of the following degrees by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- DMBA 610 Ethical Leadership in Organizations and Society (6)
DMBA 620 Effective Financial and Operational Decision Making (6)
DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Master of Distance Education and E-Learning

REQUIRED COURSES

OMDE 601	Foundations of Distance Education and E-Learning (3)
OMDE 603	Technology in Distance Education and E-Learning (3)
OMDE 610	Teaching and Learning in Online Distance Education (3)
OMDE 606	Costs and Economics of Distance Education and E-Learning (3)
OMDE 608	Learner Support in Distance Education and Training (3)
DETT 621	Online Learning and Development in the Workplace (3)

MS IN MANAGEMENT: ACQUISITION AND SUPPLY CHAIN MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Acquisition and Supply Chain Management specialization is designed for individuals who are involved in supply chain management, contract administration, or procurement activities in the private, public, and not-for-profit sectors. The courses in this program help provide a foundation for understanding both the strategic and operational aspects of the procurement function.

Career Paths

- Contract specialist
- Contract officer
- Contract manager/administrator
- Procurement specialist/manager
- Supply chain manager/administrator
- Purchaser/buyer
- Logistics specialist
- Logistics analyst
- Logistics manager/administrator

Degree Requirements

MS in Management: Acquisition and Supply Chain Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

- MGMT 610 Organizational Theory (3)
- MGMT 615 Intercultural Communication and Leadership (3)
- MGMT 640 Financial Decision Making for Managers (3)
- MGMT 650 Statistics for Managerial Decision Making (3)*

REQUIRED SPECIALIZATION COURSES

- ASCM 626 Purchasing and Materials Management (3)
- ASCM 627 Legal Aspects of Contracting (3)
- ASCM 628 Contract Pricing and Negotiations (3)
- ASCM 629 Strategic Purchasing and Logistics (3)
- ASCM 630 Commercial Transactions in a Technological Environment: Law, Management, and Technology (3)
- ASCM 631 Integrative Supply Chain Management (3)
- ASCM 632 Contemporary Logistics (3)

REQUIRED CAPSTONE COURSE

- MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSES

- MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.
- ASCM 650 Legal Aspects of Contracting and Commercial Transactions (6) may be taken instead of ASCM 627 and 630.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- ASCM 626 should be taken as the first specialization course.
- ASCM 629 is prerequisite to ASCM 631.
- MGMT 640 should not be attempted simultaneously with MGMT 650.

* Research methods/statistics course for the program.

Course descriptions are found on pp. 110–47.

BUSINESS AND MANAGEMENT PROGRAMS

- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.
- Specialization courses should be taken in the order listed.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 38–39.

Related Certificate Program

Acquisition and Supply Chain Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

ASCM 626 Purchasing and Materials Management (3)
ASCM 627 Legal Aspects of Contracting (3)
ASCM 628 Contract Pricing and Negotiations (3)
ASCM 629 Strategic Purchasing and Logistics (3)
ASCM 630 Commercial Transactions in a Technological Environment: Law, Management, and Technology (3)

MS IN MANAGEMENT: HUMAN RESOURCE MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Human Resource Management specialization is designed for individuals who intend to become human resource professionals, as well as for managers who plan to supervise staff and need to comprehend the issues, policies, and procedures involved in effectively managing people. Courses cover the theory, research, knowledge, and procedures used by human resource executives, generalists, and specialists. They examine traditional functions, such as staffing, compensation, training, and change management, as well as investigate emerging disciplines.

Career Paths

- Human resources executive
- Human resources generalist
- Employee relations manager
- Staffing director
- Compensation manager
- Director of human resource training and development
- Organizational development and change consultant

Degree Requirements

MS in Management: Human Resource Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

MGMT 610 Organizational Theory (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3)*

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

REQUIRED SPECIALIZATION COURSES

- HRMD 610 Issues and Practices in Human Resource Management (3)
HRMD 620 Employee and Labor Relations (3)
HRMD 630 Recruitment and Selection (3)
HRMD 640 Job Analysis, Assessment, and Compensation (3)
HRMD 650 Organizational Development and Change (3)
HRMD 651 Current Perspectives in Training and Development (3)
HRMD 665 Managing Virtual and Global Teams (3)

REQUIRED CAPSTONE COURSE

- MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.
- Courses should be taken in the order listed.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 38–39.

Related Certificate Programs

Foundations of Human Resource Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

- MGMT 615 Intercultural Communication and Leadership (3)
HRMD 610 Issues and Practices in Human Resource Management (3)
HRMD 620 Employee and Labor Relations (3)
HRMD 650 Organizational Development and Change (3)

COURSE SEQUENCING

Courses should be taken in order.

Leadership and Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

- MGMT 610 Organizational Theory (3)
MGMT 615 Intercultural Communication and Leadership (3)
HRMD 610 Issues and Practices in Human Resource Management (3)
HRMD 650 Organizational Development and Change (3)

* Research methods/statistics course for the program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

BUSINESS AND MANAGEMENT PROGRAMS

MS IN MANAGEMENT: INTERDISCIPLINARY STUDIES IN MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Interdisciplinary Studies in Management specialization is intended for students who want a broad exposure to major areas of study that are essential for managers in every organization. The curriculum covers fundamentals in human resources, project management, marketing, and information systems.

Career Paths

- Human resource manager
- Marketing manager
- Board director
- General or regional manager

Degree Requirements

MS in Management: Interdisciplinary Studies in Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

CORE COURSES

MGMT 610 Organizational Theory (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3)*

SPECIALIZATION COURSES

HRMD 620 Employee and Labor Relations (3)
MRKT 600 Marketing Management (3)

ISAS 600 Information Systems for Managers (3)
HRMD 610 Issues and Practices in Human Resource Management (3)
HRMD 650 Organizational Development and Change (3)
MRKT 601 Legal and Ethical Issues in Global Communications (3)
PMAN 634 Foundations of Project Management (3)

CAPSTONE COURSE

MGMT 670 Strategic Management Capstone

ALTERNATE COURSES

- MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.
- MRKT 620 Marketing Principles, Regulation, and Ethical Issues (6) may be taken instead of MRKT 600 and 601.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp 38–39.

Related Certificate Program

- Leadership and Management

Details are available on p. 41.

* Research methods/statistics course for the program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

MS IN MANAGEMENT: NONPROFIT AND ASSOCIATION MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Nonprofit and Association Management specialization is designed for current and potential managers of organizations in the nonprofit sector, including associations, development organizations, foundations, and political organizations. The curriculum helps provide a thorough understanding of the sector. Emphasis is on management of nonprofit organizations; financial management; revenue generation and cost control issues; legal foundations and governance; recruitment and management of volunteers; approaches to promotion, marketing, and fundraising; and outcome and process evaluation of nonprofits. Contemporary concerns such as organizational quality, diversity, and ethics are also examined.

Career Paths

- Board member or director
- Executive director
- Executive vice president
- Chief executive officer
- Policy analyst
- Government liaison
- Director of marketing and development
- Program director
- Membership director
- Technical expert
- Social entrepreneur/nonprofit founder
- Volunteer

Degree Requirements

MS in Management: Nonprofit and Association Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

MGMT 610 Organizational Theory (3)
 MGMT 615 Intercultural Communication and Leadership (3)
 MGMT 640 Financial Decision Making for Managers (3)
 MGMT 650 Statistics for Managerial Decision Making (3)*

REQUIRED SPECIALIZATION COURSES

NPMN 600 Nonprofit and Association Organizations and Issues (3)
 NPMN 610 Nonprofit and Association Law and Governance (3)
 NPMN 620 Nonprofit and Association Financial Management (3)
 NPMN 640 Marketing, Development, and Public Relations in Nonprofit Organizations and Associations (3)
 NPMN 650 Fundamentals of Association Management (3)
 NPMN 655 Outcome and Process Evaluation Management (3)
 NPMN 660 Strategic Management in Nonprofit Organizations and Associations (3)

REQUIRED CAPSTONE COURSE

MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.
- NPMN 600 must be taken as the first specialization course.
- Taking NPMN 650 before NPMN 655 is strongly recommended.

* Research methods/statistics course for the program.

Course descriptions are found on pp. 110–47.

BUSINESS AND MANAGEMENT PROGRAMS

Dual Degree Options

Students who complete the Master of Science in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 38–39.

Related Certificate Program

Nonprofit and Association Financial Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

MGMT 640 Financial Decision Making for Managers (3)
FIN 610 Financial Management in Organizations (3)
NPMN 620 Nonprofit and Association Financial Management (3)
NPMN 660 Strategic Management in Nonprofit Organizations and Associations (3)

COURSE SEQUENCING

- Students without recent coursework in accounting or economics are strongly advised to complete UCSP 620 and 621 before enrolling in MGMT 640 and FIN 610.
- MGMT 640 is prerequisite to FIN 610.
- Students are encouraged to take NPMN 660 as the last course.

MS IN MANAGEMENT: PROJECT MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Project Management specialization offers a strong theoretical and practical foundation in project management. This specialization is designed to serve managers and other professionals who wish to acquire, enhance, and certify their knowledge and skills to design, integrate, develop, and manage projects. Students have the opportunity to gain hands-on experience in using various project management tools and techniques to successfully manage real-world projects of varying sizes and degrees of complexity. Focus is on applying emerging principles and methods in the project management field.

Career Paths

- Program manager
- Director
- Chief executive officer

Degree Requirements

MS in Management: Project Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

MGMT 610 Organizational Theory (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3)*

* Research methods/statistics course for the program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

REQUIRED SPECIALIZATION COURSES

PMAN 634	Foundations of Project Management (3)
PMAN 637	Project Risk Management (3)
PMAN 638	Project Communications Management (3)
PMAN 639	Project Quality Management (3)
PMAN 641	Project Procurement Management (3)
PMAN 650	Financial and Strategic Management of Projects (3)
PMAN 635	Quantitative Methods in Project Management (3)

REQUIRED CAPSTONE COURSE

MGMT 670	Strategic Management Capstone (3)
----------	-----------------------------------

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.
- PMAN 634 must be taken as the first course.

Academic Relationship

Students certified as Project Management Professionals by the Project Management Institute may receive credit for PMAN 634 Foundations of Project Management if they begin study for the master's degree within five years of earning certification. Graduate advisors can provide more information.

Recognition/Professional Certification

UMUC master's degree programs with project management specializations are accredited by the Global Accreditation Center (GAC) of the Project Management Institute (PMI). Graduates of these programs receive 1,500 hours of project management experience toward earning the PMI Project Management Professional (PMP) credential.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 38–39.

Related Certificate Program

Project Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615	Orientation to Graduate Study at UMUC (0)
----------	---

REQUIRED COURSES

PMAN 634	Foundations of Project Management (3)
PMAN 635	Quantitative Methods in Project Management (3)
PMAN 637	Project Risk Management (3)
PMAN 638	Project Communication Management (3)
PMAN 639	Project Quality Management (3)

COURSE SEQUENCING

PMAN 634 must be taken as the first course.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

CYBERSECURITY PROGRAMS

MASTER OF SCIENCE IN CYBERSECURITY

Society has become increasingly reliant on information and communications technologies—and increasingly vulnerable to cyberspace threats. The Master of Science (MS) in Cybersecurity is designed for midcareer professionals who wish to help meet the challenges posed by increasing cyber threats. The program uses a multidisciplinary approach—drawing from fields such as management, law, ethics, science, technology, business, psychology, and sociology—to help students gain a broad analytical framework for evaluating and solving cybersecurity problems. The goal of the program is to provide students with the knowledge and skills to combat cyber threats at enterprise, national, and global levels.

Program Objectives

The program is designed to help students

- Analyze cybersecurity issues from different perspectives.
- Identify the root causes of cybersecurity problems.
- Propose effective countermeasures and preventive methods in cybersecurity.
- Lead teams of cybersecurity professionals.
- Work in concert with leaders in related fields.
- Make strategic decisions to protect entities from cyber threats.

Career Paths

- Chief security officer
- Cybersecurity manager or administrator
- Cybersecurity architect
- Cybersecurity operations analyst
- Cybersecurity or secure software assurance engineer
- Cyber operations planner

Technology Requirements

The cybersecurity curriculum makes extensive use of online multimedia learning objects and interactive exercises. A minimum Internet connection speed of 512 KB per second is recommended.

MS IN CYBERSECURITY

Required Main Courses	30
Required Capstone Course	6
Total Credits	36

Degree Requirements

MS in Cybersecurity

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED MAIN COURSES

CSEC 610 Cyberspace and Cybersecurity (6)
CSEC 620 Human Aspects in Cybersecurity: Ethics, Legal Issues, and Psychology (6)
CSEC 630 Prevention and Protection Strategies in Cybersecurity (6)
CSEC 640 Monitoring, Auditing, Intrusion Detection, Intrusion Prevention, and Penetration Testing (6)
CSEC 650 Cyber Crime Investigation and Digital Forensics (6)

REQUIRED CAPSTONE COURSE

CSEC 670 Cybersecurity Capstone (6)

COURSE SEQUENCING

- Courses should be taken in the order listed.
- CSEC 610 must be taken as the first course.
- Students must complete all other program coursework before taking CSEC 670.
- Courses may not be taken concurrently.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major in cybersecurity to reduce their total coursework for the graduate degree by up to 18 credits (three courses).

The Graduate School will accept both CSIA 413 Security Policy Implementation and CSIA 485 Practical Applications in Cybersecurity Management in lieu of CSEC 610 Cyberspace and Cybersecurity for a maximum of 6 credits toward the completion of the MS in Cybersecurity.

The substitutions listed above are the only ones possible. A minimum grade of B must have been earned in the undergraduate class for the credits to be accepted at the graduate level.

Eligible students may also qualify for an additional 12 credits by completing specified coursework through this agreement. Credits eligible for sharing must have been completed no earlier than four years before the beginning of graduate studies. Admission requirements apply to all applicants.

More information on eligibility and applicable coursework is provided online at www.umuc.edu/articulations.

Dual Degree Option

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Cybersecurity may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- | | |
|----------|---|
| DMBA 610 | Ethical Leadership in Organizations and Society (6) |
| DMBA 620 | Effective Financial and Operational Decision Making (6) |
| DMBA 630 | Marketing and Strategy Management in the Global Marketplace (6) |

Related Certificate Programs

Cybersecurity Technology

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- | | |
|----------|---|
| UCSP 615 | Orientation to Graduate Study at UMUC (0) |
|----------|---|

REQUIRED COURSES

- | | |
|----------|--|
| CSEC 610 | Cyberspace and Cybersecurity (6) |
| CSEC 630 | Prevention and Protection Strategies in Cybersecurity (6) |
| CSEC 640 | Monitoring, Auditing, Intrusion Detection, Intrusion Prevention, and Penetration Testing (6) |

COURSE SEQUENCING

- CSEC 610 must be taken as the first course.
- Courses may not be taken concurrently.

Foundations of Cybersecurity

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- | | |
|----------|---|
| UCSP 615 | Orientation to Graduate Study at UMUC (0) |
|----------|---|

REQUIRED COURSES

- | | |
|----------|--|
| CSEC 610 | Cyberspace and Cybersecurity (6) |
| CSEC 620 | Human Aspects in Cybersecurity: Ethics, Legal Issues, and Psychology (6) |

COURSE SEQUENCING

Courses must be taken in the order listed; courses may not be taken concurrently.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

CYBERSECURITY PROGRAMS

MASTER OF SCIENCE IN CYBERSECURITY POLICY

Our physical world is increasingly supported by a cyberspace infrastructure. The Master of Science (MS) in Cybersecurity Policy is designed for midcareer professionals who wish to help meet the challenges posed by the increasing number of cyber threats at the policy level. The cybersecurity policy program examines strategies for societal responses to cybersecurity threats at enterprise, national, and global levels. The roles of government, interorganizational alliances, and international cooperatives are explored, as are legal concepts such as privacy, intellectual property, and civil liberties.

Program Objectives

The program is designed to help students

- Assess the scope of the risk of potential cyber threats at enterprise, national, and global levels.
- Evaluate measures to prevent anticipated cyber intrusions and to ensure business continuity.
- Assess organizational controls that can detect cyber intrusions as quickly as possible.
- Analyze responses to cyber intrusions to restore the operations of an organization as quickly as possible.
- Work with others to secure access to cyberspace and to design effective policies to counter specific cyber intrusions launched from anywhere in the world.
- Use the experiences from past cyber intrusions to mitigate future cyber threats.
- Formulate and implement policies on organizational, national, and international levels to help organizations successfully prevent, detect, and recover from cyber intrusions.
- Identify the requisite technical components of responses to help organizations successfully prevent, detect, and recover from cyber intrusions.

Career Paths

- Cyber policy analyst
- Cyber intelligence analyst
- Federal, state, or local government manager
- Legislative aide

Technology Requirements

The cybersecurity curriculum makes extensive use of online multimedia learning objects and interactive exercises. A minimum Internet connection speed of 512 KB per second is recommended.

MS IN CYBERSECURITY POLICY

Required Main Courses	30
Required Capstone Course	6
Total Credits	36

Degree Requirements

MS in Cybersecurity Policy

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED MAIN COURSES

CSEC 610	Cyberspace and Cybersecurity (6)
CSEC 620	Human Aspects in Cybersecurity: Ethics, Legal Issues, and Psychology (6)
CSEC 635	National Cybersecurity Policy and Law (6)
CSEC 645	Enterprise Cybersecurity Policy (6)
CSEC 655	Global Cybersecurity (6)

REQUIRED CAPSTONE COURSE

CSEC 670 Cybersecurity Capstone (6)

COURSE SEQUENCING

- Courses should be taken in the order listed.
- CSEC 610 must be taken as the first course.
- Students must complete all other program coursework before taking CSEC 670.
- Courses may not be taken concurrently.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major in cybersecurity to reduce their total coursework for the graduate degree by up to 18 credits (three courses).

The Graduate School will accept both CSIA 413 Security Policy Implementation and CSIA 485 Practical Applications in Cybersecurity Management in lieu of CSEC 610 Cyberspace and Cybersecurity for a maximum of 6 credits toward the completion of the MS in Cybersecurity Policy.

The substitutions listed above are the only ones possible. A minimum grade of B must have been earned in the undergraduate class for the credits to be accepted at the graduate level.

Eligible students may also qualify for an additional 12 credits by completing specified coursework through this agreement. Credits eligible for sharing must have been completed no earlier than four years before the beginning of graduate studies. Admission requirements apply to all applicants.

More information on eligibility and applicable coursework is provided online at www.umuc.edu/articulations.

Dual Degree Option

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Cybersecurity Policy may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- DMBA 610 Ethical Leadership in Organizations and Society (6)
- DMBA 620 Effective Financial and Operational Decision Making (6)
- DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Related Certificate Programs

Cybersecurity Policy

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

- CSEC 610 Cyberspace and Cybersecurity (6)
- CSEC 635 National Cybersecurity Policy and Law (6)
- CSEC 645 Enterprise Cybersecurity Policy (6)

COURSE SEQUENCING

- CSEC 610 must be taken as the first course.
- Courses may not be taken concurrently.

Foundations of Cybersecurity

Details are available on p. 47.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

CYBERSECURITY PROGRAMS

MASTER OF SCIENCE IN DIGITAL FORENSICS AND CYBER INVESTIGATION

While technology is changing at a rapid pace, the rules governing the application of digital forensics to the fields of auditing, homeland security, and law enforcement are evolving as well. The Master of Science (MS) in Digital Forensics and Cyber Investigation is designed for midcareer professionals who wish to help meet the challenges posed in uncovering digital evidence. Using a multidisciplinary approach, the program helps provide students with a broad analytical framework for becoming cyber investigators.

Program Objectives

The program is designed to help students

- Apply basic procedures and technologies for conducting successful forensic examinations of digital media storage devices and computer networks.
- Design procedures at a suspected crime scene to ensure that the digital evidence obtained is not corrupted.
- Conduct hands-on forensic searches to identify how digital media and digital networks were compromised and the method(s) of intrusion employed.
- Employ the rigorous procedures necessary to enable forensic results to withstand to scrutiny in a court of law.
- Understand the operation of digital components (storage media, networks, etc.) so that all necessary forensic evidence can be extracted and validated.
- Seize, image, deconstruct, and analyze digital media; analyze logs; decipher network traffic; and report this information in a suitable format.
- Present digital forensics results in a court of law as an expert witness.
- Apply a strong ethical foundation to ensure that their results are above reproach.

Career Paths

- Computer forensic specialist
- Computer forensic examiner

Technology Requirements

The cybersecurity curriculum makes extensive use of online multimedia learning objects and interactive exercises. A minimum Internet connection speed of 512 KB per second is recommended.

MS IN DIGITAL FORENSICS AND CYBER INVESTIGATION

Required Main Courses	30
Required Capstone Course	6
Total Credits	36

Degree Requirements

MS in Digital Forensics and Cyber Investigation

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED MAIN COURSES

CSEC 610 Cyberspace and Cybersecurity (6)
CSEC 620 Human Aspects in Cybersecurity: Ethics, Legal Issues, and Psychology (6)
CSEC 650 Cyber Crime Investigation and Digital Forensics (6)
CSEC 661 Digital Forensics Investigation (6)
CSEC 662 Cyber Incident Analysis and Response (6)

REQUIRED CAPSTONE COURSE

CSEC 670 Cybersecurity Capstone (6)

COURSE SEQUENCING

- Courses should be taken in the order listed.
- CSEC 610 must be taken as the first course.
- Students must complete all other program coursework before taking CSEC 670.
- Courses may not be taken concurrently.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major in cybersecurity to reduce their total coursework for the graduate degree by up to 12 credits (two courses).

The Graduate School will accept both CSIA 413 Security Policy Implementation and CSIA 485 Practical Applications in Cybersecurity Management in lieu of CSEC 610 Cyberspace and Cybersecurity for a maximum of 6 credits toward the completion of the MS in Digital Forensics and Cyber Investigation.

The substitutions listed above are the only ones possible. A minimum grade of B must have been earned in the undergraduate class for the credits to be accepted at the graduate level.

Eligible students may also qualify for an additional 6 credits by completing specified coursework through this agreement. Credits eligible for sharing must have been completed no earlier than four years before the beginning of graduate studies. Admission requirements apply to all applicants.

More information on eligibility and applicable coursework is provided online at www.umuc.edu/articulations.

Dual Degree Option

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Digital Forensics and Cyber Investigation may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- DMBA 610 Ethical Leadership in Organizations and Society (6)
- DMBA 620 Effective Financial and Operational Decision Making (6)
- DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Related Certificate Programs

Digital Forensics and Cyber Investigation

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

- CSEC 650 Cyber Crime Investigation and Digital Forensics
- CSEC 661 Digital Forensics Investigation
- CSEC 662 Cyber Incident Analysis and Response

COURSE SEQUENCING

Courses may not be taken concurrently.

REQUIRED ACADEMIC PREPARATION

Since certificate students do not take the usual prerequisite coursework, they must demonstrate a strong technical foundation in computing to be admitted to the program. Only students who are pursuing the MS in Digital Forensics and Cyber Investigation; are pursuing or have completed the MS in Cybersecurity or Information Technology at UMUC; or have a bachelor's degree in computer science, computer engineering, computer security, cybersecurity, or information technology are eligible.

Foundations of Cybersecurity

Details are available on p. 47.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

EDUCATION AND TEACHING PROGRAMS

MASTER OF ARTS IN TEACHING

For those who want to make a mark on the future, teaching today's young people is a sure route. The Master of Arts in Teaching (MAT) program is designed for individuals with a bachelor's (or higher) degree with sufficient content discipline preparation who seek to become outstanding teachers and leaders in today's and tomorrow's classrooms. The program is approved by the Maryland State Department of Education; it leads to eligibility for initial teacher certification in Maryland and provides enhanced opportunities for interstate reciprocity. Students can prepare to teach in secondary schools (grades 7–12) in a specific subject discipline (biology, chemistry, computer science, earth/space science, English, foreign languages♦, history, mathematics, physics, and social studies).

Program Objectives

The program is designed to help students

- Develop, implement, and evaluate a variety of instructional methods, strategies, and technologies.
- Demonstrate knowledge of diverse learners and learning theories through personalized instruction.
- Demonstrate mastery of content knowledge and apply instructional theory, research, and practice to facilitate students' understanding of content and integration of higher-order thinking skills.
- Design and implement formative and summative assessments and interpret and apply data for instructional decision making.
- Collaborate with and advocate for students; staff; families; and the local, global, and professional communities to strengthen teaching and learning based on critical application of legal, ethical, and professional standards.
- Develop and continually refine skills of reflective practice through thoughtful analysis, self-assessment, and iterative cycles of research.

Career Path

Secondary school teacher in the state of Maryland

Admission Requirements

All students—including those entering the program from an articulated undergraduate program at UMUC—must have completed a major in the content area for which certification will be sought; earned a GPA of 2.75 in the major; and presented Maryland-

specified passing scores on the ACT, GRE, SAT, or Praxis I exam. Alternatively, and subject to faculty approval, students must have completed 30 credits in content-related coursework and maintained a GPA of 2.75 in these courses. Qualifying scores for the aforementioned exams can be found on the Maryland State Department of Education website.

Technology Requirements

MAT students are required to purchase a one-time \$100 subscription to Tk20 HigherEd before their first class. The subscription is good for seven years. Tk20 is a comprehensive assessment and management system that supports all education students at UMUC. Students may also need to access a webcam/microphone for certain assignments. More information is available online at www.umuc.edu/tk20.

MASTER OF ARTS IN TEACHING

Required Main Courses	24
Required Professional Internship	6
Total Credits	30

Degree Requirements

MAT

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED MAIN COURSES

- EDTP 600 Foundations of Teaching for Learning (6)
- EDTP 635 Adolescent Development and Learning Needs (6)
- EDTP 639 Reading and Multiple Literacies (6)
- EDTP 645 Subject Methods and Assessment (6)

REQUIRED PROFESSIONAL INTERNSHIP

- EDTP 650 Professional Internship and Seminar (6)

COURSE SEQUENCING

- Courses should be taken in the order listed.

♦ Foreign languages include Spanish, French, German, Chinese, Japanese, Russian, Italian, and Arabic.

Course descriptions are found on pp. 110–47.

- EDTP 600 and 635 must be taken before EDTP 639 and may be taken together.
- EDTP 639 and 645 must be completed before EDTP 650 and may be taken together.

Field Experience/Student Teaching

Each course of the MAT program includes required field experience components, in which students develop and practice their knowledge, skills, and dispositions for working effectively with diverse learners. Students may work with secondary students in a variety of settings, including conventional and distance learning classrooms; urban, suburban, and rural schools; and diverse learning communities. Students must complete and document field experiences in diverse settings.

Each student is responsible for arranging such field experiences and classroom observations with school districts of his or her choice. Faculty members provide details particular to each course, including guidelines on contacting schools, obtaining permissions, and establishing timelines and directions on documenting field experiences and classroom observations. While UMUC is able to provide support and assistance in securing field experience, the university cannot guarantee that all school districts will grant MAT students permission to enter the classroom. Also, states and local school districts have varying regulations and policies regarding student teaching. Students are advised to remain informed about the student teaching requirements for their state and locality and/or the Department of Defense.

More information is available at www.umuc.edu/MAThandbook.

Criteria for Program Progression

In accordance with the standards of the Council for Accreditation of Educator Preparation (CAEP), the MAT program requires that students earn grades of 80 percent (B) or better on major assignments in certain courses—namely EDTP 635 and 639, which are offered before specific transition points in the program. Performance of 80 percent (grade of B) or better on major assignments in these courses is required to move forward in the program.

Graduation Requirements

Before beginning the professional internship, which requires full-time presence at an approved secondary school site, students must pass a content assessment. To graduate, students must also complete a performance-based teaching portfolio and action research project and register for the Praxis II pedagogy exam.

Professional Certification

Fulfilling the requirements of the MAT provides eligibility for the Maryland Standard Professional Certificate I (SPC I), which is

granted by the Maryland State Department of Education. The Maryland certification enables the graduate to teach in the state of Maryland and provides enhanced opportunities for interstate reciprocity.

Please note that while Maryland state certification to teach world languages is valid for grades pre-K through 12, the MAT program focuses on teaching at the secondary school level.

Teacher certification requirements are constantly evolving in many states. Students are responsible for remaining informed about the teacher certification requirements of the state in which they seek to become certified. They should also confirm requirements and any reciprocity arrangements with the state's certifying agency. State-specific information is available through the National Association of State Directors of Teacher Education and Certification's website at www.nasdtc.org/agreement.php.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with an appropriate major (i.e., computer science, English, history, or social science) or who have appropriate coursework in biology, mathematics, or a foreign language to reduce their total coursework for the MAT by 12 credits (two courses) and complete both degrees with a total of 138 credits.

Dual Degree Option

Dual degree options, described on p. 5, require a second application.

Students who complete the MAT may earn the following degree by completing the coursework indicated:

Master of Education in Instructional Technology

REQUIRED COURSES

- | | |
|----------|--|
| EDTC 610 | Web-Based Teaching and Learning: Design and Pedagogy (3) |
| EDTC 620 | Technology in K–12 Education: Synchronous, Asynchronous, and Multimedia Technologies (3) |
| EDTC 630 | Administration of Technology Initiatives: Planning, Budgeting, and Evaluation (3) |
| EDTC 640 | Leading Technology Change in Schools (3) |
| EDTC 645 | Integration of Technology: Global Perspectives (3) |
| EDTC 670 | Integrative Capstone Project (3) |

COURSE SEQUENCING

EDTC 610 is prerequisite to EDTC 620; may be taken concurrently with EDTC 630.

EDUCATION AND TEACHING PROGRAMS

MASTER OF DISTANCE EDUCATION AND E-LEARNING

SPECIALIZATIONS

Distance Education Policy and Management
Distance Education Teaching and Training
Distance Education Technology

CERTIFICATES

Distance Education, Globalization, and Development
Distance Education Leadership
Foundations of Distance Education and E-Learning
Instructional Design for E-Learning
Library and Intellectual Property in Distance Education and E-Learning
Policy and Management in Distance Education and E-Learning
Teaching and Training at a Distance
Technology in Distance Education and E-Learning

Distance education and e-learning have expanded rapidly in the past few years, not just in the public and private education sectors, but also in the training sectors of the government, the military, and for-profit and nonprofit businesses. The demand for qualified managers and leaders in the field is likely to continue for many years to come. The Master of Distance Education and E-Learning (MDE) is designed to develop general knowledge and competencies in all aspects of both the business and technical issues related to distance education. The goal of the program is to produce individuals who are capable of managing distance education and e-learning enterprises within a wide variety of organizational structures.

Program Objectives

The program is designed to help students

- Develop and communicate a mission and vision for the implementation of distance education and e-learning within an organization.
- Function effectively as leaders, managers, and team members within a distance education or training organization.
- Develop strategic goals and business plans for distance education and e-learning within an organization.
- Analyze and recommend an organizational distance education technology plan and manage the implementation of that technology in distance delivery.
- Design, implement, and assess the necessary support services for a distance education or e-learning program.
- Demonstrate competency in organizational and management processes, leadership and change management, information technology, business development, strategic action planning, problem solving, ethics, and social responsibility.

Degree Requirements

Specific course requirements are detailed under each specialization.

Program Accreditation

UMUC's MDE program is accredited by the European Foundation for Management Development–Technology-Enhanced Learning (EFMD CEL). EFMD CEL is the highest international standard of technology-enhanced learning programs in the field of management education.

Academic Relationship

The MDE program is offered in partnership with Carl von Ossietzky University of Oldenburg, Germany, a leading German institution with extensive experience in distance education. More information is available on p. 5.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MDE may earn one of the following degrees by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- DMBA 610 Ethical Leadership in Organizations and Society (6)
- DMBA 620 Effective Financial and Operational Decision Making (6)
- DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Master of Education in Instructional Technology

REQUIRED COURSES

- EDTC 600 Foundations of Technology in Teaching and Learning (3)
- EDTC 605 Digital Information Literacy for K–12 Educators (3)
- EDTC 615 Using Technology for Instructional Improvement: Research, Data, and Best Practices (3)
- EDTC 640 Technology Change Management in Schools (3)
- EDTC 645 Integration of Technology: Global Perspectives (3)
- EDTC 670 Integrative Capstone Project (3)

Master of Science in Management

REQUIRED COURSES

- MGMT 610 Organizational Theory (3)
- MGMT 615 Intercultural Communication and Leadership (3)
- MGMT 640 Financial Decision Making for Managers (3)
- MGMT 650 Statistics for Managerial Decision Making (3)
- HRMD 651 Current Perspectives in Training and Development (3)
- MGMT 670 Strategic Management Capstone (3)

COURSE SEQUENCING

- MGMT 640 and 650 should not be attempted simultaneously.

- All other MGMT classes must be completed before taking MGMT 670.

Related Certificate Programs

Distance Education, Globalization, and Development

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

- OMDE 601 Foundations of Distance Education and E-Learning (3)
- OMDE 606 Costs and Economics of Distance Education and E-Learning (3)
- DEPM 625 Distance Education, Globalization, and Development (3)
- DETC 630 Emerging Technology Trends and Issues in Distance Education and E-Learning (3)

Distance Education Leadership

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

- OMDE 601 Foundations of Distance Education and E-Learning (3)
- OMDE 603 Technology in Distance Education and E-Learning (3)
- OMDE 610 Teaching and Learning in Online Distance Education (3)
- DEPM 604 Management and Leadership in Distance Education and E-Learning (3)

Foundations of Distance Education and E-Learning

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

- OMDE 601 Foundations of Distance Education and E-Learning (3)
- OMDE 603 Technology in Distance Education and E-Learning (3)

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

EDUCATION AND TEACHING PROGRAMS

OMDE 606 Costs and Economics of Distance Education and E-Learning (3)

OMDE 608 Learner Support in Distance Education and Training (3)

Instructional Design for E-Learning◆

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

EDUC 602 Instructional Systems Development I (3)◆

EDUC 603 Instructional Systems Development II (3)◆

OMDE 603 Technology in Distance Education and E-Learning (3)

DETT 621 Online Learning and Development in the Workplace (3)

Library and Intellectual Property in Distance Education and E-Learning

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

OMDE 601 Foundations of Distance Education and E-Learning (3)

OMDE 603 Technology in Distance Education and E-Learning (3)

OMDE 610 Teaching and Learning in Online Distance Education (3)

DETT 611 Library and Intellectual Property Issues in Distance Education and E-Learning (3)

MDE: DISTANCE EDUCATION POLICY AND MANAGEMENT SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	18
Required Capstone Course	3
Total Credits	36

The Policy and Management specialization focuses on the reasons why investment in education is so highly valued by governments and individuals and how distance education programs are budgeted and their costs evaluated. The core of this specialization examines the technology costs and economics of distance learning and other management competencies.

Career Paths

- Director of distance learning, director of extended education, access director, or director of continuing education
- Project/program manager/director
- Coordinator of online instruction
- Financial advisor/account manager or financial analyst/financial manager
- Distance learning librarian

Degree Requirements

MDE: Distance Education Policy and Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED CORE COURSES

OMDE 601 Foundations of Distance Education and E-Learning (3)

OMDE 603 Technology in Distance Education and E-Learning (3)

OMDE 610 Teaching and Learning in Online Distance Education (3)

◆ This certificate is offered in partnership with University of Maryland Baltimore County (UMBC). EDUC 602 and 603 are UMBC courses. UMUC students must register for these courses through UMBC as visiting students.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

- OMDE 606 Costs and Economics of Distance Education and E-Learning (3)
- OMDE 608 Learner Support in Distance Education and Training (3)

REQUIRED SPECIALIZATION COURSES

- DEPM 604 Management and Leadership in Distance Education and E-Learning (3)
- DEPM 609 Distance Education and E-Learning Systems (3)
- DETT 611 Library and Intellectual Property Issues in Distance Education and E-Learning (3)
- DEPM 650 Practitioner Research in Distance Education and E-Learning (3)
- DEPM 622 The Business of Distance Education and E-Learning (3)
- DEPM 625 Distance Education, Globalization, and Development (3)

REQUIRED CAPSTONE COURSE

- OMDE 670 Portfolio and Project in Distance Education and E-Learning (3)

Dual Degree Options

Students who complete the MDE may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Education in Instructional Technology
- Master of Science in Management

Details are available on p. 55.

Related Certificate Program

Policy and Management in Distance Education and E-Learning

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

- OMDE 601 Foundations of Distance Education and E-Learning (3)
- OMDE 606 Costs and Economics of Distance Education and E-Learning (3)

- DEPM 622 The Business of Distance Education and E-Learning (3)
- DEPM 604 Management and Leadership in Distance Education and E-Learning (3)

MDE: DISTANCE EDUCATION TEACHING AND TRAINING SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	18
Required Capstone Course	3
Total Credits	36

The objective of the Teaching and Training specialization is to educate managers about the demands placed on teaching personnel and trainers by emerging information and communications technologies. To deal with the specific teaching-related aspects of distance education, this specialization examines the instructional design process, as well as the integration of the appropriate selection of media. The specialization also explores the technology-related aspects of distance learning and specific management-related issues such as intellectual property, accreditation, and quality assurance.

Career Paths

- Manager of online teaching/tutoring/training
- Online pedagogy expert
- Coordinator of online instruction
- Online librarian/resource manager
- Program evaluator/educational consultant
- Subject matter expert for distance education

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

EDUCATION AND TEACHING PROGRAMS

Degree Requirements

MDE: Distance Education Teaching and Training Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED CORE COURSES

- OMDE 601 Foundations of Distance Education and E-Learning (3)
- OMDE 603 Technology in Distance Education and E-Learning (3)
- OMDE 610 Teaching and Learning in Online Distance Education (3)
- OMDE 606 Costs and Economics of Distance Education and E-Learning (3)
- OMDE 608 Learner Support in Distance Education and Training (3)

REQUIRED SPECIALIZATION COURSES

- DETT 607 Instructional Design and Course Development in Distance Education and E-Learning (3)
- DETC 620 Training and Learning with Multimedia (3)
- DETT 611 Library and Intellectual Property Issues in Distance Education and E-Learning (3)
- EDTC 650 Teaching and Learning in K–12 Virtual Schools (3)
- DETT 621 Online Learning and Development in the Workplace (3)
- DEPM 604 Management and Leadership in Distance Education and E-Learning (3)

REQUIRED CAPSTONE COURSE

- OMDE 670 Portfolio and Project in Distance Education and E-Learning (3)

COURSE SEQUENCING

DETT 607 or EDTC 640 is prerequisite to EDTC 650.

Dual Degree Options

Students who complete the MDE may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Education in Instructional Technology
- Master of Science in Management

Details are available on p. 55.

Related Certificate Program

Teaching and Training at a Distance

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

ACADEMIC PREPARATION

Knowledge and experience in distance education

REQUIRED COURSES

- OMDE 610 Teaching and Learning in Online Distance Education (3)
- DETT 607 Instructional Design and Course Development in Distance Education and E-Learning (3)
- DETC 620 Training and Learning with Multimedia (3)
- DETT 621 Online Learning and Development in the Workplace (3)

MDE: DISTANCE EDUCATION TECHNOLOGY SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	18
Required Capstone Course	3
Total Credits	36

The Distance Education Technology specialization is designed to train managers in the technology-related aspects of distance education program development, including setting up appropriate technology configurations, selecting tools, and managing the aspects of media integration and course design and development affected by technology. Managers are also made critically aware of the relationship of globalization and communication technologies, which influence distance education. The specialization provides a foundation in the history of media and technology in distance education, sets a framework for guiding appropriate technology choices, and provides an in-depth understanding of both asynchronous and synchronous technologies.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

Career Paths

- Technical director
- Production manager
- Technical expert/advisor/consultant
- Coordinator of online instruction
- Online course support specialist

Degree Requirements

MDE: Distance Education Technology Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED CORE COURSES

- OMDE 601 Foundations of Distance Education and E-Learning (3)
- OMDE 603 Technology in Distance Education and E-Learning (3)
- OMDE 610 Teaching and Learning in Online Distance Education (3)
- OMDE 606 Costs and Economics of Distance Education and E-Learning (3)
- OMDE 608 Learner Support in Distance Education and Training (3)

REQUIRED SPECIALIZATION COURSES

- DETT 607 Instructional Design and Course Development in Distance Education and E-Learning (3)
- DETC 630 Emerging Technology Trends and Issues in Distance Education and E-Learning (3)
- DETC 620 Training and Learning with Multimedia (3)
- DEPM 604 Management and Leadership in Distance Education and E-Learning (3)
- DEPM 625 Distance Education, Globalization, and Development (3)
- IMAT 639 Internet Multimedia Applications (3)

REQUIRED CAPSTONE COURSE

- OMDE 670 Portfolio and Project in Distance Education and E-Learning (3)

Dual Degree Options

Students who complete the MDE may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Education in Instructional Technology
- Master of Science in Management

Details are available on p. 55.

Related Certificate Program

Technology in Distance Education and E-Learning

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

- OMDE 601 Foundations of Distance Education and E-Learning (3)
- OMDE 603 Technology in Distance Education and E-Learning (3)
- DETC 630 Emerging Technology Trends and Issues in Distance Education and E-Learning (3)
- DETC 620 Training and Learning with Multimedia (3)

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47

EDUCATION AND TEACHING PROGRAMS

MASTER OF EDUCATION IN INSTRUCTIONAL TECHNOLOGY

As technology advances more quickly than ever before, increasing numbers of pre-K–12 educators are looking for ways to strengthen teaching and learning through technology integration. The Master of Education (MEd) in Instructional Technology is designed for P–12 teachers, technology integration specialists, staff developers, and administrators. The curriculum focuses on three interrelated areas of study: curriculum and instruction, instructional technology integration, and leadership. The program seeks to produce graduates who have the knowledge and skills needed to incorporate technology effectively into P–12 curricula, instruction, and assessment; demonstrate expertise in current and emerging instructional technologies; understand the role of technology in the contemporary school; and lead change efforts at the classroom, school, and district levels.

Note: The MEd is not an initial teacher preparation program. Graduates who wish to become K–12 teachers in public schools and who do not yet have state licensure to teach may need to pursue an initial teacher certification program, based on state or national requirements.

Students interested in coursework related to teacher certification should refer to UMUC's Master of Arts in Teaching (p. 52).

Program Objectives

The program is designed to help students

- Integrate current and emerging technologies into curricula, instruction, and assessment to strengthen and transform teaching and student learning.
- Use a range of technologies to communicate and collaborate with students, colleagues, parents, and other audiences.
- Apply technology to meet the needs of a diverse school population.
- Create multimedia and web-based products that support instruction.
- Develop standards-based, technology-supported lessons that promote global perspectives.
- Provide professional development for teachers and other educators in topics such as the integration of technology to promote student learning.
- Lead and work with others to develop a vision for technology integration in schools, including designing technology plans and budgets, ensuring access, and acquiring resources.

- Apply classroom and school-based data, research, and reflection to make sound instructional decisions, advocate for change, and build program support.
- Extend learning beyond the classroom with blended and online experiences.
- Integrate and manage mobile learning environments.
- Assess the effectiveness of technology to support student learning.

Career Paths

- Teacher leader in a school, especially related to technology integration
- Staff developer or technology integration specialist at the school, district, or state level
- Developer of multimedia for education or training
- Distance education teacher for virtual K–12 schools

Professional Preparation

The MEd in Instructional Technology is designed for students with professional experience teaching in pre-K–12 schools. Students who lack teaching experience may want to choose another of UMUC's education-related graduate programs.

Technology Requirements

Students in the MEd degree and the Instructional Technology Integration certificate programs are required to purchase a one-time \$100 subscription to Tk20 HigherEd before their first class. The subscription is good for seven years. Tk20 is a comprehensive assessment and management system that supports all education students at UMUC. Students may also need to access a webcam/microphone for certain assignments. More information is available online at www.umuc.edu/tk20.

MEd IN INSTRUCTIONAL TECHNOLOGY

Required Core Courses	36
Required Capstone Course	3
Total Credits	39

Degree Requirements

Master of Education in Instructional Technology

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED MAIN COURSES

EDTC 600	Foundations of Technology in Teaching and Learning (3)
EDTC 605	Teaching Information and Media Literacies in the Digital World (3)
EDTC 610	Web-Based Teaching and Learning: Design and Pedagogy (3)
EDTC 615	Using Technology for Instructional Improvement: Research, Data, and Best Practices (3)
EDTC 620	Technology in K–12 Education: Synchronous, Asynchronous, and Multimedia Technologies (3)
EDTC 625	Hardware and Software in Instructional Development (3)
EDTC 630	Administration of Technology Initiatives: Planning, Budgeting, and Evaluation (3)
EDTC 640	Leading Technology Change in Schools (3)
EDTC 645	Integration of Technology: Global Perspectives (3)
EDTC 650	Teaching and Learning in K–12 Virtual Schools (3) Required Internship
EDTP 650	Professional Internship and Seminar (6)

REQUIRED CAPSTONE COURSE

EDTC 670 Integrative Capstone Project (3)

COURSE SEQUENCING

- The first nine courses in the program must be taken in the order listed; sequential courses may be taken concurrently.
- Students must have completed the first nine courses in the program before taking EDTC 670; availability of the capstone course is provided online at www.umuc.edu/educ.

Criteria for Program Progression

In accordance with the standards of the Council for Accreditation of Educator Preparation (CAEP), the MAT program requires that students earn grades of 80 percent (B) or better on major assignments in certain courses—namely EDTC 600, 615, 630, 640, and 645, which are offered before specific transition points in the program. Performance of 80 percent (grade of B) or better on major assignments in these courses is required to move forward in the program. Students must also earn a final grade of B in EDTC 600 to move forward in the program.

Academic Relationships

UMUC has formed an educational alliance with the American Council on Teaching of Foreign Language (ACTFL). As part of this alliance, UMUC offers special sections of the first four courses in the program (those required for the certificate in Instructional Technology Integration) tailored specifically to teaching world languages. More information is available online at www.umuc.edu/actfl or from UMUC Corporate Learning Solutions at 855-CLS-5300 or cls@umuc.edu.

Dual Degree Option

Dual degree options, described on p. 5, require a second application.

Students who complete the MEd in Instructional Technology may earn the following degree by completing the coursework indicated:

Master of Distance Education and E-Learning

REQUIRED COURSES

OMDE 601	Foundations of Distance Education and E-Learning (3)
OMDE 603	Technology in Distance Education and E-Learning (3)
OMDE 610	Teaching and Learning in Online Distance Education (3)
OMDE 606	Costs and Economics of Distance Education and E-Learning (3)
OMDE 608	Learner Support in Distance Education and Training (3)
DETT 621	Online Learning and Development in the Workplace (3)

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

EDUCATION AND TEACHING PROGRAMS

Related Certificate Program

Instructional Technology Integration

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

- EDTC 600 Foundations of Technology in Teaching and Learning (3)
- EDTC 605 Teaching Information and Media Literacies in the Digital World (3)
- EDTC 610 Web-Based Teaching and Learning: Design and Pedagogy (3)
- EDTC 615 Using Technology for Instructional Improvement: Research, Data, and Best Practices (3)

COURSE SEQUENCING

Courses must be taken in the order listed; sequential courses may be taken at the same time.

SPECIAL OPTION

Course sections tailored to teaching world languages are available; students should consult an advisor. More information is available online at www.umuc.edu/actfl.

HEALTH CARE AND SCIENCE PROGRAMS

MASTER OF SCIENCE IN BIOTECHNOLOGY

SPECIALIZATION IN

Bioinformatics

Biosecurity and Biodefense

Biotechnology Management

Biotechnology Regulatory Affairs

CERTIFICATE IN

Bioinformatics

Biosecurity and Biodefense

Biotechnology Management

Biotechnology Regulatory Affairs

Biotechnology explores the delicate and complex relationship between technology and life. The Master of Science (MS) in Biotechnology is designed for students with backgrounds in molecular biology who want to explore the ever-increasing role that technology plays in biological studies and research and in bio-businesses. The curriculum covers bioinformatics and societal and business issues in biotechnology. The goal is to provide graduates with the specific knowledge and expertise needed to take on more prominent roles, such as laboratory supervisor, production manager, research scientist, bioinformatics analyst, or computational biologist, at their organizations.

Program Objectives

The program is designed to help students

- Explore and apply the technologies currently in use in the biotechnology industry.
- Evaluate and understand the regulatory role of federal and state governmental agencies as well as international bodies and professional groups.
- Examine the business of biotechnology, including financial, strategic, and human resource management in the industry.
- Utilize molecular biology concepts and software tools to increase their knowledge of bioinformatics.

Required Academic Preparation

Students without a molecular biology background are required to take a college-level molecular biology course before taking the required program core courses.

Degree Requirements

Specific course requirements are detailed under each specialization.

Recognition

UMUC's MS in Biotechnology has been designated a Professional Science Master's degree program through the Council of Graduate Schools.

Academic Relationship

Students certified as Project Management Professionals by the Project Management Institute may receive credit for PMAN 634 Foundations of Project Management if they begin study for the master's degree within five years of earning certification. Graduate advisors can provide more information.

HEALTH CARE AND SCIENCE PROGRAMS

Dual Degree Option

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Biotechnology may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

DMBA 610	Ethical Leadership in Organizations and Society (6)
DMBA 620	Effective Financial and Operational Decision Making (6)
DMBA 630	Marketing and Strategy Management in the Global Marketplace (6)

MS IN BIOTECHNOLOGY: BIOINFORMATICS SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	18
Required Capstone Course	3
Total Credits	36

The Bioinformatics specialization helps provide students with a comprehensive and deep understanding of the many aspects of molecular biology and computational science. The curriculum covers a broad range of subjects, including biostatistics, databases and data structures, algorithms, gene expression data analysis, and Perl and Java programming.

Students specializing in bioinformatics are expected to have experience in C+, Perl, or another programming language and have completed a statistics class (with a grade of C for undergraduate coursework or a grade of B for graduate coursework).

Career Paths

- Bioinformatics analyst
- Bioinformatics specialist
- Computational biologist
- Biological database specialist
- Instructor

Degree Requirements

MS in Biotechnology: Bioinformatics Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

BIOT 640	Societal Issues in Biotechnology (3)
BIOT 630	Introduction to Bioinformatics (3)
BIOT 645	The Business of Biotechnology (3)
BIOT 643	Techniques of Biotechnology (3)
PMAN 634	Foundations of Project Management (3)

REQUIRED SPECIALIZATION COURSES

BIFS 613	Statistical Processes for Biotechnology (3)
BIFS 617	Advanced Bioinformatics (3)
DBST 651	Relational Database Systems (3)
BIFS 618	Java for Biotechnology Applications (3)
BIFS 619	Systems-Level Approaches in Bioinformatics (3)
BIFS 614	Data Structures and Algorithms (3)

REQUIRED CAPSTONE COURSE

BTMN 670 Capstone in Biotechnology (3)

COURSE SEQUENCING

- Students without coursework in molecular biology must take BIOT 601 (described on p. 114); BIOT 601 may be taken along with BIOT 640.
- BIOT 640 must be taken as the first program course.
- All core courses with the BIOT designator must be completed in the order listed before starting any specialization.
- STAT 200 or an equivalent undergraduate statistics course is prerequisite to BIFS 613.
- CMIS 102 (or an equivalent undergraduate programming course) is prerequisite to BIFS 617.
- BIFS 617 is prerequisite to BIFS 618 and 619.
- BTMN 670 must be taken after completion of 30 credits of program coursework; availability of the capstone course is provided online at www.umuc.edu/biotech.

Dual Degree Option

Students who complete the MS in biotechnology may then complete the following degree as part of a dual degree option:

- Master of Business Administration

Details are available on p. 64.

Related Certificate Program

Bioinformatics

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

BIOT 630 Introduction to Bioinformatics (3)
BIFS 613 Statistical Processes for Biotechnology (3)
BIFS 617 Advanced Bioinformatics (3)
DBST 651 Relational Database Systems (3)
BIFS 614 Data Structures and Algorithms (3)

MS IN BIOTECHNOLOGY: BIOSECURITY AND BIODEFENSE SPECIALIZATION

Required Core Courses	24
Required Specialization Courses	18
Required Capstone Course	3
Total Credits	42

Biosecurity and biodefense are emerging as integral subject areas in the 21st century, and students who choose this specialization have the opportunity to hone their skills in researching, analyzing, and/or writing about the most recent developments in these areas. The curriculum covers agents of bioterrorism, threat analysis and response, and information technology as it relates to biodefense.

Career Paths

- Biodefense policy writer
- Research scientist

Degree Requirements

MS in Biotechnology: Biosecurity and Biodefense Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

BIOT 640 Societal Issues in Biotechnology (3)
BIOT 630 Introduction to Bioinformatics (3)
BIOT 645 The Business of Biotechnology (3)
BIOT 643 Techniques of Biotechnology (3)
PMAN 634 Foundations of Project Management (3)

REQUIRED SPECIALIZATION COURSES

BSBD 640 Agents of Bioterrorism (3)
BSBD 641 Biosecurity and Bioterrorism (3)
HSMN 630 Resilience Planning and Preparedness for Disaster Response and Recovery (3)
BSBD 642 Advanced Biosecurity and Bioterrorism (3)
BSBD 643 Strategies for Interagency Cooperation, Verification, and Global Countermeasures in Biodefense (6)

REQUIRED CAPSTONE COURSE

BTMN 670 Capstone in Biotechnology (3)

COURSE SEQUENCING

- Students without coursework in molecular biology must take BIOT 601 (described on p. 114); BIOT 601 may be taken along with BIOT 640.
- BIOT 640 must be taken as the first program course.
- All core courses with the BIOT designator must be completed in order before starting any specialization.
- BTMN 670 must be taken after completion of 30 credits of program coursework; availability of the capstone course is provided online at www.umuc.edu/biotech.

Dual Degree Option

Students who complete the MS in Biotechnology may then complete the following degree as part of a dual degree option:

- Master of Business Administration

Details are available on p. 64.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 91–135.

HEALTH CARE AND SCIENCE PROGRAMS

Related Certificate Program

Biosecurity and Biodefense

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

BSBD 640 Agents of Bioterrorism (3)
BSBD 641 Biosecurity and Bioterrorism (3)
BSBD 642 Advanced Biosecurity and Bioterrorism (3)
BSBD 643 Strategies for Interagency Cooperation, Verification,
and Global Countermeasures in Biodefense (6)

MS IN BIOTECHNOLOGY: BIOTECHNOLOGY MANAGEMENT SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	18
Required Capstone Course	3
Total Credits	36

The Biotechnology Management specialization explores the biotechnology field as a commercial enterprise. The curriculum covers the commercialization of biotechnology, project selection and evaluation processes, and biomanufacturing.

Career Paths

- Laboratory supervisor
- Manufacturing and production manager
- Project manager
- Instructor
- Regulatory affairs officer
- Public relations officer
- Sales representative
- Bioethicist

Degree Requirements

MS in Biotechnology: Biotechnology Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

BIOT 640 Societal Issues in Biotechnology (3)
BIOT 630 Introduction to Bioinformatics (3)
BIOT 645 The Business of Biotechnology (3)
BIOT 643 Techniques of Biotechnology (3)
PMAN 634 Foundations of Project Management (3)

REQUIRED SPECIALIZATION COURSES

BTMN 632 Commercializing Biotechnology in Early-Stage Ventures (3)
BTMN 634 Selection and Evaluation of Biotechnology Projects (3)
BTMN 636 Biotechnology and the Regulatory Environment (3)
TMAN 611 Principles of Technology Management (3)
MRKT 600 Marketing Management (3)
TMAN 625 Economics and Financial Analysis for Technology Managers (3)

REQUIRED CAPSTONE COURSE

BTMN 670 Capstone in Biotechnology (3)

COURSE SEQUENCING

- Students without coursework in molecular biology must take BIOT 601 (described on p. 114); BIOT 601 may be taken along with BIOT 640.
- BIOT 640 must be taken as the first program course.
- All core courses with the BIOT designator must be completed in the order listed before starting any specialization.
- BTMN 670 must be taken after completion of 30 credits of program coursework; availability of the capstone course is provided online at www.umuc.edu/biotech.

Dual Degree Option

Students who complete the MS in Biotechnology may then complete the following degree as part of a dual degree option:

- Master of Business Administration

Details are available on p. 64.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 91–135.

Related Certificate Program

Biotechnology Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

BIOT 640	Societal Issues in Biotechnology (3)
BIOT 630	Introduction to Bioinformatics (3)
BIOT 643	Techniques of Biotechnology (3)
BTMN 636	Biotechnology and the Regulatory Environment (3)
BTMN 632	Commercializing Biotechnology in Early-Stage Ventures (3)

MS IN BIOTECHNOLOGY: BIOTECHNOLOGY REGULATORY AFFAIRS SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	18
Required Capstone Course	3
Total Credits	36

The Biotechnology Regulatory Affairs specialization assists students with understanding the regulatory and policy issues that face the field of biotechnology. The curriculum covers the impact of regulatory and policy issues on domestic and international affairs, clinical trials and various aspects of a product's life cycle, good laboratory and manufacturing practices, quality control and assurance, bioethics, and the business of global biotechnology.

Career Paths

- Senior manager in regulatory affairs
- Specialist in regulatory affairs
- Quality assurance specialist
- Clinical specialist
- Other health care and biotechnology professional

Degree Requirements

MS in Biotechnology: Biotechnology Regulatory Affairs Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

BIOT 640	Societal Issues in Biotechnology (3)
BIOT 630	Introduction to Bioinformatics (3)
BIOT 645	The Business of Biotechnology (3)
BIOT 643	Techniques of Biotechnology (3)
PMAN 634	Foundations of Project Management (3)

REQUIRED SPECIALIZATION COURSES

BTMN 636	Biotechnology and the Regulatory Environment (3)
BTRA 640	Preclinical and Clinical Research Design (3)
BTRA 641	Product Life-Cycle Approval, Production, and Marketing for Devices and Drugs (3)
BTRA 642	Global Biotechnology Business Issues (3)
BTRA 643	Practical Applications of Biotech Regulatory Affairs (6)

REQUIRED CAPSTONE COURSE

BTMN 670 Capstone in Biotechnology (3)

COURSE SEQUENCING

- Students without coursework in molecular biology must take BIOT 601 (described on p. 114); BIOT 601 may be taken along with BIOT 640.
- BIOT 640 must be taken as the first program course.
- All core courses with the BIOT designator must be completed in the order listed before starting any specialization.
- BTMN 670 must be taken after completion of 30 credits of program coursework; availability of the capstone course is provided online at www.umuc.edu/biotech.

Dual Degree Option

Students who complete the MS in Biotechnology may then complete the following degree as part of a dual degree option:

- Master of Business Administration

Details are available on p. 64.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

HEALTH CARE AND SCIENCE PROGRAMS

Related Certificate Program

Biotechnology Regulatory Affairs

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

BTMN 636 Biotechnology and the Regulatory Environment (3)
BTRA 640 Preclinical and Clinical Research Design (3)
BTRA 641 Product Life-Cycle Approval, Production,
 and Marketing for Devices and Drugs (3)
BTRA 642 Global Biotechnology Business Issues (3)
BTRA 643 Practical Applications of Biotech Regulatory
 Affairs (6)

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–14.

MASTER OF SCIENCE IN ENVIRONMENTAL MANAGEMENT

Employment of environmental scientists is expected to grow almost 20 percent by 2020, according to the U.S. Department of Labor's *Occupational Outlook Handbook*. Employers will need more management-level professionals for positions created to meet this growth. The Master of Science (MS) in Environmental Management is designed for professionals with several years of experience in the environmental field who want a clear path to those management positions. The curriculum helps provide a solid conceptual and applied foundation in environmental management and includes waste management techniques; pollution prevention for water, air, and soil; environmental management systems; and options for effectively managing land and water resources. The goal is for students to acquire the skills, knowledge, and expertise to deftly evaluate various environmental issues and challenges and manage teams to respond to them effectively.

Program Objectives

The program is designed to help students

- Describe the institutions and processes that have an impact on the development of environmental and energy laws and policy issues.
- Analyze, monitor, and mitigate impacts from an organization's operations.
- Analyze and communicate health, safety, and environmental risks.
- Manage, plan, and conduct comprehensive environmental compliance, managerial, and liability audits for various industrial and commercial facilities.
- Develop teams and manage environmental projects/programs for an organization or a government agency.

Career Paths

- Environmental program/project specialist
- Environmental program/project manager
- Industrial compliance manager
- Environmental auditor
- Health and safety manager

Required Academic Preparation

Students should have completed at least one undergraduate course each in chemistry and biology.

MS IN ENVIRONMENTAL MANAGEMENT

Required Main Courses	33
Required Capstone Course	3
Total Credits	36

Degree Requirements

MS in Environmental Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED MAIN COURSES

ENVM 646	Environmental/Energy Law and Policy Development (3)
ENVM 648	Fundamentals of Environmental Systems (3)
ENVM 641	Environmental Auditing (3)
ENVM 643	Environmental Communications and Reporting (3)
ENVM 647	Environmental Risk Assessment (3)
ENVM 649	Principles of Waste Management and Pollution Control (3)
ENVM 644	New Technologies in Environmental Management (3)
ENVM 650	Environmental and Natural Resources Economics (3)
ENVM 651	Watershed Planning Management (3)
ENVM 652	Principles of Air Quality Management (3)
ENVM 653	Land Use Management (3)

REQUIRED CAPSTONE COURSE

ENVM 670 Seminar in Environmental Management (3)

Course descriptions are found on pp. 110–47.

HEALTH CARE AND SCIENCE PROGRAMS

COURSE SEQUENCING

- ENVM 646 and 648 must be taken within the first 9 credits of study.
- Students must complete 27 credits of program coursework before enrolling in ENVM 670.

Recognition

UMUC's MS in Environmental Management has been designated a Professional Science Master's degree program through the Council of Graduate Schools.

Dual Degree Option

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Environmental Management may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- DMBA 610 Ethical Leadership in Organizations and Society (6)
DMBA 620 Effective Financial and Operational Decision Making (6)
DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Related Certificate Program

Environmental Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

- ENVM 646 Environmental/Energy Law and Policy Development (3)
ENVM 641 Environmental Auditing (3)
ENVM 643 Environmental Communications and Reporting (3)
ENVM 647 Environmental Risk Assessment (3)
ENVM 649 Principles of Waste Management and Pollution Control (3)

COURSE SEQUENCING

ENVM 646 must be taken first.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

MASTER OF SCIENCE IN HEALTH CARE ADMINISTRATION

The need for health care services—and professionals with expertise in health care administration—is expected to grow quickly as the U.S. population ages. In fact, the U.S. Department of Labor predicts that the need for medical and health services managers will grow 22 percent between 2010 and 2020. The Master of Science (MS) in Health Care Administration is designed to give midcareer professionals the specialized skills they need to fill those positions. The program is also appropriate for those who have an undergraduate degree in health care but have not worked in the field. The curriculum covers financial decision making, research methods, information technology, long-term care, public health, legal issues, and more. The goal of the program is for students to garner a deeper understanding of the challenges the health care industry faces and apply their extensive knowledge of both the industry and management techniques to overcome those challenges.

Program Objectives

The program is designed to help students

- Solve health care industry management challenges.
- Produce effective health care industry outcomes.
- Effect ethical decision making for managers in health care settings.

Career Paths

- Health services manager
- Health care business operator
- Health service project administrator
- Managed care manager

Academic or Professional Preparation

The MS in Health Care Administration is designed for students with educational and/or professional work experience in the health care field. Students who do not have an undergraduate degree in health care administration or a related field or who do not have professional health care industry work experience should choose the MS in Management: Health Care Administration Specialization.

MS IN HEALTH CARE ADMINISTRATION

Required Management Foundation Courses	6
Required Health Care Administration Courses	27
Required Capstone Course	3
Total Credits	36

Degree Requirements

MS in Health Care Administration

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED MANAGEMENT FOUNDATION COURSES

MGMT 615 Intercultural Communication and Leadership (3)

MGMT 640 Financial Decision Making for Managers (3)

REQUIRED HEALTH CARE ADMINISTRATION COURSES

HCAD 600 Introduction to Health Care Administration (3)

HCAD 610 Information Technology for Health Care Administration (3)

HCAD 620 The U.S. Health Care System (3)

HCAD 630 Public Health Administration (3)

HCAD 635 Long-Term Care Administration (3)

HCAD 640 Financial Management for Health Care Organizations (3)

HIMS 650 Research Methods for Health Care Managers (3)

HCAD 650 Legal Aspects of Health Care Administration (3)

HCAD 660 Health Care Institutional Organization and Management (3)

REQUIRED CAPSTONE COURSE

HCAD 670 Health Care Administration Capstone (3)

HEALTH CARE AND SCIENCE PROGRAMS

COURSE SEQUENCING

- Students are strongly encouraged to take HCAD 600 and MGMT 615 as the first courses in the program.
- MGMT 615 is prerequisite to HCAD 660.
- MGMT 640 is prerequisite to HCAD 640.
- MGMT 640 and HIMS 650 should not be taken at the same time.
- Students must complete 30 credits before enrolling in HCAD 670.

Honor Society

Information on eligibility for membership in the UMUC chapter of Upsilon Phi Delta, the national academic honor society of the Association of University Programs in Health Administration, is available on p. 157.

Dual Degree Option

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Health Care Administration may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- DMBA 610 Ethical Leadership in Organizations and Society (6)
DMBA 620 Effective Financial and Operational Decision Making (6)
DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Related Certificate Program

Health Care Administration

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

- HCAD 610 Information Technology for Health Care Administration (3)
HCAD 620 The U.S. Health Care System (3)
HCAD 630 Public Health Administration (3)
HCAD 640 Financial Management for Health Care Organizations (3)

- HCAD 650 Legal Aspects of Health Care Administration (3)
HCAD 660 Health Care Institutional Organization and Management (3)

COURSE SEQUENCING

- MGMT 615 is prerequisite to HCAD 660.
- MGMT 640 is prerequisite to HCAD 640.

Note: Students who have not met course prerequisites may need to complete more than 18 credits to satisfy certificate requirements.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

MASTER OF SCIENCE IN HEALTH INFORMATICS ADMINISTRATION

The U.S. health care industry's move to electronic medical records and the meaningful use of health data makes health informatics one of the fastest-growing career fields in the country. The Master of Science (MS) in Health Informatics Administration is designed for health care professionals who want to gain a deeper understanding of the information technology systems on which their job executions rely and for information technology professionals who work in health care settings. The curriculum combines competencies in information technology, health, and management as they apply to health care administration. It covers computer security, software systems, hardware assurance, project management, data terminologies and analysis, legal and resource issues, and strategic planning. The goal of the program is to prepare students to undertake additional professional responsibilities in health informatics by broadening their understanding of the role that information science plays in the health care industry.

Program Objectives

The program is designed to help students

- Develop management and technical competencies that are critical for overseeing the complex coordination and planning necessary to meet health informatics administration needs.
- Plan, implement, and evaluate information systems in a health care setting.
- Apply knowledge of legal, ethical, and quality management issues related to information technology in health care settings.

Career Paths

- Health informatics administration consultant
- Health informatics administration products vendor
- Health informatics/data analyst
- Health care information services specialist

MS IN HEALTH INFORMATICS ADMINISTRATION

Required Main Courses	33
Required Capstone Course	3
Total Credits	36

Degree Requirements

MS in Health Informatics Administration

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED MAIN COURSES

HCAD 600	Introduction to Health Care Administration (3)
ITEC 610	Information Technology Foundations (3)
HIMS 650	Research Methods for Health Care Managers (3)
INFA 610	Foundations of Information Security and Assurance (3)
HIMS 655	Health Data Management (3)
HCAD 640	Financial Management for Health Care Organizations (3)
HCAD 650	Legal Aspects of Health Care Administration (3)
HIMS 661	Health Informatics Administration (3)
ITEC 640	Information Technology Project Management (3)
DBST 651	Relational Database Systems (3)
IMAT 637	IT Acquisitions Management (3)

REQUIRED CAPSTONE COURSE

HIMS 670 Health Informatics Administration Capstone (3)

COURSE SEQUENCING

- Students are advised to take HCAD 600 and ITEC 610 first.
- Students will benefit most by taking the courses in the order listed.

HEALTH CARE AND SCIENCE PROGRAMS

- Students should have successfully completed a 3-credit course in financial decision making (with a minimum grade of C for an undergraduate course, B for a graduate course) before enrolling in HCAD 640.
- Students must complete HIMS 650 before taking HIMS 655.
- Students must have successfully completed 30 credits, including HIMS 661, before enrolling in HIMS 670.

Program Accreditation

UMUC's MS in Health Informatics Administration is accredited by the Commission for Health Informatics and Information Management (CAHIIM).

Related Certificate Program

Health Informatics Administration

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

HCAD 600 Introduction to Health Care Administration (3)

ITEC 610 Information Technology Foundations (3)

INFA 610 Foundations of Information Security
and Assurance (3)

HIMS 655 Health Data Management (3)

DBST 651 Relational Database Systems (3)

HIMS 661 Health informatics administration (3)

COURSE SEQUENCING

- Students are advised to take HCAD 600 and ITEC 610 first.
- Students will benefit most by taking the courses in the order listed.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

MASTER OF SCIENCE IN MANAGEMENT

SPECIALIZATION IN

Health Care Administration

CERTIFICATE IN

Health Care Administration

The Master of Science (MS) in Management is designed for professionals who are assuming or want to assume greater management responsibilities within their organizations or are looking to pursue management positions at new organizations. Throughout the curriculum, emphasis is on the effects rapid technological change has on organizations and administrative processes and the consequent ethical and moral responsibilities of managers to society at large. The goal of the program is to provide students with the skills and technical expertise that are the basis for success in modern organizations.

Program Objectives

The program is designed to help students

- Utilize methods of and conduct organizational assessments.
- Evaluate the organization/environment relationship.
- Manage strategic planning.
- Demonstrate organizational communication and leadership.
- Budget and allocate resources.
- Manage organizational decision making.

Degree Requirements

Specific course requirements are detailed under each specialization.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Management may earn one of the following degrees by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- DMBA 610 Ethical Leadership in Organizations and Society (6)
- DMBA 620 Effective Financial and Operational Decision Making (6)
- DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Master of Distance Education and E-Learning

REQUIRED COURSES

- OMDE 601 Foundations of Distance Education and E-Learning (3)
- OMDE 603 Technology in Distance Education and E-Learning (3)

HEALTH CARE AND SCIENCE PROGRAMS

OMDE 610	Teaching and Learning in Online Distance Education (3)
OMDE 606	Costs and Economics of Distance Education and E-Learning (3)
OMDE 608	Learner Support in Distance Education and Training (3)
DETT 621	Online Learning and Development in the Workplace (3)

MS IN MANAGEMENT: HEALTH CARE ADMINISTRATION SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Health Care Administration specialization helps provide an introduction to the health care industry and is designed for students who have little or no educational or work experience in the field. The curriculum examines the U.S. health care system and the legal, information technology, and financial aspects of management in the health care field.

Career Paths

- Health services manager
- Health care business planner

Degree Requirements

MS in Management: Health Care Administration Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615	Orientation to Graduate Study at UMUC (0)
----------	---

REQUIRED CORE COURSES

MGMT 610	Organizational Theory (3)
MGMT 615	Intercultural Communication and Leadership (3)
MGMT 640	Financial Decision Making for Managers (3)
HIMS 650	Research Methods for Health Care Managers (3)*

REQUIRED SPECIALIZATION COURSES

HCAD 610	Information Technology for Health Care Administration (3)
HCAD 620	The U.S. Health Care System (3)
HCAD 630	Public Health Administration (3)
HCAD 640	Financial Management for Health Care Organizations (3)
HCAD 650	Legal Aspects of Health Care Administration (3)
HCAD 660	Health Care Institutional Organization and Management (3)
TMAN 632	Organizational Performance Management (3)

REQUIRED CAPSTONE COURSE

MGMT 670	Strategic Management Capstone (3)
----------	-----------------------------------

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 should not be attempted simultaneously with HIMS 650.
- Students must take MGMT 640 before HCAD 640.
- MGMT 615 is prerequisite to HCAD 660.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.
- Specialization courses should be taken in the order listed.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on p. 75.

Related Certificate Program

- Health Care Administration

Details are available on p. 72.

* Research methods/statistics course for the program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

INFORMATION TECHNOLOGY PROGRAMS

MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

SPECIALIZATIONS IN

Database Systems Technology
Informatics
Information Assurance
Project Management
Software Engineering
Systems Engineering
Telecommunications Management

CERTIFICATES IN

Database Systems Technology
Foundations of Information Technology
Informatics
Information Assurance
Project Management
Software Engineering
Systems Engineering
Telecommunications Management

Information technology (IT) is a broad term for a career field that includes website designers, network administrators, telecommunications managers, and dozens of other occupations related to the development, implementation, and management of information systems. The Master of Science (MS) in Information Technology is designed for students with a variety of educational backgrounds and work experiences who want to pursue careers in IT development, find themselves taking on IT-related roles in their current job, want to serve as IT liaisons, or wish to better understand how their organization's IT systems function and make use of them in the business realm. Depending on the specialization, the curriculum can include the study of systems engineering, relational database systems, software maintenance, satellite communication systems, network and Internet security, and more. The goal of the program is to give students a broad technical understanding of current and evolving technologies in the IT field with an emphasis on moving technology from the laboratory into business development.

Program Objectives

The program is designed to help students

- Utilize the principles and theories underlying applied information technology.
- Demonstrate an understanding of the technical and regulatory issues surrounding the Internet.
- Apply IT best practices to improve productivity and competitive advantage.
- Display an awareness of developments in the convergence of computer and telecommunications technologies.
- Discuss the role of information awareness and literacy in organizational decision making.
- Grasp the central role of software and hardware life cycles.

Degree Requirements

Specific course requirements are detailed under each specialization.

INFORMATION TECHNOLOGY PROGRAMS

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Information Technology may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- DMBA 610 Ethical Leadership in Organizations and Society (6)
DMBA 620 Effective Financial and Operational Decision Making (6)
DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Students who complete the information assurance specialization in the MS in Information Technology may earn the following degree by completing the coursework indicated:

Master of Science in Cybersecurity Policy

REQUIRED COURSES

- CSEC 635 National Cybersecurity Policy and Law (6)
CSEC 645 Enterprise Cybersecurity Policy (6)
CSEC 655 Global Cybersecurity (6)

Students who complete any specialization other than information assurance in the MS in Information Technology may earn the following degree by completing the coursework indicated:

Master of Science in Cybersecurity Policy

REQUIRED COURSES

- CSEC 610 Cyberspace and Cybersecurity (6)
CSEC 635 National Cybersecurity Policy and Law (6)
CSEC 645 Enterprise Cybersecurity Policy (6)

Related Certificate Program

Foundations of Information Technology

REQUIRED COURSES

- ITEC 610 Information Technology Foundations (3)
ITEC 626 Information Systems Infrastructure (3)
ITEC 630 Information Systems Analysis, Modeling, and Design (3)

- ITEC 640 Information Technology Project Management (3)
TMAN 625 Economics and Financial Analysis for Technology Managers (3)

MS IN INFORMATION TECHNOLOGY: DATABASE SYSTEMS TECHNOLOGY SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	21
Total Credits	36

Database technology is pervasive in our society and is considered a core component of most businesses. The Database Systems Technology specialization focuses on the design, development, and management of database technology. Emphasis is on relational databases. The curriculum also covers distributed databases, data warehousing, and data mining. The goal is to develop a practical understanding of the principles of database security and database administration and apply emerging tools and technology for managing big data. Laboratory experiences are included in most courses.

Career Paths

- Database administrator
- Technical leader
- Database developer/designer/modeler
- Chief data officer
- Chief information officer
- Data warehouse developer
- Data mining specialist
- Data architect

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

Degree Requirements

MS in Information Technology: Database Systems Technology Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

ITEC 610 Information Technology Foundations (3)
ITEC 625 Computer Systems Architecture (3)
ITEC 626 Information Systems Infrastructure (3)
ITEC 630 Information Systems Analysis, Modeling, and Design (3)
ITEC 640 Information Technology Project Management (3)

REQUIRED SPECIALIZATION COURSES

DBST 651 Relational Database Systems (3)
DBST 652 Advanced Relational/Object-Relational Database Systems (3)
DBST 663 Distributed Database Management Systems (3)
DBST 665 Data Warehouse Technologies (3)
DBST 667 Data Mining (3)
DBST 668 Database Security (3)
DBST 670 Database Systems Administration (3)

COURSE SEQUENCING

- ITEC 610 must be taken in the first term of coursework.
- Students must complete 6 credits of core coursework before beginning specialization coursework.
- DBST 651 is prerequisite for all other specialization coursework and may not be taken concurrently with other specialization coursework.
- All other specialization coursework must be completed before taking DBST 670.

Dual Degree Options

Students who complete the MS in Information Technology may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Science in Cybersecurity Policy

Details are available on p. 78.

Related Certificate Program

Database Systems Technology

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

DBST 651 Relational Database Systems (3)
DBST 652 Advanced Relational/Object-Relational Database Systems (3)
DBST 663 Distributed Database Management Systems (3)
DBST 665 Data Warehouse Technologies (3)
DBST 670 Database Systems Administration (3)

MS IN INFORMATION TECHNOLOGY: INFORMATICS SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	21
Total Credits	36

The Informatics specialization has a decidedly technical slant and is oriented toward students seeking a generalist's view of IT. It offers a broadly based and strongly quantitative grounding in the various facets of information theory and best practices for developing a variety of systems and program products. Students are introduced to the major categories of IT endeavors, including networking, security, software development, databases, web design, and IT acquisitions to be well prepared for the challenges of the workplace in the 21st century. The specialization also serves as a logical extension of coursework begun in programs offered at military institutions with which UMUC has alliance agreements (listed on p. 5).

Career Paths

- Programming and applications software developer and acquisitions manager
- Software tester
- Network designer
- Customer service training/support manager
- Hardware acquisition and integration manager
- Interface designer

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

INFORMATION TECHNOLOGY PROGRAMS

- Publications and systems documentation manager
- Software quality assurance administrator
- Internet site designer/developer

Degree Requirements

MS in Information Technology: Informatics Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

ITEC 610 Information Technology Foundations (3)
ITEC 625 Computer Systems Architecture (3)
ITEC 626 Information Systems Infrastructure (3)
ITEC 630 Information Systems Analysis, Modeling, and Design (3)
ITEC 640 Information Technology Project Management (3)

REQUIRED SPECIALIZATION COURSES

SWEN 603 Modern Software Methodologies (3)
DBST 651 Relational Database Systems (3)
SWEN 645 Software Requirements (3)
INFA 610 Foundations of Information Security and Assurance (3)
IMAT 637 IT Acquisitions Management (3)
IMAT 639 Internet Multimedia Applications (3)
IMAT 670 Contemporary Topics in Informatics (3)

COURSE SEQUENCING

- ITEC 610 must be taken in the first term of coursework.
- Students must complete 6 credits of core coursework before taking the first specialization course.

Dual Degree Options

Students who complete the MS in Information Technology may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Science in Cybersecurity Policy

Details are available on p. 78.

Related Certificate Program

Informatics

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

ITEC 610 Information Technology Foundations (3)
ITEC 626 Information Systems Infrastructure (3)
DBST 651 Relational Database Systems (3)
INFA 610 Foundations of Information Security and Assurance (3)
IMAT 637 IT Acquisitions Management (3)

COURSE SEQUENCING

ITEC 610 must be taken in the first term of coursework.

MS IN INFORMATION TECHNOLOGY: INFORMATION ASSURANCE SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	21
Total Credits	36

The Information Assurance specialization is designed to provide a thorough knowledge base for managers and technology professionals concerned with the design, development, implementation, operation, and management of secure information systems and with the protection of an organization's information assets. The goal of the specialization is to provide students with a practical understanding of the principles of data protection, network security, and computer forensics. The specialization also introduces students to the ethical, legal, and policy issues associated with information security. Laboratory exercises are included in some courses to enhance the learning experience.

Career Paths

- Chief security officer
- Network administrator
- Network professional

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

- Security administrator
- Security architect
- Security manager
- Security professional
- Security officer
- System administrator
- System professional

Degree Requirements

MS in Information Technology: Information Assurance Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

ITEC 610	Information Technology Foundations (3)
ITEC 625	Computer Systems Architecture (3)
ITEC 626	Information Systems Infrastructure (3)
ITEC 630	Information Systems Analysis, Modeling, and Design (3)
ITEC 640	Information Technology Project Management (3)

REQUIRED SPECIALIZATION COURSES

INFA 610	Foundations of Information Security and Assurance (3)
INFA 620	Network and Internet Security (3)
INFA 630	Intrusion Detection and Intrusion Prevention (3)
INFA 640	Cryptology and Data Protection (3)
INFA 650	Computer Forensics (3)
INFA 660	Security Policy, Ethics, and the Legal Environment (3)
INFA 670	Information Assurance Capstone (3)

COURSE SEQUENCING

- ITEC 610 must be taken in the first term of coursework.
- INFA 610 must be taken as the first specialization course.
- Students must complete all other specialization coursework before taking INFA 670.

Recognition

UMUC's MS in Information Technology with a specialization in information assurance has been designated a Professional Science Master's degree program through the Council of Graduate Schools.

Dual Degree Options

Students who complete the MS in Information Technology may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Science in Cybersecurity Policy

Details are available on p. 78.

Related Certificate Program

Information Assurance

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

INFA 610	Foundations of Information Security and Assurance (3)
INFA 620	Network and Internet Security (3)
INFA 630	Intrusion Detection and Intrusion Prevention (3)
INFA 640	Cryptology and Data Protection (3)
INFA 650	Computer Forensics (3)

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

INFORMATION TECHNOLOGY PROGRAMS

MS IN INFORMATION TECHNOLOGY: PROJECT MANAGEMENT SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	21
Total Credits	36

The Project Management specialization offers a strong theoretical and practical foundation in project management. This specialization is designed to serve managers and other professionals who wish to acquire, enhance, and certify their knowledge and skills to successfully design, integrate, develop, and manage projects. Students have the opportunity to gain hands-on experience in using various project management tools and techniques to successfully manage real-world projects of varying sizes and degrees of complexity. Focus is on applying emerging principles and methods in the project management field.

Career Paths

- Program manager
- Project/product manager
- Government contractor

Degree Requirements

MS in Information Technology: Project Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

ITEC 610	Information Technology Foundations (3)
ITEC 625	Computer Systems Architecture (3)
ITEC 626	Information Systems Infrastructure (3)
ITEC 630	Information Systems Analysis, Modeling, and Design (3)
ITEC 640	Information Technology Project Management (3)

REQUIRED SPECIALIZATION COURSES

PMAN 634	Foundations of Project Management (3)
PMAN 635	Quantitative Methods in Project Management (3)

PMAN 637	Project Risk Management (3)
PMAN 638	Project Communication Management (3)
PMAN 639	Project Quality Management (3)
PMAN 641	Project Procurement Management (3)
PMAN 650	Financial and Strategic Management of Projects (3)

COURSE SEQUENCING

- ITEC 610 must be taken in the first term of coursework.
- Students must complete 6 credits of core coursework before beginning specialization coursework.
- PMAN 634 must be taken as the first specialization course.

Recognition/Professional Certification

UMUC master's degree programs with project management specializations are accredited by the Global Accreditation Center (GAC) of the Project Management Institute (PMI). Under certain conditions, students who have matriculated in or are graduating from a GAC-accredited program may qualify for 1,500 hours of work experience credit toward Project (PMP) and Program Management Professional (PgMP) credentials. Detailed requirements are available at www.gacpm.org.

UMUC is also a PMI-registered educational provider. Successful completion of each 3-credit PMAN course qualifies for 45 professional development units (PDUs). Students may claim their PDUs at www.pmi.org.

Academic Relationship

Students certified as Project Management Professionals by PMI may receive credit for PMAN 634 Foundations of Project Management if they begin study for the master's degree within five years of earning certification. Graduate advisors can provide more information.

Dual Degree Options

Students who complete the MS in Information Technology may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Science in Cybersecurity Policy

Details are available on p. 78.

Related Certificate Program

Project Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

PMAN 634 Foundations of Project Management (3)
PMAN 635 Quantitative Methods in Project Management (3)
PMAN 637 Project Risk Management (3)
PMAN 638 Project Communication Management (3)
PMAN 639 Project Quality Management (3)

COURSE SEQUENCING

PMAN 634 must be taken as the first course.

MS IN INFORMATION TECHNOLOGY: SOFTWARE ENGINEERING SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	21
Total Credits	36

The Software Engineering specialization offers a foundation in technical concepts and design techniques, as well as management and teamwork approaches, for building software systems. The emphasis of this specialization is on implementing software engineering projects within cost and schedule by applying proven and innovative practices.

Career Paths

- Leader of a software development team
- Head of a development department
- Chief technical officer
- Software architect

Required Academic Preparation

The software engineering specialization is designed for students with a degree and/or professional experience in software development and programming languages.

Degree Requirements

MS in Information Technology: Software Engineering Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

ITEC 610 Information Technology Foundations (3)
ITEC 625 Computer Systems Architecture (3)
ITEC 626 Information Systems Infrastructure (3)
ITEC 630 Information Systems Analysis, Modeling, and Design (3)
ITEC 640 Information Technology Project Management (3)

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

INFORMATION TECHNOLOGY PROGRAMS

REQUIRED SPECIALIZATION COURSES

SWEN 603	Modern Software Methodologies (3)
SWEN 645	Software Requirements (3)
SWEN 651	Usability Engineering (3)
SWEN 646	Software Design and Implementation (3)
SWEN 647	Software Verification and Validation (3)
SWEN 648	Software Maintenance (3)
SWEN 670	Software Engineering Project (3)

COURSE SEQUENCING

- ITEC 610 must be taken in the first term of coursework.
- Students must complete 6 credits of core coursework before beginning specialization coursework.
- SWEN 670 must be taken in the last term of enrollment.

Recognition

UMUC's MS in Information Technology with a specialization in software engineering has been designated a Professional Science Master's degree program through the Council of Graduate Schools.

Dual Degree Options

Students who complete the MS in Information Technology may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Science in Cybersecurity Policy

Details are available on p. 78.

Related Certificate Program

Software Engineering

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

SWEN 603	Modern Software Methodologies (3)
SWEN 645	Software Requirements (3)
SWEN 651	Usability Engineering (3)
SWEN 646	Software Design and Implementation (3)
SWEN 647	Software Verification and Validation (3)

MS IN INFORMATION TECHNOLOGY: SYSTEMS ENGINEERING SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	21
Total Credits	36

The Systems Engineering specialization helps provide students with the ability to apply traditional and modern life cycle models, techniques, and tools to the specification, design, development, and deployment of complex systems. This specialization is designed for students with an academic or professional background in a technical discipline who wish to enhance their knowledge and skills in systems engineering theory and practice. A variety of cases across different application domains are used to illustrate the wide scope of systems concepts.

Career Paths

- Lead project engineer
- Process designer
- Engineering manager

Degree Requirements

MS in Information Technology: Systems Engineering Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

ITEC 610	Information Technology Foundations (3)
ITEC 625	Computer Systems Architecture (3)
ITEC 626	Information Systems Infrastructure (3)
ITEC 630	Information Systems Analysis, Modeling, and Design (3)
ITEC 640	Information Technology Project Management (3)

REQUIRED SPECIALIZATION COURSES

SYSE 610	Systems Engineering Overview (3)
SYSE 620	Requirements Engineering (3)

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

SYSE 630	System Design and Development (3)
SYSE 640	System Integration and Test (3)
SYSE 650	Design Considerations (3)
SYSE 660	Systems Engineering Management (3)
SYSE 670	Systems Engineering Capstone (3)

COURSE SEQUENCING

- ITEC 610 must be taken in the first term of coursework.
- Students must complete 6 credits of core coursework before beginning specialization coursework.
- Specialization courses must be taken in the order listed.
- Students must take SYSE 670 in their final term.

Dual Degree Options

Students who complete the MS in Information Technology may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Science in Cybersecurity Policy

Details are available on p. 78.

Related Certificate Program

Systems Engineering

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

SYSE 610	Systems Engineering Overview (3)
SYSE 620	Requirements Engineering (3)
SYSE 630	System Design and Development (3)
SYSE 640	System Integration and Test (3)
SYSE 650	Design Considerations (3)
SYSE 660	Systems Engineering Management (3)
SYSE 670	Systems Engineering Capstone (3)

MS IN INFORMATION TECHNOLOGY: TELECOMMUNICATIONS MANAGEMENT SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	21
Total Credits	36

The Telecommunications Management specialization is designed to provide the technical knowledge and management skills needed to plan, acquire, operate, and evaluate telecommunication systems. It emphasizes critical management concepts, such as the structure and environment of the telecommunications industry, strategic planning, financial management, and quality improvement.

Career Paths

- Telecommunication system development and deployment specialist
- Network security manager
- Network manager and designer for local- and wide-area, wired, and wireless systems
- Information systems development and deployment specialist
- Telecommunication system business manager
- Federal, state, or local government telecommunication manager or contractor

Degree Requirements

MS in Information Technology: Telecommunications Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

ITEC 610	Information Technology Foundations (3)
ITEC 625	Computer Systems Architecture (3)
ITEC 626	Information Systems Infrastructure (3)
ITEC 630	Information Systems Analysis, Modeling, and Design (3)
ITEC 640	Information Technology Project Management (3)

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

INFORMATION TECHNOLOGY PROGRAMS

REQUIRED SPECIALIZATION COURSES

TLMN 602	Telecommunications Industry: Structure and Environment (3)
TLMN 623	Telecommunications Networks (3)
TLMN 630	Satellite Communication Systems (3)
TLMN 641	Network Management and Design (3)
TLMN 645	Wireless Telecommunications Systems (3)
INFA 620	Network and Internet Security (3)
TLMN 670	Capstone Course in Telecommunications Management (3)

COURSE SEQUENCING

- ITEC 610 must be taken in the first term of coursework.
- Students must complete 6 credits of core coursework before beginning specialization coursework.
- ITEC 626 should be taken before any specialization courses.
- Students must complete 27 credits of program coursework before taking TLMN 670; availability of the capstone course is provided online at www.umuc.edu/telecom.

Recognition

UMUC's MS in Information Technology with a specialization in telecommunications management has been designated a Professional Science Master's degree program through the Council of Graduate Schools.

Dual Degree Options

Students who complete the MS in Information Technology may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Science in Cybersecurity Policy

Details are available on p. 78.

Related Certificate Program

Telecommunications Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

ITEC 626	Information Systems Infrastructure (3)
TLMN 602	Telecommunications Industry: Structure and Environment (3)
TLMN 641	Network Management and Design (3)
TLMN 645	Wireless Telecommunications Systems (3)
TLMN 623	Telecommunications Networks (3)

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

MASTER OF SCIENCE IN MANAGEMENT

SPECIALIZATION IN

Information Systems and Services

CERTIFICATE IN

Systems Analysis

The Master of Science (MS) in Management is designed for professionals who are assuming or want to assume greater management responsibilities within their organizations or are looking to pursue management positions at new organizations. Throughout the curriculum, emphasis is on the effects rapid technological change has on organizations and administrative processes and the consequent ethical and moral responsibilities of managers to society at large. The goal of the program is to provide students with the skills and technical expertise that are the basis for success in modern organizations.

Program Objectives

The program is designed to help students to

- Utilize methods of and conduct organizational assessments.
- Evaluate the organization/environment relationship.
- Manage strategic planning.
- Demonstrate organizational communication and leadership.
- Budget and allocate resources.
- Manage organizational decision making.

Degree Requirements

Specific course requirements are detailed under each specialization.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Management may earn one of the following degrees by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- | | |
|----------|---|
| DMBA 610 | Ethical Leadership in Organizations and Society (6) |
| DMBA 620 | Effective Financial and Operational Decision Making (6) |
| DMBA 630 | Marketing and Strategy Management in the Global Marketplace (6) |

INFORMATION TECHNOLOGY PROGRAMS

Master of Distance Education and E-Learning

REQUIRED COURSES

OMDE 601	Foundations of Distance Education and E-Learning (3)
OMDE 603	Technology in Distance Education and E-Learning (3)
OMDE 610	Teaching and Learning in Online Distance Education (3)
OMDE 606	Costs and Economics of Distance Education and E-Learning (3)
OMDE 608	Learner Support in Distance Education and Training (3)
DETT 621	Online Learning and Development in the Workplace (3)

MS IN MANAGEMENT: INFORMATION SYSTEMS AND SERVICES SPECIALIZATION

Required Core Courses	9
Required Research Methods Core Course	3
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Information Systems and Services specialization explores the ways a manager can procure and use computer-based information systems to enhance decision making and organizational effectiveness. The specialization is structured to accommodate the needs of students who have little or no experience with computers as well as those with advanced computer skills. In addition to offering a technological foundation, the curriculum explores the interaction of technology, organizational behavior, strategic planning, project management, and systems analysis used to support an organization through its information systems.

Career Paths

- Systems or business analyst
- Systems development manager
- Information security project or program manager

- Information security consultant
- Chief information officer
- Information security-aware general manager

Degree Requirements

MS in Management: Information Systems and Services Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

MGMT 610	Organizational Theory (3)
MGMT 615	Intercultural Communication and Leadership (3)
MGMT 640	Financial Decision Making for Managers (3)
MGMT 650	Statistics for Managerial Decision Making (3)*

REQUIRED SPECIALIZATION COURSES

ISAS 600	Information Systems for Managers (3)
ISAS 610	Information Systems Management and Integration (3)
ISAS 620	Information Systems Sourcing Management (3)
ISAS 630	Systems Analysis and Design (3)
ISAS 640	Decision Support Systems and Expert Systems (3)
ISAS 650	Information Technology, the CIO, and Organizational Transformation (3)
IMAT 639	Internet Multimedia Applications (3)

REQUIRED CAPSTONE COURSE

MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.
- ISAS 600 should be taken before any other ISAS courses.

* Research methods/statistics course for the program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 87–88.

Related Certificate Program

Systems Analysis

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

ISAS 600	Information Systems for Managers (3)
ISAS 610	Information Systems Management and Integration (3)
ISAS 620	Information Systems Sourcing Management (3)
ISAS 630	Systems Analysis and Design (3)
ISAS 650	Information Technology, the CIO, and Organizational Transformation (3)

COURSE SEQUENCING

ISAS 600 must be taken first.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

MARKETING AND COMMUNICATION PROGRAMS

MASTER OF INTERNATIONAL MANAGEMENT

SPECIALIZATION IN

International Marketing Management

CERTIFICATE IN

International Marketing

In our increasingly globalized world, business leaders cannot ignore what occurs beyond U.S. borders. The Master of International Management (MIM) is designed for midcareer professionals who want to delve more deeply into international business and commerce and learn how to overcome obstacles to succeed in the field. The curriculum emphasizes developing skills for assessing the international competitive structure of industries, building marketing and business plans, formulating market-entry strategies, and managing country and global business risk. The goal is to help students develop a working knowledge of transnational business operations and the global environment and an understanding of how both affect their own organization and management.

Program Objectives

The program is designed to help students

- Demonstrate a global perspective in business operations/processes.
- Increase the competitiveness of their organizations.

Degree Requirements

Specific course requirements are detailed under each specialization.

Dual Degree Option

Students who complete the MIM may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- | | |
|----------|---|
| DMBA 610 | Ethical Leadership in Organizations and Society (6) |
| DMBA 620 | Effective Financial and Operational Decision Making (6) |
| DMBA 630 | Marketing and Strategy Management in the Global Marketplace (6) |

MIM: INTERNATIONAL MARKETING MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The International Marketing Management specialization helps create a solid foundation for marketing management, with a particular focus on marketing in a global environment. It is designed for managers in the public, private, or nonprofit sectors who need to market their organization's products and services to consumers or other businesses domestically and internationally. The specialization focuses on the knowledge and skills that managers need to attract customers. Coursework covers defining the scope of 21st-century marketing, developing and executing effective marketing strategies, adapting to rapidly changing technologies, building customer satisfaction and retention, and facilitating communications successfully (from the international organization to the customer as well as from the international customer to the organization).

Career Paths

- International marketing manager
- Internet marketing manager
- Direct marketing manager
- International product/brand manager
- International manufacturer's representative
- International account executive (business or consumer products)
- International market research analyst
- International promotions manager

Degree Requirements

MIM: International Marketing Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED CORE COURSES

IMAN 601 Strategic Management in a Global Environment (3)
MGMT 615 Intercultural Communication and Leadership (3)

MGMT 640 Financial Decision Making (3)

IMAN 635 Managing Country Risk (3)

REQUIRED SPECIALIZATION COURSES

IMAN 615 Strategic Investment and Partnering (3)

IMAN 625 International Trade and Economic Policy (3)

MRKT 605 International Marketing Management (3)

MRKT 601 Legal and Ethical Issues in Global Communications (3)

MRKT 602 Consumer Behavior (3)

MGMT 650 Statistics for Managerial Decision Making (3)

MRKT 604 Marketing Intelligence and Research Systems (3)

REQUIRED CAPSTONE COURSE

IMAN 670 Managing Overseas Operations (3)

COURSE SEQUENCING

- IMAN 601 must be completed during the first term of enrollment.
- MGMT 650 must be completed before MRKT 604.
- Students must complete 30 credits of program coursework, including all core courses, before enrolling in IMAN 670.

Dual Degree Option

Students who complete the MIM may then complete the following degree as part of a dual degree option:

- Master of Business Administration

Details are provided on p. 90.

Related Certificate Program

International Marketing

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

MRKT 605 International Marketing Management (3)

IMAN 625 International Trade and Economic Policy (3)

MRKT 601 Legal and Ethical Issues in Global Communications (3)

MRKT 602 Consumer Behavior (3)

COURSE SEQUENCING

- MRKT 605 must be taken first.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

MARKETING AND COMMUNICATION PROGRAMS

MASTER OF SCIENCE IN MANAGEMENT

SPECIALIZATIONS IN

Marketing

Public Relations

CERTIFICATES IN

Integrated Direct Marketing

Public Relations

The Master of Science (MS) in Management is designed for professionals who are assuming or want to assume greater management responsibilities within their organizations or are planning to pursue management positions at new organizations. Throughout the curriculum, emphasis is on the effects rapid technological change has on organizations and administrative processes and the consequent ethical and moral responsibilities of managers to society at large. The goal of the program is to provide students with the skills and technical expertise that are the basis for success in modern organizations.

Program Objectives

The program is designed to help students

- Utilize methods of and conduct organizational assessments.
- Evaluate the organization/environment relationship.
- Direct strategic planning.
- Demonstrate organizational communication and leadership.
- Budget and allocate resources.
- Manage organizational decision making.

Degree Requirements

Specific course requirements are detailed under each specialization.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Management may earn one of the following degrees by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- | | |
|----------|---|
| DMBA 610 | Ethical Leadership in Organizations and Society (6) |
| DMBA 620 | Effective Financial and Operational Decision Making (6) |
| DMBA 630 | Marketing and Strategy Management in the Global Marketplace (6) |

Master of Distance Education and E-Learning

REQUIRED COURSES

OMDE 601	Foundations of Distance Education and E-Learning (3)
OMDE 603	Technology in Distance Education and E-Learning (3)
OMDE 610	Teaching and Learning in Online Distance Education (3)
OMDE 606	Costs and Economics of Distance Education and E-Learning (3)
OMDE 608	Learner Support in Distance Education and Training (3)
DETT 621	Online Learning and Development in the Workplace (3)

MS IN MANAGEMENT: MARKETING SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Marketing specialization is designed for managers in the public, private, or nonprofit sectors who need to acquire customers for their products and services either internally or externally (business-to-business or business-to-consumer). The specialization focuses on the theories and skills managers need to know to attract customers: defining the scope of 21st-century marketing, developing and executing effective marketing strategies, adapting to rapidly changing technologies, building customer satisfaction and retention, and facilitating communication successfully from the organization to the customer as well as from the customer to the organization.

Career Paths

- Marketing manager (business-to-business or business-to-consumer)
- Internet marketing manager
- Direct marketing manager
- Product/brand manager

- Manufacturer's representative
- Retail manager
- Account executive (business or consumer products)
- Market research analyst
- Promotions manager

Degree Requirements

MS in Management: Marketing Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED CORE COURSES

- MGMT 610 Organizational Theory (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3) *

REQUIRED SPECIALIZATION COURSES

- MRKT 600 Marketing Management (3)
MRKT 601 Legal and Ethical Issues in Global Communications (3)
MRKT 602 Consumer Behavior (3)
MRKT 603 Brand Management (3)
MRKT 604 Marketing Intelligence and Research Systems (3)
MRKT 605 International Marketing Management (3)
MRKT 606 Integrated Direct Marketing (3)

REQUIRED CAPSTONE COURSE

MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSES

- MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.
- MRKT 620 Marketing Principles, Regulation, and Ethical Issues (6) may be taken instead of MRKT 600 and 601.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- Students must complete MRKT 600 and 601 (or MRKT 620) as their first specialization course(s).
- MGMT 650 must be completed before MRKT 604 and 606.

* Research methods/statistics course for the program.

Course descriptions are found on pp. 110–47.

MARKETING AND COMMUNICATION PROGRAMS

- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.

Dual Degree Options

Students who complete the Master of Science in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 92–93.

Related Certificate Program

Integrated Direct Marketing

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

MGMT 650 Statistics for Managerial Decision Making (3)
MRKT 600 Marketing Management (3)
MRKT 604 Marketing Intelligence and Research Systems (3)
MRKT 606 Integrated Direct Marketing (3)

COURSE SEQUENCING

- MGMT 650 and MRKT 600 must be taken as the first courses.
- MGMT 650 must be completed before MRKT 604 and 606.

MS IN MANAGEMENT: PUBLIC RELATIONS SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Public Relations specialization is designed to meet the needs of both entry-level employees and working professionals who seek a more formal grounding in the field. The specialization emphasizes public relations theory, legal and ethical issues, and the analytical and creative skills necessary to excel in the profession. The capstone experience provides an opportunity to observe and participate in the production and assessment of a public relations campaign in which students analyze the effects of various strategies and practices in the workplace.

Career Paths

- Director of public relations
- Corporate communications manager
- Director of media relations
- Account manager
- Communications writer
- Director of public affairs
- Promotion director
- Internal communications manager

Degree Requirements

MS in Management: Public Relations Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED CORE COURSES

MGMT 610 Organizational Theory (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3)*

* Research methods/statistics course for the program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

REQUIRED SPECIALIZATION COURSES

PRPA 600	Public Relations Writing (3)
MRKT 600	Marketing Management (3)
PRPA 601	Public Relations Theory and Practice (3)
PRPA 602	Public Relations Techniques (3)
PRPA 610	Crisis Communication Management (3)
PRPA 620	Global Public Relations (3)
PRPA 650	Public Relations Campaigns (3)

REQUIRED CAPSTONE COURSE

MGMT 670	Strategic Management Capstone (3)
----------	-----------------------------------

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- PRPA 600 is prerequisite to all other specialization courses and must be taken first.
- PRPA 601 is prerequisite to PRPA 602.
- PRPA 602 is prerequisite to PRPA 610 and 620.
- All program coursework (except MGMT 670) must be completed before PRPA 650.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.

Dual Degree Options

Students who complete the Master of Science in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 92–93.

Related Certificate Program

Public Relations

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615	Orientation to Graduate Studies at UMUC (0)
----------	---

REQUIRED COURSES

PRPA 600	Public Relations Writing (3)
MRKT 600	Marketing Management (3)
PRPA 601	Public Relations Theory and Practice (3)
PRPA 602	Public Relations Techniques (3)
PRPA 610	Crisis Communication Management (3)

COURSE SEQUENCING

- PRPA 600 is prerequisite to all other certificate courses and must be taken first.
- PRPA 601 is prerequisite to PRPA 602.
- PRPA 602 is prerequisite to PRPA 610.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

PUBLIC SAFETY AND INTELLIGENCE

MASTER OF INTERNATIONAL MANAGEMENT

SPECIALIZATION IN

International Emergency Management

CERTIFICATE IN

Emergency Management

In our increasingly globalized world, business leaders cannot ignore what occurs beyond U.S. borders. The Master of International Management (MIM) is designed for midcareer professionals who want to delve more deeply into international business and commerce and learn how to overcome obstacles to succeed in the field. The curriculum emphasizes developing skills for assessing the international competitive structure of industries, building marketing and business plans, formulating market-entry strategies, and managing country and global business risk. The goal is to help students develop a working knowledge of transnational business operations and the global environment and an understanding of how both affect their own organization and management.

Program Objectives

The program is designed to help students

- Demonstrate a global perspective in business operations/processes.
- Increase the competitiveness of their organizations.

Degree Requirements

Specific course requirements are detailed under each specialization.

Dual Degree Option

Students who complete the MIM may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- | | |
|----------|---|
| DMBA 610 | Ethical Leadership in Organizations and Society (6) |
| DMBA 620 | Effective Financial and Operational Decision Making (6) |
| DMBA 630 | Marketing and Strategy Management in the Global Marketplace (6) |

MIM: INTERNATIONAL EMERGENCY MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	42

The International Emergency Management specialization is designed for individuals who intend to assume greater management responsibility in both private and public settings in helping global communities reduce vulnerability to hazards and cope with international disasters. The aim is for students to gain an essential understanding of the entire vision, mission, and principles of emergency management. Emphasis is on leadership, management, use of technology, and cross-agency collaboration. The curriculum covers management theories and their application, emergency management-related research (including data and literature on hazards, vulnerabilities, and risks), and major principles of this cross-disciplinary field.

Career Paths

- Disaster response/recovery specialist
- Emergency management director
- Emergency management coordinating officer
- Emergency management program analyst
- Emergency planner
- Emergency response manager
- Emergency services coordinator
- Hazard or risk management specialist
- Humanitarian assistance specialist

Degree Requirements

MIM: International Emergency Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED CORE COURSES

IMAN 601 Strategic Management in a Global Environment (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making (3)
IMAN 635 Managing Country Risk (3)

REQUIRED SPECIALIZATION COURSES

EMAN 600 Comprehensive Crisis and Emergency Management (3)
EMAN 610 Hazard Risk and Vulnerability Assessment (3)
EMAN 620 Information Technology in Emergency Management (3)
HSMN 610 Concepts in Homeland Security (3)
HSMN 630 Resilience Planning and Preparedness for Disaster Response and Recovery (3)
EMAN 630 Crisis Communication for Emergency Managers (3)
EMAN 670 Seminar in Emergency Management Leadership (3)

REQUIRED CAPSTONE COURSE

IMAN 670 Managing Overseas Operations (3)

COURSE SEQUENCING

- IMAN 601 must be completed during the first term of enrollment.
- Students must complete 30 credits of program coursework, including all core courses, before enrolling in IMAN 670.
- EMAN 600 must be taken as one of the first two specialization courses.
- EMAN 670 must be taken after all courses except IMAN 670.

PUBLIC SAFETY AND INTELLIGENCE

Academic Relationship

An articulation agreement between the Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major or minor in emergency management to reduce their total coursework for the graduate degree by up to 6 credits (two courses) and complete both degrees with a total of 150 credits of coursework.

The Graduate School will accept the following courses toward the completion of a specialization in emergency management within the MIM or the MS in Management for a maximum of 6 credits:

- EMGT 302 Concepts in Emergency Management in lieu of EMAN 600 Comprehensive Crisis and Emergency Management
- EMGT 310 Continuity of Operations Planning and Implementation in lieu of HSMN 630 Resilience Planning and Preparedness for Disaster Response and Recovery

The substitutions listed above are the only ones possible. Credits eligible for sharing must have been completed no earlier than four years before the beginning of graduate studies. A minimum grade of B must have been earned in the undergraduate class for the credits to be accepted at the graduate level. Admission requirements apply to all applicants.

Dual Degree Option

Students who complete the MIM may then complete the following degree as part of a dual degree option:

- Master of Business Administration

Details are provided on p. 98.

Related Certificate Program

Emergency Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

EMAN 600 Comprehensive Crisis and Emergency Management (3)
EMAN 610 Hazard Risk and Vulnerability Assessment (3)
EMAN 620 Information Technology in Emergency Management (3)
HSMN 610 Concepts in Homeland Security (3)
HSMN 630 Resilience Planning and Preparedness for Disaster Response and Recovery (3)
EMAN 630 Crisis Communication for Emergency Managers (3)

COURSE SEQUENCING

EMAN 600 must be taken as one of the first two specialization courses.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47

MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

SPECIALIZATION IN

Homeland Security Management

CERTIFICATE IN

Homeland Security Management

Information technology (IT) is a broad term for a career field that includes website designers, network administrators, telecommunications managers, and dozens of other occupations related to the development, implementation, and management of information systems. The Master of Science (MS) in Information Technology is designed for students with a variety of educational backgrounds and work experiences who want to pursue careers in IT development, find themselves taking on IT-related roles in their current job, want to serve as IT liaisons, or wish to better understand how their organization's IT systems function and make use of them in the business realm. Depending on the specialization, the curriculum can include the study of systems engineering, relational database systems, software maintenance, satellite communication systems, network and Internet security, and more. The goal of the program is to give students a broad technical understanding of current and evolving technologies in the IT field with an emphasis on moving technology from the laboratory into business development.

Program Objectives

The program is designed to help students

- Utilize the principles and theories underlying applied information technology.
- Demonstrate an understanding of the technical and regulatory issues surrounding the Internet.
- Apply IT best practices to improve productivity and competitive advantage.
- Display an awareness of developments in the convergence of computer and telecommunications technologies.
- Discuss the role of information awareness and literacy in organizational decision making.
- Grasp the central role of software and hardware life cycles.

Degree Requirements

Specific course requirements are detailed under each specialization.

PUBLIC SAFETY AND INTELLIGENCE

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Information Technology may earn the following degree by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- DMBA 610 Ethical Leadership in Organizations and Society (6)
DMBA 620 Effective Financial and Operational Decision Making (6)
DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Students who complete the information assurance specialization in the MS in Information Technology may earn the following degree by completing the coursework indicated:

Master of Science in Cybersecurity Policy

REQUIRED COURSES

- CSEC 635 National Cybersecurity Policy and Law (6)
CSEC 645 Enterprise Cybersecurity Policy (6)
CSEC 655 Global Cybersecurity (6)

Students who complete any specialization other than information assurance in the MS in Information Technology may earn the following degree by completing the coursework indicated:

Master of Science in Cybersecurity Policy

REQUIRED COURSES

- CSEC 610 Cyberspace and Cybersecurity (6)
CSEC 635 National Cybersecurity Policy and Law (6)
CSEC 645 Enterprise Cybersecurity Policy (6)

Related Certificate Program

Foundations of Information Technology

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

- UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

- ITEC 610 Information Technology Foundations (3)
ITEC 626 Information Systems Infrastructure (3)
ITEC 630 Information Systems Analysis, Modeling, and Design (3)
ITEC 640 Information Technology Project Management (3)
TMAN 625 Economics and Financial Analysis for Technology Managers (3)

MS IN INFORMATION TECHNOLOGY: HOMELAND SECURITY MANAGEMENT SPECIALIZATION

Required Core Courses	15
Required Specialization Courses	21
Total Credits	36

The Homeland Security Management specialization is designed to provide managers and practitioners with the background to prepare for and deal with a wide range of human-made and natural threats and vulnerabilities at community and organizational levels. The curriculum helps prepare students to perform security risk assessments and develop strategies to mitigate threats to people, physical facilities, and information-dependent critical infrastructure, as well as plan for and manage operational recovery. Courses also explore the evolving roles within various first-responder communities regarding pre-event planning and postevent response.

Career Paths

- Chief operation officer
- Facility or plant manager
- Facility security officer
- Military planner
- Federal, state, or local government emergency planner or policy maker
- Law enforcement, emergency, or medical practitioner or administrator

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

Degree Requirements

MS in Information Technology: Homeland Security Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

ITEC 610 Information Technology Foundations (3)
ITEC 625 Computer Systems Architecture (3)
ITEC 626 Information Systems Infrastructure (3)
ITEC 630 Information Systems Analysis, Modeling, and Design (3)
ITEC 640 Information Technology Project Management (3)

REQUIRED SPECIALIZATION COURSES

HSMN 610 Concepts in Homeland Security (3)
HSMN 625 Critical Infrastructures (3)
HSMN 630 Resilience Planning and Preparedness for Disaster Response and Recovery (3)
INFA 660 Security Policy, Ethics, and the Legal Environment (3)
BSBD 641 Biosecurity and Bioterrorism (3)
HSMN 640 Energy Infrastructure Security (3)
HSMN 670 Seminar in Homeland Security (3)

COURSE SEQUENCING

- ITEC 610 must be taken in the first term of coursework.
- HSMN 610 must be taken as one of the first two specialization courses.
- HSMN 670 must be taken after all other specialization courses.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major or minor in homeland security to reduce their total coursework for the graduate degree by up to 6 credits (two courses) and complete both degrees with a total of 150 credits of coursework.

The Graduate School will accept the following toward the completion of a specialization in homeland security management within the MS in Information Technology or MS in Management for a maximum of 6 credits:

- HMLS 302 Introduction to Homeland Security in lieu of HSMN 610 Concepts in Homeland Security
- HMLS 408 Infrastructure Security Issues in lieu of HSMN 625 Critical Infrastructures

The substitutions listed above are the only ones possible. Credits eligible for sharing must have been completed no earlier than four years before the beginning of graduate studies. A minimum grade of B must have been earned in the undergraduate class for the credits to be accepted at the graduate level. Admission requirements apply to all applicants.

Dual Degree Options

Students who complete the MS in Information Technology may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Science in Cybersecurity Policy

Details are available on p. 100

Related Certificate Program

Homeland Security Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

REQUIRED COURSES

HSMN 610 Concepts in Homeland Security (3)
HSMN 625 Critical Infrastructures (3)
HSMN 630 Resilience Planning and Preparedness for Disaster Response and Recovery (3)
INFA 660 Security Policy, Ethics, and the Legal Environment (3)
HSMN 640 Energy Infrastructure Security (3)

COURSE SEQUENCING

HSMN 610 must be taken as one of the first two courses in the program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

PUBLIC SAFETY AND INTELLIGENCE

MASTER OF SCIENCE IN MANAGEMENT

SPECIALIZATION IN

Criminal Justice Management
Emergency Management
Homeland Security Management
Intelligence Management

CERTIFICATE IN

Criminal Justice Management
Emergency Management
Homeland Security Management
Intelligence Management

The Master of Science (MS) in Management is designed for professionals who are assuming or want to assume greater management responsibilities within their organizations or are looking to pursue management positions at new organizations. Throughout the curriculum, emphasis is on the effects rapid technological change has on organizations and administrative processes and the consequent ethical and moral responsibilities of managers to society at large. The goal of the program is to provide students with the skills and technical expertise that are the basis for success in modern organizations.

Program Objectives

The program is designed to help students

- Utilize methods of and conduct organizational assessments.
- Evaluate the organization/environment relationship.
- Manage strategic planning.
- Demonstrate organizational communication and leadership.
- Budget and allocate resources.
- Manage organizational decision making.

Degree Requirements

Specific course requirements are detailed under each specialization.

Dual Degree Options

Dual degree options, described on p. 5, require a second application.

Students who complete the MS in Management may earn one of the following degrees by completing the coursework indicated:

Master of Business Administration

REQUIRED COURSES

- | | |
|----------|---|
| DMBA 610 | Ethical Leadership in Organizations and Society (6) |
| DMBA 620 | Effective Financial and Operational Decision Making (6) |
| DMBA 630 | Marketing and Strategy Management in the Global Marketplace (6) |

Master of Distance Education and E-Learning

REQUIRED COURSES

OMDE 601	Foundations of Distance Education and E-Learning (3)
OMDE 603	Technology in Distance Education and E-Learning (3)
OMDE 610	Teaching and Learning in Online Distance Education (3)
OMDE 606	Costs and Economics of Distance Education and E-Learning (3)
OMDE 608	Learner Support in Distance Education and Training (3)
DETT 621	Online Learning and Development in the Workplace (3)

MS IN MANAGEMENT: CRIMINAL JUSTICE MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Criminal Justice Management specialization helps provide the foundation necessary for graduates to assume roles of increasing responsibility within the criminal justice system in both private and public settings, as well as to continue studies at the doctoral or professional level. The curriculum covers the entire criminal justice system and the management of organizations within that system and emphasizes leadership, cross-agency collaboration, research, data analysis, policy development, and operational decision making. Coursework explores crime and criminal justice issues and examines topics such as law enforcement leadership, physical security, corrections, and legal and judicial perspectives.

Career Paths

- Police administrator
- Correctional administrator
- Security manager
- Intelligence analyst supervisor
- Federal, state, or local government manager

- Court/law-related practitioner or administrator
- Juvenile corrections manager
- Parole or probations supervisor
- Private corrections administrator
- Border patrol supervisor

Degree Requirements

MS in Management: Criminal Justice Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

- MGMT 610 Organizational Theory (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3)*

REQUIRED SPECIALIZATION COURSES

- CJMS 600 Critical Analysis of the Criminal Justice System (3)
CJMS 610 Perspectives in Law Enforcement Management (3)
CJMS 620 Issues in Correctional Administration (3)
CJMS 630 Seminar in Security Management (3)
CJMS 640 Criminal Justice Intelligence Systems and Approaches (3)
CJMS 650 Legal Aspects Within the Criminal Justice System (3)
CJMS 660 Issues in Criminal Justice Leadership (3)

REQUIRED CAPSTONE COURSE

MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Specialization courses should be taken in the order listed.

* Research methods/statistics course for the program.

Course descriptions are found on pp. 110–47.

PUBLIC SAFETY AND INTELLIGENCE

- CJMS 600 must be taken as the first specialization course.
- CJMS 660 must be taken after all specialization and core courses (except MGMT 670).
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major in criminal justice to reduce their total coursework for the graduate degree by up to 6 credits (two courses) and complete both degrees with a total of 150 credits of coursework.

The Graduate School will accept the following toward the completion of a specialization in criminal justice management within the MS in management for a maximum of 6 credits:

- CCJS 495 Issues in Criminal Justice in lieu of CJMS 600 Critical Analysis of the Criminal Justice System
- CCJS 497 Correctional Administration in lieu of CJMS 620 Issues in Correctional Administration

The substitutions listed above are the only ones possible. Students pursuing a graduate certificate in Criminal Justice Management may substitute CCJS 495 for CJMS 600 for 3 credits only. Credits eligible for sharing must have been completed no earlier than four years before the beginning of graduate studies. A minimum grade of B must have been earned in the undergraduate class for the credits to be accepted at the graduate level. Admission requirements apply to all applicants.

Dual Degree Options

Students who complete the Master of Science in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 102–3.

Related Certificate Program

Criminal Justice Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

COURSE SEQUENCING

CJMS 600 must be taken first.

REQUIRED COURSES

CJMS 600	Critical Analysis of the Criminal Justice System (3)
CJMS 610	Perspectives in Law Enforcement Management (3)
CJMS 620	Issues in Correctional Administration (3)
CJMS 630	Seminar in Security Management (3)

MS IN MANAGEMENT: EMERGENCY MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Emergency Management specialization is designed for individuals who intend to assume greater management responsibility in both private and public settings in helping global communities reduce vulnerability to hazards and cope with international disasters. The aim is for students to gain an essential understanding of the entire vision, mission, and principles of emergency management. Emphasis is on leadership, management, use of technology, and cross-agency collaboration. The curriculum covers management theories and their application, emergency management–related research (including data and literature on hazards, vulnerabilities, and risks), and major principles of this cross-disciplinary field.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

Career Paths

- Director of emergency management
- Business continuity specialist
- Disaster or emergency management specialist
- Emergency operations manager or planner
- Emergency management program analyst
- Hazard/risk management specialist
- Disaster recovery specialist
- Emergency management training specialist

Degree Requirements

MS in Management: Emergency Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

MGMT 610 Organizational Theory (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3)*

REQUIRED SPECIALIZATION COURSES

EMAN 600 Comprehensive Crisis and Emergency Management (3)
EMAN 610 Hazard Risk and Vulnerability Assessment (3)
EMAN 620 Information Technology in Emergency Management (3)
HSMN 610 Concepts in Homeland Security (3)
HSMN 630 Resilience Planning and Preparedness for Disaster Response and Recovery (3)
EMAN 630 Crisis Communication for Emergency Managers (3)
EMAN 670 Seminar in Emergency Management Leadership (3)

REQUIRED CAPSTONE COURSE

MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- EMAN 600 must be taken as one of the first two specialization courses.
- EMAN 670 must be taken after all program coursework except MGMT 670.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major or minor in emergency management to reduce their total coursework for the graduate degree by up to 6 credits (two courses). Details are on p. 98.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 102–3.

Related Certificate Program

- Emergency Management

Details are available on p. 98.

* Research methods/statistics course for the program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

PUBLIC SAFETY AND INTELLIGENCE

MS IN MANAGEMENT: HOMELAND SECURITY MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Homeland Security Management specialization is designed to provide managers and practitioners with the background to prepare for and deal with a wide range of human-made and natural threats and vulnerabilities at community and organizational levels. The curriculum helps prepare students to perform security risk assessments and develop strategies to mitigate threats to people, physical facilities, and information-dependent critical infrastructure, as well as plan for and manage operational recovery. Courses also explore the evolving roles within various first-responder communities regarding pre-event planning and postevent response.

Career Paths

- Enterprise chief operation officer
- Facility and plant manager
- Facility security officer
- Military planner
- Federal, state, or local government emergency planner and policy maker
- Law enforcement, emergency, or medical practitioner or administrator

Degree Requirements

MS in Management: Homeland Security Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

MGMT 610 Organizational Theory (3)

MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3)*

REQUIRED SPECIALIZATION COURSES

HSMN 610 Concepts in Homeland Security (3)
HSMN 625 Critical Infrastructures (3)
HSMN 630 Resilience Planning and Preparedness for Disaster Response and Recovery (3)
INFA 660 The Law, Regulation, and Ethics of Information Assurance (3)
BSBD 641 Biosecurity and Bioterrorism (3)
HSMN 640 Energy Infrastructure Security (3)
HSMN 670 Seminar in Homeland Security (3)

REQUIRED CAPSTONE COURSE

MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- HSMN 610 must be taken as one of the first two specialization courses.
- HSMN 670 must be taken after all other specialization courses.
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.

Academic Relationship

An articulation agreement between The Graduate School and UMUC's Undergraduate School allows students who completed their undergraduate degree at UMUC with a major or minor in homeland security to reduce their total coursework for the graduate degree by up to 6 credits (two courses). Details are on p. 101.

* Research methods/statistics course for the program.

Course descriptions are found on pp. 110–47.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 93–94.

Related Certificate Program

- Homeland Security Management

Details are available on p. 101

MS IN MANAGEMENT: INTELLIGENCE MANAGEMENT SPECIALIZATION

Required Core Courses	12
Required Specialization Courses	21
Required Capstone Course	3
Total Credits	36

The Intelligence Management specialization is meant for early- to midcareer intelligence professionals who want to assume management roles of increasing responsibility within the intelligence community in both private and public settings. The specialization offers students opportunities to apply solid management theories while helping them acquire the knowledge and skills necessary to engage in basic intelligence-related research and interpret intelligence-related data and literature. The curriculum is designed to provide an essential understanding of the entire intelligence community, with an emphasis on leadership, management, and cross-agency collaboration. The aim is for students to gain an analytical understanding of the legal and ethical principles that guide the intelligence community as well as an understanding of how to manage the intelligence process, using technological advances and human resources, to prevent crime and enhance national security.

Career Paths

- Intelligence operations officer
- Collections management supervisor
- Personnel, facility, or information security manager
- Intelligence analyst supervisor

- Signals intelligence manager
- Human intelligence analyst
- Imagery analyst supervisor
- Technical intelligence supervisor
- Federal, state, or local law enforcement intelligence analyst
- Business manager of competitive intelligence analysis
- Correctional administrator
- Security manager

Degree Requirements

MS in Management: Intelligence Management Specialization

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED CORE COURSES

MGMT 610 Organizational Theory (3)
MGMT 615 Intercultural Communication and Leadership (3)
MGMT 640 Financial Decision Making for Managers (3)
MGMT 650 Statistics for Managerial Decision Making (3)*

REQUIRED SPECIALIZATION COURSES

INMS 600 Managing Intelligence Activities (3)
INMS 610 Intelligence Collection: Sources and Challenges (3)
INMS 620 Intelligence Analysis: Consumers, Uses, and Issues (3)
INMS 630 Counterintelligence (3)
INMS 640 Intelligence-Led Enforcement (3)
INMS 650 Intelligence Management and Oversight (3)
INMS 660 Leadership Seminar (3)

REQUIRED CAPSTONE COURSE

MGMT 670 Strategic Management Capstone (3)

ALTERNATE COURSE

MGMT 630 Organizational Theory and Behavior in a Global Environment (6) may be taken instead of MGMT 610 and 615.

* Research methods/statistics course for the program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 110–47.

PUBLIC SAFETY AND INTELLIGENCE

COURSE SEQUENCING

- MGMT 610 (or MGMT 630) must be taken within the first 6 credits.
- MGMT 640 should not be attempted simultaneously with MGMT 650.
- Specialization courses should be taken in the order listed.
- INMS 600 and 610 must be taken as the first two specialization courses.
- INMS 660 must be taken after all specialization and core courses (except MGMT 670).
- Students must complete 24 credits of program coursework, including all core and research methods courses, before enrolling in MGMT 670.

Dual Degree Options

Students who complete the MS in Management may then complete one of the following degrees as part of a dual degree option:

- Master of Business Administration
- Master of Distance Education and E-Learning

Details are available on pp. 102–3.

Related Certificate Program

Intelligence Management

INITIAL REQUIREMENT

(to be taken within the first 6 credits of study)

UCSP 615 Orientation to Graduate Study at UMUC (0)

REQUIRED COURSES

INMS 600 Managing Intelligence Activities (3)
INMS 610 Intelligence Collection: Sources and Challenges (3)
INMS 620 Intelligence Analysis: Consumers, Uses, and Issues (3)
INMS 630 Espionage and Counterintelligence (3)

COURSE SEQUENCING

INMS 600 and 610 should be taken first.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Course descriptions are found on pp. 91–135.

COURSE DESCRIPTIONS

INDEX TO COURSE DESCRIPTIONS

ACCT (Accounting)	110	HIMS (Health Informatics Administration)	131
AMBA (Business Administration)	111	HRMD (Human Resource Management and Development)	132
ASCM (Acquisition and Supply Chain Management)	112	HSMN (Homeland Security Management)	133
BIFS (Bioinformatics)	113	IMAN (International Management)	134
BIOT (Biotechnology Studies)	114	IMAT (Informatics)	134
BSBD (Biosecurity and Biodefense)	114	INFA (Information Assurance)	135
BTMN (Biotechnology Management)	115	INMS (Intelligence Management)	136
BTRA (Biotechnology Regulatory Affairs)	115	ISAS (Information Systems and Services)	136
CJMS (Criminal Justice Management)	116	ITEC (Information Technology)	137
CMBA (Business Administration—One Year)	116	MGMT (Management)	138
COMM (Communication Studies)	117	MRKT (Marketing)	139
CSEC (Cybersecurity)	117	MSAF (Accounting and Financial Management)	139
DATA (Data Analytics)	118	MSAS (Accounting and Information Systems)	140
DBST (Database Systems Technology)	119	MSFS (Financial Management and Information Systems)	140
DEPM (Distance Education Policy and Management)	120	NPMN (Nonprofit Management)	140
DETC (Distance Education Technology)	121	OMDE (Distance Education and E-Learning)	141
DETT (Distance Education Teaching and Training)	121	PMAN (Project Management)	142
DMBA (Business Administration—Dual Degree)	121	PRPA (Public Relations)	143
DMCC (Doctoral Studies in Community College Policy and Administration)	122	RMBA (Business Administration—Global Focus)	144
DMGT (Doctoral Studies in Management)	123	SWEN (Software Engineering)	145
EDTC (Education: Instructional Technology)	124	SYSE (Systems Engineering)	145
EDTP (Education: Teacher Preparation)	126	TLMN (Telecommunications Management)	146
EMAN (Emergency Management)	127	UCSP (Special Topics)	147
ENVM (Environmental and Waste Management)	128		
FIN (Financial Management)	129		
GHCA (Health Care Administration—Global)	130		
HCAD (Health Care Administration)	130		

COURSE DESCRIPTIONS

Accounting (ACCT)

ACCT 610 Financial Accounting (3)

Prerequisite: Completion of 15 credits of undergraduate accounting. A study of accounting theory in a strategic framework. An overview of relevant theory provides a foundation for further study. Focus is on developing skills in critical thinking and applying accounting concepts and principles. Topics include the preparation and interpretation of corporate financial statements in accordance with generally accepted accounting practices (GAAP); accounting standards and the standard-setting process; the use of electronic technology in financial accounting; effective communication; professional ethics; and current issues, debates, and research in accounting.

ACCT 611 Management Accounting (3)

Prerequisite: ACCT 610. An examination of the control and decision-making methodologies used by management accountants in solving strategic problems for business. Methodologies covered include break-even analysis, regression analysis, the balanced scorecard, activity-based costing/management, value chain analysis, total quality management, and performance evaluation/assessment. Business problems examined range from ethical issues to product costing.

ACCT 612 Auditing (3)

Prerequisite: ACCT 610. An in-depth examination of generally accepted auditing standards (GAAS), as well as standards for attestation and other services. Alternative audit models are evaluated for both their practical relevance and their theoretical justification as informed by current research and emerging information technology. The use of computer-assisted auditing techniques (CAAT) and other computer-related technology for obtaining evidence is evaluated in terms of its effectiveness and suitability in diverse audit environments. Methods of evaluating internal control are considered in light of the risks encountered in new ways of conducting business, such as e-commerce. Professional ethical and legal responsibilities, as shaped by the contemporary professional, legal, and regulatory environments, are examined as they relate to audit risk, risk assessment, and audit program planning. The use of audit reports and other services as tools to support management control and decision making are considered.

THE UNIT OF CREDIT

The unit of credit defines the amount of university-level credit to be awarded for course completion. One credit is awarded on the basis of either of two sets of criteria, as follows:

- At least 15 hours (50 minutes each) of actual class meeting or the equivalent in guided learning activity (exclusive of registration and study days, holidays, and final examinations);
- At least 30 hours (50 minutes each) of supervised laboratory or studio work (exclusive of registration and study days, holidays, and final examinations).

PREREQUISITES

Prerequisites, normally stated in terms of numbered courses, represent the level of knowledge a student should have acquired before enrolling in a given course. Students will not be able to register for courses for which prerequisites have not been met.

ACCT 613 Federal Income Taxation (3)

Prerequisite: ACCT 610. A case study-based, problem-oriented examination of fundamental federal tax concepts. Tax issues and controversies are explored in-depth. Emphasis is on applying tax laws, as opposed to learning individual tax rules. Methods of case analysis and research that are typically involved in tax planning and litigation are covered. Important definitions, judicially created rules, and other tax conventions are explored in great detail through the study of each one's genesis and purpose. Topics include gross income, identification of the proper taxpayer, deductions, timing, income and deduction characterization, and deferral and capital gains and losses.

ACCT 614 Accounting Information Systems (3)

Prerequisite: ACCT 610. A study of the use of information systems in the accounting process, with an emphasis on computer systems and internal controls. Focus is on the analytical tools necessary to evaluate users' accounting information needs and to design, implement, and maintain an accounting information system to support business processes and cycles. Topics include the components of contemporary accounting information systems; security and internal controls, particularly within Internet and e-commerce environments; traditional flow charts and data-flow diagrams; computer networks; theory and application of relational databases; and relational database management systems. Assignments include designing an accounting information system using a commercial database software package.

ACCT 625 Government and Not-for-Profit Accounting (3)

Prerequisite: ACCT 610. A study of the financial accounting standards applicable to public-sector and not-for-profit organizations in the United States and their unique reporting requirements. Emphasis is on similarities and differences among accounting rules for different types of entities and the rationale for the accounting standards governing each type. Students may receive credit for only one of the following courses: ACCT 625 or ACCT 665.

ACCT 630 Fraud Examination (3)

Prerequisite: ACCT 610. A study of the nature and elements of fraud. Topics include fraud prevention, fraud detection, fraud investigation, use of controls to prevent fraud, and methods of fraud resolution. Emphasis is on the use of forensic accounting techniques to analyze what is behind the data being generated by the accounting system, detect internal control weaknesses, and map out a fraud investigation program. Students may receive credit for only one of the following courses: ACCT 608 or ACCT 630.

ACCT 635 Accounting Ethics (3)

Prerequisite: ACCT 610. A study of ethics as a critical foundation for the accounting professional. Topics include the theories and bases of ethical reasoning, development of ethical standards, codes of professional conduct, professional responsibilities and judgment calls in accounting, and the evolution of ethics in the accounting profession. Students may receive credit for only one of the following courses: ACCT 608 or ACCT 635.

ACCT 640 International Accounting (3)

Prerequisite: ACCT 610. An exploration of international accounting and financial reporting. Focus is on evolving reporting requirements under International Financial Reporting Standards (IFRS). Accounting practices, as influenced by business operations, culture, and the inherent risk in international accounting environments, are compared. Students may receive credit for only one of the following courses: ACCT 640 or ACCT 665.

AMBA (Business Administration)

AMBA 600 MBA Fundamentals (3)

An overview of fundamental management concepts across a broad spectrum of subject areas. Topics include the online environment and technologies used in the MBA program; academic requirements; research, writing, and analytical skills; plagiarism issues; and basic management concepts. Assignments focus on statistics and the theory of constraints. Exercises improve skills in the areas of research, writing, critical thinking, and teamwork.

AMBA 610 The Manager in Organizations and Society (6)

Prerequisite: AMBA 600. An exploration of the responsibilities and influence that 21st-century managers have within their organizations and the global society. Essential concepts and theories that provide a foundation for the study of business administration and management—including systems thinking, critical thinking, ethical decision making and leadership, legal concepts, corporate social responsibility, organizational theory and organizations, and holistic approaches to marketing management—are examined.

AMBA 630 The Economics of Management Decisions (6)

Prerequisite: AMBA 620. An examination of economic decision making in a wide variety of managerial situations. Topics include financial statement analysis; asset valuation; budgeting; cost management; and performance evaluation of organizations, organizational units, products, and managers. Critical thinking is applied to make connections among concepts from the disciplines of microeconomics, finance, managerial accounting, and financial accounting. Discussion covers the current legal and ethical issues surrounding financial accounting; the valuation of tangible, financial, and intangible assets in a domestic and global context; and activity-based costing. Performance measurement techniques covered include the balanced scorecard.

AMBA 640 Managing Projects, Operations, and Information Systems (6)

Prerequisite: AMBA 630. A study of project management, operations management, and information technology management—three key areas of modern business functional management. A guide to the project management body of knowledge is provided. Topics include the dos and don'ts of managing a project, several world-class operations management techniques (such as Six Sigma), and industry best practices in operational efficiency and effectiveness. The mission, goals, and importance of information systems management are assessed, using one's own work organization as a model. Assignments include the development of an international information systems management plan.

COURSE DESCRIPTIONS

AMBA 650 Marketing Management and Innovation (6)

Prerequisite: AMBA 640. An exploration of the essentials of marketing management: setting marketing goals for an organization based on internal resources and marketing opportunities, planning and executing activities to meet these goals, and measuring progress toward their achievement. Focus is on the concept of innovation in business, including the introduction of new market offerings and the use of new technologies, strategies, and tactics for achieving marketing objectives. An integrative approach combines discussions on theory of marketing management with industry analysis and practical implications. Assignments include the design and marketing of innovative products, analysis of the application of modern marketing strategies and tactics using examples from participants' organizations, and practicing a holistic approach to marketing management.

AMBA 660 Managing Global Business (6)

Prerequisite: AMBA 650. A global overview of various types of business organizations and environments that shape organizational decisions. Emphasis is on the regulatory structures, legal systems, governance models, and policy making that define the internal and external functions of business at the confluence of local, state, national, and international affairs. Topics include critical thinking, international ethics, business sustainability, social responsibility, and the impact of economics and technology.

AMBA 670 Managing Strategy in the Global Marketplace (6)

Prerequisite: AMBA 660. An investigation of strategy, value creation, and value capture in different business contexts. Focus is on developing frameworks and models for understanding the structural characteristics of industries and how companies can achieve sustainable competitive advantage, taking appropriate action in these different, but concurrent, business contexts. An explicitly integrative approach is adopted, building on knowledge of the different functional areas of management gained through previous study.

ASCM (Acquisition and Supply Chain Management)

ASCM 626 Purchasing and Materials Management (3)

(Formerly PCMS 626.) An overview of the procurement and contracting cycle, along with other organizational functions. Discussion covers methods of purchasing and source selection, with a focus on receipt, inspection, and quality assurance. Documentation and reporting specifics are examined, as are surplus, salvage, and disposal issues. Inventory, physical distribution, and logistics are considered.

ASCM 627 Legal Aspects of Contracting (3)

(Formerly PMAN 627 and PCMS 636.) A study of the law of commercial purchasing, including the law of agency, contracts, sales, torts, and antitrust. The Federal Acquisition Regulation and American Bar Association model procurement codes for state and local governments are examined. Topics include the authority of purchasing, unauthorized purchases, rights and duties of sellers and buyers under a contract, buyer rights upon receipt of nonconforming goods, ability to terminate a sales contract, formation of government contracts, and formal dispute resolution. Students may receive credit for only one of the following courses: ASCM 627, ASCM 650, PCMS 627, or PCMS 650.

ASCM 628 Contract Pricing and Negotiations (3)

(Formerly PCMS 628.) A study of techniques for planning, conducting, and managing negotiated procurement. Focus is on analytical techniques for conducting price and cost analysis in preparation for negotiations. Techniques for critically examining all categories of costs, including profit, are examined. The theory and practice of negotiations are studied, and opportunities to practice negotiation techniques to achieve a fair and reasonable contract price are given. Emphasis is on preparing negotiation positions through analysis of cases containing detailed cost and pricing data. Ethical decision making throughout these processes is addressed.

ASCM 629 Strategic Purchasing and Logistics (3)

(Formerly PCMS 629.) An investigation of issues and methodologies related to strategic purchasing and logistics. Topics include ethics, social responsibility, and accountability in procurement, logistics, and contract management. Discussion also covers the professional development of staff, just-in-time management, electronic data interchange, vendor assessment and development, pricing and negotiation, and international procurement issues.

ASCM 630 Commercial Transactions in a Technological Environment: Law, Management, and Technology (3)

(Formerly PCMS 630.) Recommended: ASCM 627 or PCMS 627. A presentation of the legal issues and management methodologies related to commercial transactions in a technological environment. Topics include the law, ethics, accountability, and contract management considerations in the procurement of technology products and services. Discussion also covers commercial sales transactions, government commercial item acquisition, private and government contracts for services, assignment and protection of proprietary rights in technology products, technology transfers, and international contractual issues in the procurement of products and services. Students may receive credit for only one of the following courses: ASCM 630, ASCM 650, PCMS 630, or PCMS 650.

ASCM 631 Integrative Supply Chain Management (3)

(Formerly PCMS 631.) A study of supply chain issues, techniques, methodologies, and strategies designed to enhance organizational procurement efficiency. Integrated supply chain management is explored as a core competitive strategy that affects the organization's bottom line. Topics include the integration of information, supply, and material flows across multiple supply chain channels and how these flows can be streamlined and optimized for more efficient procurement. Discussion also covers the role of information systems and technology in supply chain management, e-commerce strategies, managing the flow of materials across the supply chain, developing and maintaining supply chain partnerships and other relationships, and future challenges in integrative supply chain management.

ASCM 632 Contemporary Logistics (3)

(Formerly PCMS 632.) A study of logistical issues, techniques, methodologies, and strategies designed to enhance organizational efficiency. Topics include the total cost approach to logistics; logistical planning and implementation; logistical concepts; systems relationships and integration; demand forecasting; interplant movement; inventory management and control; order management and processing; packaging; plant and warehouse selection; production scheduling; traffic and transportation management; warehouse and distribution management; recycling; and other logistical strategies, techniques, and methodologies.

ASCM 650 Legal Aspects of Contracting and Commercial Transactions (6)

(Formerly PCMS 650.) A study of the law relevant to commercial, governmental, and international purchasing, contracting, and other legal transactions. Focus is on agency law, contracts, sales, torts, antitrust, ethics, and accountability. Discussion covers contract management considerations in the procurement of products and services. Topics include commercial sales transactions, government commercial item acquisition, private and government contracts for services, assigning and protecting proprietary rights in technology products, technology transfers, and international contractual issues in the procurement of products and services. The Federal Acquisition Regulation and American Bar Association model procurement codes for state and local governments are investigated. The authority of purchasing, unauthorized purchases, rights and duties of sellers and buyers under a contract, buyer rights upon receipt of non-conforming goods, ability to terminate a sales contract, formation of government contracts, and formal dispute resolution are also addressed. Students may receive credit for only one of the following courses: ASCM 627, ASCM 630, ASCM 650, PCMS 627, PCMS 630, or PCMS 650.

BIFS (Bioinformatics)

BIFS 613 Statistical Processes for Biotechnology (3)

Prerequisite: STAT 200. A study of statistical tools such as Bayesian statistics, Markov processes, and information theoretic indices and how they can be used to analyze sequence homology, the presence of motifs in sequences, gene expression, and gene regulation. Topics include information content, mutual information, long-range correlation, repeats, Fourier analysis, and linguistic methods.

BIFS 614 Data Structures and Algorithms (3)

An introduction to the definitions, implementations, and applications of the most basic data structures used in bioinformatics. Basic formalism and concepts used in algorithm design and the analysis of algorithms are also introduced. The relative efficiency of the algorithms is estimated by application of these concepts to biological data analysis. Algorithms and data structures discussed include those for database searches, motif finding, sequence alignment, gene prediction, and microarray analysis.

BIFS 617 Advanced Bioinformatics (3)

Prerequisite: CMIS 102. An overview of the basic programming tools for performing bioinformatic analyses in both the UNIX and MS DOS/Windows environments. Focus is on the use of Perl and BioPerl as the basic programming tools. Basic programming skills are developed and practiced on such problems as codon usage/bias, open reading frame, CpG islands detection, and gene identification.

BIFS 618 Java for Biotechnology Applications (3)

Prerequisite: BIFS 617. A study of basic concepts in Java and object-oriented programming in bioinformatics application development. Emphasis is on web-based, graphical, and database-driven application design. Review covers the function and design of some Java-based bioinformatics tools. Some commonly used libraries in the BioJava project are introduced, and developments of reusable modular application objects are examined. Basic problem-solving skills in the field of biotechnology using Java programming are developed through practical projects.

BIFS 619 Systems Level Approaches in Bioinformatics (3)

Prerequisite: BIFS 617. A study of the bioinformatic techniques used in "omics" (genomics, proteomics, etc.) experiments. Focus is on analyzing experiment protocols, comparing the tools used for these experiments, and interpreting the data resulting from the experiments.

COURSE DESCRIPTIONS

BIOT (Biotechnology Studies)

BIOT 601 Introduction to Molecular Biology (3)

A thorough grounding in the fundamentals of biology, including a broad review of the life sciences with emphasis on molecular biology. Topics include the basic concepts and processes of cell biology, molecular biology, and immunology. The components of a cell, the processes occurring in a single cell, and the functioning of a multicellular organism are explained. Discussion also covers the use of model organisms to understand basic and applied biology.

BIOT 630 Introduction to Bioinformatics (3)

An introduction to bioinformatics. Emphasis is on the interpretation of data. Topics include new, sophisticated DNA, RNA, and protein sequence analyses and pattern recognition and DNA computing, as well as more traditional mathematical modeling (using Bayesian probability and basic algorithms, machine learning and neural networks, and Markov models and dynamic programming). Discussion also covers the analysis of tridimensional structures, phylogenetic relationships, and genomic and proteomic data.

BIOT 640 Societal Issues in Biotechnology (3)

An examination of current societal issues in biotechnology from several perspectives. Topics include the commercialization of biotechnology; biohazards; managerial views of legal issues and bioethics; the need for public scrutiny; environmental and cultural issues; and the role of governmental regulatory agencies in researching, developing, and commercializing biotechnology. An overview of the early history and modern developments of biotechnology is provided.

BIOT 643 Techniques of Biotechnology (3)

A comprehensive review of current techniques in biotechnology research and applications. The development and use of some of the techniques are placed in historical context. Discussion covers techniques used in genomics, transcriptomics, and proteomics and the applications of these techniques. Current plant and animal transformation methods are explained. High throughput technologies, including sequencing, real time RT-PCR, SAGE, and microarrays, are also explored. Topics also include therapeutic applications of biotechnology, such as gene therapy, stem cell technology, and RNA interference. Emerging technologies in this field are introduced.

BIOT 645 Bioprocessing and the Business of Biotechnology (3)

A detailed exploration of the business of biotechnology, its structure and operation, and the science upon which this relatively new global industry sector was founded. Discussion covers a wide range of biotechnology applications, from biopharmaceuticals to biofuels, and the technical advances behind them. Focus is on methods and economics of bioprocessing and unique aspects of the funding, alliances, and global models used in the business of biotechnology.

BSBD (Biosecurity and Biodefense)

BSBD 640 Agents of Bioterrorism (3)

An examination of the probable weapons of biowarfare, including biological, chemical, and nuclear weapons, from several perspectives. Topics include their mechanism of action, biological impact, detection and recognition, epidemiology, and treatment. Their potential dangers and effectiveness are evaluated, and strategies for defense against attacks by such weapons are investigated. Discussion covers the bioethical challenges of anti-bioterror research.

BSBD 641 Biosecurity and Bioterrorism (3)

A review of bioterrorism, biosecurity, and government biodefense strategy, including the history and science of biological agents in agriculture and society. Discussion covers surveillance; public health preparedness; response; and recovery at the community, state, and federal government levels. Various aspects of the law, including the Posse Comitatus Act and federal and state quarantine powers, are introduced. The mental health consequences of bioterrorism are also discussed. A case study of a hypothetical biological attack is analyzed in detail.

BSBD 642 Advanced Biosecurity and Bioterrorism (3)

Prerequisite: BIOT 681 or BSBD 641. A thorough examination of special and advanced topics in bioterrorism and biosecurity issues. Topics include the hidden biological warfare programs of the 20th century; advances in biotechnology and molecular microbiology and the dilemma of dual use research; domestic and foreign terrorist groups, including rogue states; state-of-the-art microbial forensics; ethics and civil rights; and current trends in policy development, consequence management, and public health responses to new threats to homeland security. Discussion also addresses special topics of the students' choice. Future challenges in biosecurity are also discussed as part of a comprehensive bioterrorism exercise and the analysis of case studies of hypothetical threats.

BSBD 643 Strategies for Interagency Cooperation, Verification, and Global Countermeasures in Biodefense (6)

An in-depth study of the verification procedures used in global countermeasures and strategies. Global biosecurity and oversight are examined using real-world examples. Discussion covers the epidemiology of emerging infectious diseases as they relate to defense against threats from nonconventional sources. Topics also include the evolution and current status of the Biological Weapons Convention; the integration of responses from local, state, and multiple federal agencies; and other challenges facing public health departments, including the potential economic, political, and social impacts of bioterrorism.

BTMN (Biotechnology Management)

BTMN 632 Commercializing Biotechnology in Early-Stage Ventures (3)

(Formerly BIOT 641.) An overview of the methods for planning and organizing biotechnology ventures. The elements of a business plan are considered, as are methods for assessing various needs, such as capital, personnel, technology, and marketing. Emphasis is on approaches to marketing technology and developing joint ventures. The advantages and disadvantages of forming international ventures are weighed. Discussion also covers the importance of maintaining relations with external constituents and the need for managing public awareness.

BTMN 634 Selection and Evaluation of Biotechnology Projects (3)

A study of the applications of methodologies of technology forecasting, technology assessment, project management, and data auditing to the selection and evaluation of biotechnology projects. The underlying rationale, principles, procedures, and cost effectiveness of data auditing are examined. A systems approach to performance evaluation is presented.

BTMN 636 Biotechnology and the Regulatory Environment (3)

A comprehensive review of the role of regulation in biotechnology products and services development and commercialization. Emphasis is on the roles of the federal government, state government agencies, international bodies, and professional groups, especially the regulatory roles of the U.S. Environmental Protection Agency, Department of Agriculture, and Food and Drug Administration. Discussion covers human subject protection, good laboratory practices, and good manufacturing practices.

BTMN 670 Capstone in Biotechnology (3)

Prerequisite: Completion of 30 credits, including all other program core courses. The application of knowledge gained from previous study to real-world business, technical, and ethical issues. Topics include entrepreneurship and new venture creation, progress in biotechnology and prediction of future trends, and ethical development and management. Discussion also covers professional goals and an action plan to put knowledge and experience gained in the program to use. Focus is on demonstrating analytical, communication, and leadership skills through case analysis of promising technologies and teamwork via group development of a strategic product development plan for a start-up biotechnology venture.

BTRA (Biotechnology Regulatory Affairs)

BTRA 640 Preclinical and Clinical Research Design (3)

An examination of preclinical and clinical research designs. Emphasis is on identifying and addressing challenges associated with elements of good laboratory and clinical practice and qualifying and managing a laboratory for a clinical trial. Discussion covers best practices for planning research and collecting, analyzing, and reporting data from drug/device development studies.

BTRA 641 Product Life-Cycle Approval, Production, and Marketing for Devices and Drugs (3)

An in-depth study of the product life cycle for medical devices and implants and pharmaceuticals. Focus is on the various stages within the life cycle, from conceptualization of a product pipeline in research and development through postmarket surveillance and production. Topics include regulatory submission, approval, production, and the postmarket environment for both drugs and devices. Challenges surrounding the approval and naming of follow-on biologics are addressed. Discussion also covers combination medicines, the stages of a drug pipeline and risk assessment at each stage, and the decreasing productivity of the drug pipeline. The role of a contract research organization in testing and approval is explained, and the nature of the support services they provide to the biotechnology and devices industry is explored.

BTRA 642 Global Biotechnology Business Issues (3)

An exploration of different aspects of international pharmaceutical regulation, as outlined in the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use. Topics include international biotechnology issues, global harmonization efforts, and the cultural impact of biotechnologies. Discussion also covers domestic and international business considerations and international regulatory requirements.

BTRA 643 Practical Applications of Biotech Regulatory Affairs (6)

A capstone study of regulatory affairs related to the biotechnology industry that integrates knowledge and skills gained from previous study. Emphasis is on completion of a group project simulating the development of a drug or device through the product life cycle. The project is designed to demonstrate knowledge of international biotech business, ethics, and production issues and skills in making decisions regarding a wide range of regulatory issues and to provide a transition for applying these skills to applications in the biotechnology environment.

COURSE DESCRIPTIONS

CJMS (Criminal Justice Management)

CJMS 600 Critical Analysis of the Criminal Justice System (3)

An analysis of the U.S. criminal justice system. Topics include the role of criminal justice agencies and personnel in the prevention and response to crime, as well as interagency cooperation and coalition building from a manager's perspective.

CJMS 610 Perspectives in Law Enforcement Management (3)

A study of law-enforcement philosophies and techniques to reduce crime commonly applied at the organizational level. Topics include the politics of policing, police/community relations, police research, professionalization of personnel, and emerging problems in policing from a domestic and international perspective.

CJMS 620 Issues in Correctional Administration (3)

An in-depth study of current challenges for managers in correctional environments. Topics include the privatization of corrections, intelligence sharing, re-entry and community corrections, security threat groups, assessment techniques and empirical evaluations of treatment methods, special populations, growth rates, the political environment, and interagency and community cooperation.

CJMS 630 Seminar in Security Management (3)

A study of the management of security operations within a private setting. Discussion covers vulnerability assessment; emergency planning; interagency cooperation; threat assessment; use of technology; and information gathering, sharing, and storing. Topics also include personnel management, budgeting, reporting requirements, and current trends.

CJMS 640 Criminal Justice Intelligence Systems and Approaches (3)

An in-depth examination of the principles that guide the gathering and sharing of intelligence in the United States. Emphasis is on the interoperability between crime-fighting agencies within the criminal justice system. Topics include analytic methodologies, interview and interrogation techniques, open-source and proprietary data sources, criminal organization analysis, criminal conspiracy, enterprise theory, trial testimony, and witness protection.

CJMS 650 Legal Aspects Within the Criminal Justice System (3)

An introduction to the impact of constitutional and criminal law on managerial responsibilities within the criminal justice system. Topics include pivotal historic and current legal cases and their application to methods of prevention, as well as reaction to crime in the United States.

CJMS 660 Issues in Criminal Justice Leadership (3)

Prerequisite: Completion of 30 credits of program coursework, including all core and specialization courses except MGMT 670. A discussion of case studies involving successful leaders in the criminal justice system. Analysis covers the various characteristics and leadership styles that have proven most effective in the profession. Various theories, models, historical examples, and practical applications are reviewed. Senior criminal justice leaders discuss issues via videoconferencing. Topics include ethics and virtue in criminal justice; navigating the political environment (e.g., being politically savvy without being political); staff development; and labor relations, media relations, and working effectively with various advocacy groups.

CMBA (Business Administration—One Year Program)

CMBA 615 The Role of Managers in Organizations (4)

An exploration of the responsibilities that 21st-century managers fulfill within their organizations. Essential concepts and theories that provide a foundation in business administration and management, including systems thinking, critical thinking, management theory, and organizational design, are examined.

CMBA 625 Legal and Ethical Issues in Business (4)

Prerequisite: CMBA 615. An examination of legal and ethical issues that affect the practice of management in business firms. Discussion covers business formation, ethical decision making, and corporate social responsibility from a global perspective.

CMBA 635 Leading People and Groups in the Workplace (4)

Prerequisite: CMBA 625. An analysis of the challenges and opportunities associated with leading business firms in today's complex global marketplace. Lessons from research and practice on building a high-performing workforce are examined.

CMBA 645 Measuring Financial Performance (4)

Prerequisite: CMBA 635. An exploration of the measurement of the financial performance of business firms. The analysis of financial information to evaluate the economic performance of companies, products, and managers is addressed. Review covers performance measurement techniques that supplement financial information with nonfinancial information to analyze organizational performance effectively.

CMBA 655 Financial Decision Making (4)

Prerequisite: CMBA 645. An exploration of the fundamentals of effective financial decision making. Focus is on the valuation of both individual assets and new business ventures and acquisitions. Critical thinking is used to make connections among concepts in microeconomics, accounting, and finance.

CMBA 665 Marketing Management (4)

Prerequisite: CMBA 655. An exploration of the essentials of marketing management. Topics include setting marketing goals for an organization (taking internal resources and marketing opportunities into consideration), planning and executing activities to meet these goals, and measuring progress toward their achievement. Emphasis is on a holistic approach to marketing and the global environment of modern business.

CMBA 675 Managing Projects and Operations (4)

Prerequisite: CMBA 665. A study of project management, operations management, and information systems in a global context. Topics include Six Sigma principles and industry best practices in operational and information efficiency and effectiveness. A guide to the project management body of knowledge is provided. The goal is to understand and apply the principles and techniques of effective management planning, control, and decision making in the global environment.

CMBA 685 Business Strategy in the Global Marketplace (5)

Prerequisite: CMBA 675. An investigation of strategy, value creation, and value capture in different business contexts. Focus is on frameworks and models for understanding the structural characteristics of industries and how companies can achieve sustainable competitive advantage, taking appropriate action in the global environment.

CMBA 695 Business Practicum Part 1 (3)

Prerequisite: CMBA 615. The first segment of a practicum experience focusing on applying academic content to the workplace and developing effective personal leadership practices.

CMBA 696 Business Practicum Part 2 (3)

Prerequisite: CMBA 635. The second segment of a practicum experience focusing on continued application of academic content to the workplace.

CMBA 697 Business Practicum Part 3 (3)

Prerequisite: CMBA 665. The third and final segment of a practicum experience focusing on continued application of academic content to the workplace.

COMM (Communication Studies)

COMM 600 Academic Writing for Graduate Students (3)

The development of the writing and critical-thinking skills needed for effective academic writing. Skills addressed include applying accurate grammar and punctuation; using critical thinking to summarize and evaluate texts; developing well-organized, well-supported, and clear arguments; integrating sources into writing and formatting academic papers using APA guidelines; and revising writing to produce a clear, concise style appropriate to audience, context, and purpose.

CSEC (Cybersecurity)

CSEC 610 Cyberspace and Cybersecurity (6)

(Must be taken as the first course in the program.) A study of the fundamentals of cyberspace and cybersecurity. Topics include cyber architecture, cyber services, protocols, algorithms, hardware components, software components, programming languages, various cybersecurity mechanisms, business continuity planning, security management practices, security architecture, operations security, physical security, cyber terrorism, and national security.

CSEC 620 Human Aspects in Cybersecurity: Ethics, Legal Issues, and Psychology (6)

Prerequisite: CSEC 610. An examination of the human aspects in cybersecurity. Topics include ethics, relevant laws, regulations, policies, standards, psychology, and hacker culture. Emphasis is on the human element and the motivations for cyber crimes. Analysis covers techniques to prevent intrusions and attacks that threaten organizational data.

CSEC 630 Prevention and Protection Strategies in Cybersecurity (6)

Prerequisite: CSEC 610. An in-depth study of the theories and practices for prevention of cyber attacks. Countermeasures discussed include training, encryption, virtual private networks, policies, practices, access controls, secure systems development, software assurance arguments, verification and validation, firewall architectures, antivirus, patching practices, personnel security practices, and physical security practices. Business continuity plans (BCP) and disaster recovery plans (DRP) are also discussed. Strategies for large-scale prevention, such as critical infrastructure protection, international collaboration, and law enforcement, are also discussed.

COURSE DESCRIPTIONS

CSEC 635 National Cybersecurity Policy and Law (6)

An exploration of the role of government in securing cyberspace. Topics include federal, state, and local entities involved in cybersecurity; relevant laws and regulation; civil liberties, intellectual property, and privacy; policy formulation and analysis; law enforcement; development and diffusion of standards; and national security. Discussion also covers public/private engagement models and opportunities and tools for government to encourage cybersecurity education, awareness, and research.

CSEC 640 Monitoring, Auditing, Intrusion Detection, Intrusion Prevention, and Penetration Testing (6)

Prerequisite: CSEC 610. An in-depth study of the theory and practice of intrusion detection and prevention in cyberspace. Topics include network security, monitoring, auditing, intrusion detection, intrusion prevention, and ethical penetration testing. Emphasis is on methods to identify system vulnerabilities and threats and prevent attacks.

CSEC 645 Enterprise Cybersecurity Policy (6)

Prerequisite: CSEC 635. An exploration of organizational policies to respond to cybersecurity threats. Topics include strategic cybersecurity initiatives, cybersecurity in interorganizational relationships, increasing cybersecurity awareness in the organization, compliance issues, liability, and promoting a culture of sensitivity to cybersecurity issues.

CSEC 650 Cyber Crime Investigation and Digital Forensics (6)

Prerequisite: CSEC 610. An in-depth study of the theory and practice of digital forensics. Topics include computer forensics, network forensics, cell phone forensics, and other types of digital forensics. Discussion also covers identification, collection, acquisition, authentication, preservation, examination, analysis, and presentation of evidence for prosecution purposes.

CSEC 655 Global Cybersecurity (6)

Prerequisite: CSEC 645. An in-depth study of cybersecurity from a global perspective. Topics include cyberterrorism, cyber crime, and cyber warfare; the international legal environment; nation- and region-specific norms regarding privacy and intellectual property; international standard setting; effects on trade (including offshore outsourcing); and opportunities for international cooperation.

CSEC 661 Digital Forensic Investigations (6)

Prerequisite: CSEC 610. A study of the processes and technologies used in the collection, preservation, and analysis of digital evidence in local, networked, and cloud environments. Discussion covers validating data, reporting evidence, and preparing depositions, as well as recovering information from encrypted, obscured, or deleted sources. Topics also include emerging forensic issues in computer, peripheral, and mobile environments and their global implications.

CSEC 662 Cyber Incident Analysis and Response (6)

Prerequisite: CSEC 610. An examination of policies and procedures related to security incidents, exposures, and risks and technologies used to respond to such threats. Topics include dynamic vulnerability analysis, intrusion detection, attack response, evidence protection, and business continuity. Discussion also covers types and modes of computer-facilitated attacks, readiness, and evidence scope, as well as the role of computer emergency response teams.

CSEC 670 Cybersecurity Capstone (6)

Prerequisite: Completion of all other program courses. A study of and an exercise in developing, leading, and implementing effective enterprise- and national-level cybersecurity programs. Focus is on establishing programs that combine technological, policy, training, auditing, personnel, and physical elements. Challenges within specific industries (such as health, banking, finance, and manufacturing) are discussed. Topics include enterprise architecture, risk management, vulnerability assessment, threat analysis, crisis management, security architecture, security models, security policy development and implementation, security compliance, information privacy, identity management, incident response, disaster recovery, and business continuity planning. A project reflecting integration and application of cybersecurity knowledge is included.

DATA (Data Analytics)

DATA 600 Foundations in Data Analytics (3)

An introduction to the key business, computational, and data competencies needed by business analysts to fulfill the information needs of decision makers at all levels of an organization. Focus is on how “big data” can be used to help decision makers improve organizational competitiveness. Experience with different software tools used for data analysis and reporting is provided.

DATA 610 Decision Management Systems (6)

Prerequisite: DATA 600. An examination of the process of decision making in large organizations and the technologies that can be used to enhance data-driven decision making. Focus is on the underlying framework of good decision making. Operational decisions are examined as reusable assets that can be automated through the creation of business rules. Discussion covers how data can add analytic insight to improve decisions. Best practices for long-term success of an analytics project (in terms of project management and communications) are also explored with an emphasis on the Cross-Industry Standard Process for Data Mining (CRISP-DM) methodology.

DATA 620 Data Management and Visualization (6)

Prerequisite: DATA 610. A presentation of the fundamental concepts and techniques in managing and presenting data for effective data-driven decision making. Topics in data management and design include data design approaches for performance and availability, such as data storage and indexing strategies; elements of data warehousing, such as requirement analysis, dimensional modeling, and ETL (extract, transform, load) processing; and metadata management. Topics in data visualization include understanding data types; data dimensionalities, such as time-series and geospatial data; forms of data visualization, such as heat maps and infographs; and best practices for usable, consumable, and actionable data/results presentation.

DATA 630 Data Mining (6)

Prerequisite: DATA 600. A study of standard exploratory data analysis techniques using advanced quantitative statistical and graphical methods for data mining. Major software tools are used to perform business analysis. Topics include association rules, k-NN (k-nearest neighbor) classifier, cluster analysis, discriminant analysis, classification and regression trees, logistic regression, and neural networks.

DATA 640 Predictive Modeling (6)

Prerequisite: DATA 630. An introduction to fundamental concepts and techniques to discover patterns in data, identify variables with the most predictive power, and develop predictive models. Topics include data-mining and machine-learning concepts and methods: data selection, representation, cleansing and preprocessing; algorithms (such as artificial neural networks, classification, clustering and association rules); and advanced techniques such as text mining and web mining. Best practices on the selection of methods and tools to build predictive models are also covered.

DATA 650 Big Data Analytics (6)

Prerequisite: DATA 620 and 640. An introduction to concepts in and techniques for managing and analyzing large data sets for data discovery and modeling. Topics include understanding unstructured data sets, distributed file systems and map-reduce technology (e.g., Hadoop). Focus is on leveraging the power of untapped institutional data.

DATA 670 Data Analytics Practicum (6)

Prerequisite: DATA 650. A hands-on project-based study of data analytics that uses the latest techniques/tools and integrates all the knowledge gained through previous study and experience. Focus is on putting theory into practice. Commercial and open-source tools are employed to conduct analyses and build prototypes using real-world case studies and data sets. Case studies cover building predictive models in selected industries (e.g., health care, medicine, defense, finance, banking, or energy).

DBST (Database Systems Technology)

DBST 651 Relational Database Systems (3)

An introduction to relational databases, one of the most pervasive technologies today. Presentation covers fundamental concepts necessary for the design, use, and implementation of relational database systems. Focus is on basic concepts of database modeling and design, the languages and facilities provided by database management systems, and techniques for implementing relational database systems. Topics include implementation concepts and techniques for database design, query optimization, concurrency control, recovery, and integrity. A foundation for managing databases in important environments is provided. Assignments require use of a remote access laboratory.

DBST 652 Advanced Relational/Object-Relational Database Systems (3)

Prerequisite: CSMN 661 or DBST 651. A continuation of the study of relational database systems, exploring advanced concepts. Topics include logical design, physical design, performance, architecture, data distribution, and data sharing in relational databases. The concepts of object-relational design and implementation are introduced and developed. Assignments require the use of a remote access laboratory.

DBST 663 Distributed Database Management Systems (3)

Prerequisite: CSMN 661 or DBST 651. An introduction to the development of distributed database management, focusing on concepts and technical issues. Survey covers distributed database management systems, including architecture, distributed database design, query processing and optimization, distributed transaction management and concurrency control, distributed and heterogeneous object management systems, and database inoperability.

DBST 665 Data Warehouse Technologies (3)

Prerequisite: CSMN 661 or DBST 651. An introduction to technological approaches for successfully designing and implementing a data warehouse for structured and unstructured data. Topics include data modeling techniques; extraction, transformation, and loading of data; performance challenges; and system tradeoffs in the development of the warehouse environment. Assignments require use of a remote access laboratory.

COURSE DESCRIPTIONS

DBST 667 Data Mining (3)

Prerequisite: CSMN 661 or DBST 651. An overview of the data mining component of the knowledge discovery process. Data mining applications are introduced, and algorithms and techniques useful for solving different problems are identified. Topics include the application of well-known statistical, machine learning, and database algorithms, including decision trees, similarity measures, regression, Bayes theorem, nearest neighbor, neural networks, and genetic algorithms. Discussion also covers researching data mining applications and integrating data mining with data warehouses.

DBST 668 Database Security (3)

Prerequisite: CSMN 661 or DBST 651. An overview of both the theory of database security and applications for providing effective security in database management systems. Topics include conceptual frameworks for discretionary and mandatory access control, data integrity, availability and performance, secure database design, data aggregation, data inference, secure concurrency control, and secure transactions processing. Models for multilevel secure databases for both relational and object-relational databases are analyzed. Assignments focus on database security concepts and require use of a remote access laboratory.

DBST 670 Database Systems Administration (3)

Prerequisites: DBST 652, 663, 665, 667, and 668. An introduction to the knowledge, skills, and tools needed to successfully administer operational database systems. The conceptual and operational tools for analysis and resolution of problems (such as performance, recovery, design, and technical issues) are provided. Tools used to assist in the administration process are also included.

DEPM (Distance Education Policy and Management)

DEPM 604 Management and Leadership in Distance Education and E-Learning (3)

An introduction to the organization, management, and administration of distance education and e-learning training programs and systems. Topics include management theory and practice, organizational behavior and change, leadership roles and styles, and planning and policy. Discussion covers education and training in academic and corporate settings and the knowledge and skills necessary for a distance education practitioner to function effectively in either type of organizational environment. Assignments include individual and group case-study analyses, brief essays, and literature searches related to distance education and e-learning leadership.

DEPM 609 Distance Education and E-Learning Systems (3)

Prerequisites: OMDE 601, 603, and 608. An introduction to frameworks for analyzing the nature of distance education from a functionalist, interpretive, or emancipatory systems approach. Appropriate diagramming techniques are used as a means to examine the organization and management of distance education systems.

DEPM 622 The Business of Distance Education and E-Learning (3)

An examination of the highly competitive global business environment for distance education and training. Topics include the supply and demand of education services in emerging and existing markets, the competitive positioning of organizations, and the increasing reliance on collaborations. Emphasis is on the skills distance education managers need in planning and developing programs, products, and services that are targeted to specific markets and cost-effective.

DEPM 625 Distance Education, Globalization, and Development (3)

A study of distance education from an international perspective, highlighting developing countries. Processes are explored through concrete case studies in the areas of higher education and internationalization; teacher education, school networks, and mobile learning; alternative routes to schooling; nonformal education, community radio, telecenters, and radio browsing; and vocational education and training. Topics also cover national and international policies on distance education, including the role of the state; international organizations (such as the World Bank or UNESCO) and their policies (e.g., the Millennium Development Goals); telecommunication infrastructure; transnational corporations and the commercialization of education; and the World Trade Organization (WTO) and the General Agreement on Trade in Services (GATS).

DEPM 650 Practitioner Research in Distance Education and E-Learning (3)

Prerequisites: OMDE 601, 603, and 608. An introduction to a variety of quantitative and qualitative research methods used in the social sciences, as applied in distance education and e-learning. Emphasis is on planning and designing research and evaluation projects, including choosing appropriate methods of investigation and learning the practical aspects of quantitative and qualitative data collection and analysis. Major research paradigms are explored, and an overview of the various research fields in distance education and e-learning is provided. The Statistical Package for the Social Sciences (SPSS) is used to manage and analyze data. Skills in collecting quantitative and qualitative data and in analyzing, interpreting, and reporting the results of empirical investigations are developed.

DETC (Distance Education Technology)

DETC 620 Training and Learning with Multimedia (3)

An overview of the use of digital media in a variety of educational settings, designed to identify properties, strengths, and weaknesses of multimedia in different learning contexts. The basic psychological processes of perception, understanding, and learning with multimedia are introduced. Focus is on multimedia and instructional design for online learning systems, such as learning management systems or stand-alone learning objects. Hands-on experience with several multimedia applications is provided. Topics include collaborative learning technologies, open educational resources, the impact of multimedia on learning outcomes, methods of multimedia evaluation, quality assurance, and project management of e-learning initiatives.

DETC 630 Emerging Technology Trends and Issues in Distance Education and E-Learning (3)

An examination of emerging and advanced technologies that affect teaching and learning, as well as areas of support and management, in the field of distance education. Topics include emerging synchronous and asynchronous technology functions, mobile technologies, and social media tools for development and delivery, as well as technologies used in providing learner, faculty, and managerial support to distance education. Technologies are explored critically in both a theoretical and applied contexts. Analysis covers trends and critical issues associated with the adoption of such technologies.

DETT (Distance Education in Teaching and Training)

DETT 607 Instructional Design and Course Development in Distance Education and E-Learning (3)

An examination of the instructional design process, its history and place in today's course development efforts, and the use of instructional design components in practice. Emphasis is on the nature of learning and the requirements for effective instruction. The theoretical underpinnings of learning are explored and applied to the design of a prototype classroom. Management issues surrounding course and curriculum development efforts are discussed, and a comprehensive curriculum management plan is developed.

DETT 611 Library and Intellectual Property Issues in Distance Education and E-Learning (3)

An overview of the development and delivery of digital resources for distance education. Discussion covers the intellectual property issues affecting the use of copyrighted works in distance education, developing and delivering library resources online to faculty and student populations, and the future of digital information delivery and the impact of digital rights management (DRM) technologies and social networking.

DETT 621 Online Learning and Development in the Workplace (3)

An examination of distance learning and professional development in the business sector. Discussion covers various issues, problems, and solutions related to distance learning and professional development in the workplace. Topics include knowledge management, performance improvement, delivery of learning and development, and evaluating learning and development.

DMBA (Business Administration—Dual Degree Program)

DMBA 610 Ethical Leadership in Organizations and Society (6)

Prerequisite: Completion of all requirements for the first degree of an approved dual-degree program. An examination and application of core knowledge and skills for managerial and organizational success in the competitive global marketplace. Emphasis is on effective ethical decision making for optimal organizational performance. A foundation in systems and critical thinking is provided. Topics include the legal environment of business, forms of business and nonprofit organizations, employment issues and practices, workforce recruitment and retention, conflict management and alternative dispute resolution, management of diverse virtual teams, ethical and legal conduct of domestic and international business, and corporate social responsibility.

DMBA 620 Effective Financial and Operational Decision Making (6)

Prerequisite: DMBA 610. A study of sound decision making in business, focusing on financial analysis and operational issues found in every enterprise. Discussion covers economics, financial reporting and analysis, information systems, and project management in an international context. The goal is to understand and apply the principles and techniques of effective management planning, control, and decision making in the global environment.

COURSE DESCRIPTIONS

DMBA 630 Marketing and Strategy Management in the Global Marketplace (6)

Prerequisite: DMBA 620. An investigation of marketing and strategy and how they lead to value creation and value capture in different business contexts. Discussion covers marketing strategy and customer orientation in the context of strategic frameworks for industry analysis and achievement of sustainable competitive advantage. Global business and technology environments are assessed to determine strategic options for growth and profitability, leading to specific marketing plans and strategic decisions. Examples from personal work situations are applied to the concepts of both marketing and strategy management.

DMCC (Doctoral Studies in Community College Policy and Administration)

DMCC 800 Foundations of Management Theory (6)

A comprehensive foundation in the history of management and the structure and function of organizations. A new way of understanding and managing operational and strategic issues in public and private organizations in the face of accelerating social, economic, and technological changes is provided. Topics include organizational theory, strategic thinking and strategic management, theories of decision making, leadership, organizational culture, and management in a postindustrial society. Problem-solving, application, and evaluation skills are used to analyze the theories and practices of current and emerging organizational challenges and opportunities. The goal is to be able to critically assess the ideas of others and defend one's own ideas through the application of scholarship. Students who complete DMCC 800 cannot receive credit for DMGT 800.

DMCC 810 Leadership and Change (6)

A study of leadership—not just for survival but for sustainability—in environments where external pressure for change is the dominant feature. Discussion examines change and leadership issues in varied industries, as well as one's own organization, by identifying and analyzing theories and concepts, assessing the applicability of classic works and current perspectives, testing ideas using case studies, and developing various scenarios and strategies. Topics include the knowledge and abilities needed for managing change, such as improvisation and reinvention; the roles and skills needed at all levels for leading in new organizational models involving virtual teams; and the impact of change (particularly frequent change) on individuals and organizations. The goal is to recognize the link between leadership, change, and organizational resilience and apply the lessons. Students who complete DMCC 810 cannot receive credit for DMGT 810.

DMCC 821 Higher Education Policy (6)

An examination of national, state, and local education policy formation, as well as an analysis of the educational policy process, including antecedents, framing of problems and solutions within policies, policy implementation, and policy consequences in the context of the community college environment. Topics include issues of financial stewardship, enrollment management, external stakeholder relationships, educational outcomes, market-driven innovation and change, organizational development, student-centric culture, and technology leadership. Key leadership competencies, including strategic planning, decision making, resource management, communication, collaboration, and advocacy, are considered as they support effective policy development.

DMCC 830 Research Methods (6)

An applied study of how to design, interpret, and critique both quantitative and qualitative research. Methods are grounded in the philosophy of science to provide a solid foundation that will support the identification and analysis of researchable questions. At least one qualitative and one quantitative methodology is studied. Assignments include short analyses representative of the different methodological traditions. Students who complete DMCC 830 cannot receive credit for DMGT 830.

DMCC 841 Institutional Assessment in the Community College Environment (6)

An exploration of the criteria, indicators, and processes by which institutions define and evaluate their effectiveness and use data to improve the quality of programs and services. Emphasis is on the assessment of student learning outcomes, measuring student success (e.g., progress through developmental courses, persistence, transfer, and graduation), program evaluations, and the role of regional accreditation. Ways in which community college leaders can engage in a broad array of organizational and administrative activities to build cultures of evidence are also examined.

DMCC 851 Community College Advocacy, Advancement, and Entrepreneurship (6)

An exploration of the process by which community college leaders advocate for their students and organization in the face of the challenges and opportunities in higher education today and the skills needed for successful advocacy. Topics include the use of argumentation, data, and presentation skills to develop and effectively present cases for support at local, state, and federal levels. Discussion also covers the world of community college fund-raising and the potential of entrepreneurial ventures to help close the funding gap. Focus is on developing the skills to advocate and find support for equity and student success.

DMCC 890 Dissertation Part I (4)

The identification and refinement of the dissertation topic. Focus is on identifying research questions relevant to the chosen topic, conducting a review of the literature on that topic, and developing a conceptual model and associated hypotheses.

DMCC 892 Dissertation Part III (4)

A discussion of the future impact of the dissertation research on the management of organizations. The chosen area of specialty is examined more broadly in the context of such organizational issues as innovation, sustainable development, information assurance, and enterprise continuity.

DMGT (Doctoral Studies in Management)

DMGT 600 Foundations of Doctoral Study (3)

An introduction to doctoral studies in management at UMUC. Topics include the purpose and context of the DM program; research methods used in the review of scholarship on evidence-based management; and management, leadership, change, and organizational theory. Focus is on demonstrating skills in critical thinking and writing at a doctoral level. Degree requirements and the dissertation process are also discussed.

DMGT 800 Foundations of Management Theory (6)

A comprehensive foundation in the history of management and the structure and function of organizations. A new way of understanding and managing operational and strategic issues in public and private organizations in the face of accelerating social, economic, and technological changes is provided. Topics include organizational theory, strategic thinking and strategic management, theories of decision making, leadership, organizational culture, and management in a postindustrial society. Problem-solving, application, and evaluation skills are used to analyze the theories and practices of current and emerging organizational challenges and opportunities. The goal is to be able to critically assess the ideas of others and defend one's own ideas through the application of scholarship.

DMGT 810 Leadership and Change (6)

A study of leadership—not just for survival but for sustainability—in environments where external pressure for change is the dominant feature. Discussion examines change and leadership issues in varied industries, as well as one's own organization, by identifying and analyzing theories and concepts, assessing the applicability of classic works and current perspectives, testing ideas using case studies, and developing various scenarios and strategies. Topics include the knowledge and abilities needed for managing change, such as improvisation and reinvention; the roles and skills needed at all levels for leading in new organizational models involving virtual teams; and the impact of change (particularly frequent change) on individuals and organizations. The goal is to recognize the link between leadership, change, and organizational resilience and apply the lessons.

DMGT 820 International Finance and Global Operation (6)

An examination of four perspectives on strategic management within an international and global context: strategy and the competencies that are required for managers to function effectively, trade and financial issues, the political and legal context of decision making when many nation states are in play, and issues arising from cultural differences and their effect on the management of firms operating transnationally. Topics include the economic and financial forces affecting the organization in its internal and external environment and appropriate responses to these forces in a global context. Discussion also covers the forces and values shaping these four perspectives in terms of the firm and its industry and how these forces and values may shape the working strategy of a particular firm viewed globally and within the context of an assigned country.

DMGT 830 Research Methods I (6)

An introduction to doctoral-level research methods. Emphasis is on understanding the collection and the reporting of statistics, both of which are necessary for the appropriate conduct of evidence-based research. Topics include hypothesis testing for mean differences and relationships, analysis of variance, measures of association, regression, and decision analysis. Qualitative research approaches, such as narrative analysis, are also discussed. Assignments include statistical problem sets and short methodological analyses of published research studies.

DMGT 835 Research Methods II (6)

A study of systematic review (i.e., research synthesis) as an evidence-based research method. Study is based on the premise that evidence-based decision making is an effective management practice. The steps of systematic review are explored. Discussion covers search strategies, information management, inclusion/exclusion, data extraction and coding, synthesis models, and discussion. Practice in systematic review is provided via small-scale article analyses and syntheses. Assignments also include a written description of research methods similar to that found in dissertations.

COURSE DESCRIPTIONS

DMGT 845 Organizational Environments in a Global Context (6)

An examination of how theoretical explanations of an organization's environment clarify its external relationships, strategies, and management practices. Topics include cultural dimensions, technological factors, and governmental and regulatory influences on the organization. Interorganizational relationships, networks and signals in organizational environments, and global management strategies are examined from a theoretical perspective. Discussion also covers emerging markets and global entrepreneurship, alliances, sustainability, and management competencies for global organizations. Assignments include the development of a journal-quality paper.

DMGT 850 Innovation Process and Strategy (6)

An exploration of theories and applications of innovation in areas such as corporate strategy, new product development, management process improvement, and corporate entrepreneurship. Innovation diffusion and adoption, creative roles and process stages of innovation implementation, and ways in which business models are shaped by innovation opportunity are examined from a theoretical perspective. Discussion covers how innovation serves strategy, corporate entrepreneurship, and best management practices. Assignments include the development of a journal-quality paper.

DMGT 860 Postdoctoral Seminar and Practicum in Teaching (3)

(Open to UMUC Doctor of Management graduates and to graduates of other terminal degree programs by permission. Designed for those interested in teaching at the college level.) An interactive study and application of fundamental theories, concepts, methods, and strategies for successfully teaching adult learners in postsecondary classrooms, both online and on-site. Focus is on weaving discipline content with teaching methods that support learning in a discipline. Activities include observing classes, applying model practices, and designing and implementing course components.

DMGT 890 Dissertation Part I (4)

The identification and refinement of the dissertation topic. Focus is on identifying research questions relevant to the chosen topic, conducting a review of the literature on that topic, and developing a conceptual model and associated hypotheses.

DMGT 891 Dissertation Part II (4)

The selection of the dissertation's research methodology to evaluate the conceptual model and hypotheses. Focus is on identifying appropriate sources of data, collecting and analyzing the data in the context of the chosen methodology, and drawing conclusions regarding the conceptual model and associated hypotheses.

DMGT 892 Dissertation Part III (4)

A discussion of the future impact of the dissertation research on the management of organizations. The chosen area of specialty is examined more broadly in the context of such organizational issues as innovation, sustainable development, information assurance, and enterprise continuity.

DMGT 899 Continuing Registration (1)

Continuing refinement of the dissertation to prepare for final submission and defense.

EDTC (Education: Instructional Technology)

EDTC 600 Foundations of Technology in Teaching and Learning (3)

An introduction to the integration of technology in the schools focusing on how instructional technology affects and advances K–12 learning. Topics include principles of integrating technology to strengthen standards-based curricula, instruction, and assessment; selection of software and other technological materials; uses of technology for collaboration with school-related audiences; issues of digital equity and ethics; and strategies for using digital technology with special needs populations.

EDTC 605 Teaching Information and Media Literacies in the Digital World (3)

Prerequisite or corequisite: EDTC 600 or OMED 600. A study of the expanding types of literacies required for teaching and learning in the K–12 schools, with a concentration on digital information and media literacies. Analysis of core information literacy skills serves as the foundation for a discussion of the effects of current and emerging media on the evaluation and creation of knowledge. Topics include the effective use of online databases and search engines to access information and media resources; application of the research process; information and media literacy skills needed for reading and navigating the web environment and creating new content; options for age-appropriate, subject-specific research assignments that involve K–12 students in project-based learning; and issues related to ethical uses of information and digital citizenship across literacies.

EDTC 610 Web-Based Teaching and Learning: Design and Pedagogy (3)

Prerequisite: EDTC 600. Prerequisite or corequisite: EDTC 605 or OMED 610. An examination of the theory that informs web-based education and the implementation of best pedagogical practices. Challenges related to the original design and/or adaptation of effective web-based instruction are explored. Focus is on developing the knowledge and skills to create multiple types of web-based assignments and units for K–12 students using web authoring software. Topics also include constructing evaluation tools to assess K–12 student learning outcomes across different content areas and grade levels. Strategies for effective online group collaboration are discussed and implemented.

EDTC 615 Using Technology for Instructional Improvement: Research, Data, and Best Practices (3)

Prerequisite: EDTC 605. Prerequisite or corequisite: EDTC 610. An overview of systematic planning, development, and evaluation of media-rich classroom instruction. Research and assessment data are analyzed for use in promoting student learning and technology integration. Topics include the collection, summary, analysis, and application of assessment data to classroom improvement, as well as techniques for organizing and participating in a grade-level or school-wide collaborative team.

EDTC 620 Technology in K–12 Education: Synchronous, Asynchronous, and Multimedia Technologies (3)

Prerequisite: EDTC 610. Prerequisite or corequisite: EDTC 615 or OMED 640. A study of various technologies that assist teachers in strengthening content delivery and K–12 student learning. Focus is on designing and developing instructionally effective visual materials and multimedia for incorporation into the classroom. Examples include presentations, graphics, and a classroom website with instructional and administrative components. Knowledge and skills are also developed in the educational applications of real-time technologies that enable video- and audioconferencing in classrooms and schools.

EDTC 625 Hardware and Software in Instructional Development (3)

Prerequisite: EDTC 615. Prerequisite or corequisite: EDTC 620 or OMED 630. A study of the application of hardware and software programs in K–12 classroom and school settings. Various operating systems and network issues commonly found in schools are examined. Topics include a wide range of instructional software packages related to specific subjects and grade levels, assistive technologies appropriate for different student needs, and free web 2.0 tools for classroom instruction and professional growth. Discussion also covers hardware and software choices compatible with curricular goals and troubleshooting strategies—both technical and instructional—for teachers and students. Research on specific hardware and software is analyzed. Emerging technology-enabled curricular innovations are also examined.

EDTC 630 Administration of Technology Initiatives: Planning, Budgeting, and Evaluation (3)

Prerequisite: EDTC 620. Prerequisite or corequisite: EDTC 625. An overview of the administration of technology in K–12 school systems. The impact of technology in schools is explored from a variety of perspectives, including access, planning, budgeting, maintenance, and life cycle management at the classroom, school, and district levels. Criteria for making financial and instructional decisions about technology are developed and evaluated. Emphasis is on knowledge and skills (such as grant writing and public-/private-sector partnerships) that teachers can use to acquire classroom technology.

EDTC 640 Leading Technology Change in Schools (3)

Prerequisite: EDTC 625. Prerequisite or corequisite: EDTC 630. An overview of the theories, approaches, and strategies that help teachers assume leadership roles in implementing technology change in K–12 schools. Topics include the role of change agents in K–12 schools, strategies to meet the needs of technologically unskilled teachers, tools and techniques to respond to diverse competency levels, and various training models and approaches for adult learners. Structured observation is employed to critically assess the effectiveness of various technology training formats. In a guided project, a technology-training seminar is designed, developed, and implemented for delivery to colleagues.

COURSE DESCRIPTIONS

EDTC 645 Integration of Technology: Global Perspectives (3)

Prerequisite: EDTC 630. Prerequisite or corequisite: EDTC 640. An exploration of global perspectives on advancing K–12 student learning through technology. Investigation covers how schools design innovative units and programs that take full advantage of technology's ability to reach beyond national borders and promote global understanding and how various nations approach the challenge of technology integration in schools. Focus is on evaluating best practices in the United States and other nations and on analyzing the role of policy in shaping the way resources are deployed to advance effective technology integration. Major projects include designing models for integrating global understanding into curriculum and instruction, developing case studies of technology integration in various countries, and evaluating relevant research.

EDTC 650 Teaching and Learning in K–12 Virtual Schools (3)

Prerequisite: EDTC 640 or DETC 620. An introduction to K–12 distance education, including the policies and structures of K–12 virtual schools, teaching and course development strategies appropriate for K–12 online courses, and current issues involved in the K–12 virtual enterprise. Emphasis is on K–12 schools that offer courses over the Internet. Discussion covers principles that apply to other forms of K–12 distance education, such as television and correspondence courses. Topics include different models of current K–12 virtual schools; district, state, and national regulations governing these schools; role of parental involvement and student support systems; social and collaborative aspects of learning at a distance; and training and mentoring of online K–12 teachers. Trends in international K–12 virtual schools are compared with those in the United States. The effectiveness of virtual schools and courses at the elementary and secondary school levels is explored.

EDTC 670 Integrative Capstone Project (3)

(Recommended as the final course in the MEd program.) Prerequisites: First nine courses in the program. A self-directed project, in which teachers collaborate with colleagues within or across grade levels or departments to incorporate innovations into their curricula. A portfolio is built to demonstrate the development, implementation, and outcomes of the project. Study is designed to provide teachers the opportunity to apply knowledge and skills gained from previous coursework.

EDTP (Education—Teacher Preparation)

EDTP 600 Foundations of Teaching for Learning (6)

Preparation for effective entry into the classroom as a teacher. Topics include teaching in the contemporary school; human development; approaches to learning, diversity, and collaboration beyond the classroom; learners with exceptional needs; curriculum, instruction, and assessment; teaching in the content area; and synthesis and application. Course materials and assignments focus on documents created and/or typically utilized by school systems and incorporate current school district initiatives. School district personnel may participate as guests.

EDTP 635 Adolescent Development and Learning Needs (6)

Preparation to support the unique development of adolescents from various backgrounds, with varying beliefs and abilities. Learners are examined from the standpoint of developmental characteristics; social, cultural, racial, and gender affiliation; socioeconomic status; religious influences; learning styles; special needs; and exceptional-ity. Adolescents are also examined from biological, psychological, cognitive, and social perspectives; within the tapestry of their family and community; and through the influences of societal and cultural norms. Discussion covers theories and concepts associated with human growth and development across the lifespan, focusing on the typical and atypical development of the adolescent.

EDTP 639 Reading and Multiple Literacies (6)

(Formerly EDRS 610.) Prerequisites: EDTP 600 and 635. A study of the essentials of literacy for middle and high school classrooms, including design principles for guided inquiry, self-directed learning, collaboration, and effective use of media to meet the needs of diverse learners in the 21st century. Discussion covers purposes and types of reading; assessment; cognitive strategies in reading; reading strategy instruction for constructing meaning from text; and intrinsic and extrinsic motivational strategies. Topics include essential competencies for teaching and learning content area reading and the new literacies and for applying and adapting them to diverse learners and learners with exceptionalities. Competencies developed include use of evidence-based instructional strategies, formative and summative assessment, critical thinking, technology as a tool for learning, and literate environments. Focus is on the importance of research, collaboration, and self-assessment for the professional development of teachers.

EDTP 645 Subject Methods and Assessment (6)

Prerequisites: EDTP 600 and 635. An introduction to instructional strategies and curriculum for teaching secondary content that emphasizes effective instruction based on understanding assessment and how assessment informs effective instruction. Topics include development of comprehensive assessment strategies and their interrelationships with creation of learning objectives, selection of instructional techniques, and preparation of instructional plans. Current trends in secondary school structures, issues of traditional and authentic assessments, and teacher effect on student achievement are explored. Focus is on meeting individual needs and using content knowledge to inform instructional practice by drawing on knowledge gained through previous study and knowledge bases that reflect current research and best practices in secondary content areas.

EDTP 650 Professional Internship and Seminar (6)

Prerequisites: EDTP 645 and either EDRS 610 or EDTP 639. An opportunity to apply the concepts, techniques, methods, and theories learned in previous coursework and field-based experiences through a professional internship. Internship activities require completing observations, activities, and clinical practice in an approved secondary classroom appropriate for the selected content area certification, under the supervision of a school-based mentor/teacher and a university field supervisor. An ongoing seminar establishes a learning community that assures a continuing support system and provides a forum for feedback and discussion of common readings, experiences, questions, and issues. An electronic portfolio is completed.

EMAN (Emergency Management)

EMAN 600 Comprehensive Crisis and Emergency Management (3)

An analysis of all hazards, phases (mitigation, preparedness, response, and recovery), and actors involved in crisis and emergency management. Discussion covers the definition of crises, emergencies, and disasters and concepts and issues in crisis and emergency management. Focus is on developing crisis, contingency, and incident management plans. Current frameworks, management systems, and command systems for organizing a response, deploying resources, managing the response organization, supporting crisis communication, and making decisions in a turbulent environment are examined. Topics are discussed from U.S. and international perspectives.

EMAN 610 Hazard Risk and Vulnerability Assessment (3)

An examination of risk, hazard, and vulnerability. Topics include systematic hazard risk assessment, risk mitigation (reduction), risk transfer, and risk analysis. Discussion covers contemporary approaches to risk assessment and management of naturally or technologically induced hazards. Environmental hazard assessment is also examined. Seminal works published in the area are reviewed.

EMAN 620 Information Technology in Emergency Management (3)

An overview of the role of information in crisis and response management. Discussion covers disaster and crisis information requirements; information technologies and decision support tools applied to crisis, disaster, and emergency management; and information problems encountered during emergencies. Tools used include the global positioning system (GPS), geographical information systems (GIS), computer hardware, and hazard and emergency management-related software packages, as well as decision analysis methods. Assignments include practical case studies.

EMAN 630 Crisis Communication for Emergency Managers (3)

An exploration of current strategies and tactics for managing the range of communication responsibilities and issues that arise during a variety of crisis situations. Traditional and new media methods for analyzing crisis and communications management issues (including the use of current technologies) are applied using relevant public relations research, theory, and case examples. A strategic approach is used to better identify issues, goals, stakeholders, messaging, and other aspects involved in developing community-specific public responses to crisis situations.

EMAN 670 Seminar in Emergency Management Leadership (3)

An examination of the role, mission, and functional skills of the emergency manager that compares and contrasts current aspects with evolving trends. Factors that affect successful leadership in emergency management—such as managing crises, disasters, and emergencies through discussion of key issues and analysis of selected case studies—are explored. Discussion covers the evolving multidisciplinary nature of the emergency manager's job and characteristics and leadership styles most effective in emergency management. Summary reviews of various theories, models, historical examples, and practical applications are used to reflect the central activities of emergency managers and gain a better perspective on the emergency manager's job. Topics include planning, risk assessment, crisis communications, organizational and operational issues, problem solving, overcoming bureaucratic barriers to effective performance, promoting a culture of disaster prevention and preparedness, advising on business continuity strategies, acquiring resources, staff training, and emergency exercises. Ethics and legal issues in emergency management, the procurement of facilities, staff management, and controversies are also examined.

COURSE DESCRIPTIONS

ENVM (Environmental and Waste Management)

ENVM 641 Environmental Auditing (3)

An examination of methods for attaining statutory, regulatory, and permit compliance. The protection of workers and other stakeholders is also examined in the context of organizational, budgetary, and other constraints. Emphasis is on methods of defining auditing objectives to meet organizational goals and of designing auditing programs for effective compliance under each of the 12 major environmental statutes—including air, water, solid, and hazardous waste management laws and pollution prevention initiatives.

ENVM 643 Environmental Communications and Reporting (3)

An overview of the range of communication practices required for environmental managers in the fulfillment of legal, regulatory, ethical, and organizational responsibilities. The various populations with whom environmental managers must communicate and interact—including plant supervisors, corporate executives, regulators, the legal community, civic groups, labor unions, and the media—are identified and examined. Discussion covers various types of communication, from decision memoranda to environmental impact statements, presentations of corporate environmental policies before affected communities, and development/conveyance of technical evidence for obtaining permit variances.

ENVM 644 New Technologies in Environmental Management (3)

An overview of new waste management and waste minimization technologies, including physical and chemical treatment of hazardous wastes, bioreactors and bioremediation, and reverse osmosis and ultrafiltration. Review covers disposal technologies, such as landfill design and operation, incineration, and encapsulation methods. Pollution prevention technologies, including process redesign and computer-aided process control, as well as the substitution of toxic materials, are also presented.

ENVM 646 Environmental/Energy Law and Policy Development (3)

An examination of U.S. environmental and energy law and policy, including its development, implementation, and enforcement; legislative, executive, and judicial perspectives; and the roles and impact these government institutions have made on environmental and energy law and policy. Leading laws, such as the National Environmental Policy Act, the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the 1992 National Energy Policy Act, the FDR-era Federal Policy Act, the Public Utility Holding Company Act, and the Carter-era Public Utility Regulatory Policy Act and their ensuing policies are examined.

ENVM 647 Environmental Risk Assessment (3)

An overview of the basic concepts of risk assessment. Topics include the four core parts of a risk assessment, as denoted by the National Academy of Sciences: hazard assessment, dose-response assessment, exposure assessment, and risk characterization. Methods of measurement and modeling, as well as key questions concerning uncertainty, are discussed. Differences in the risk characterizations of substances under different use conditions and legal requirements are studied. Significant case studies serve to illustrate the assessment process.

ENVM 648 Fundamentals of Environmental Systems (3)

(For students lacking a strong science background or experience in the environmental field.) An introduction to the basic concepts of environmental chemistry, physics, geology, and risk. Topics include the gaseous, liquid, and solid effluents from various industrial activities, as well as management methods and the statutory and regulatory requirements of major federal environmental laws affecting this management. Discussion also covers fundamental principles relating to the transport and fate of contaminants and industrial wastes and the basic vocabulary of the field.

ENVM 649 Principles of Waste Management and Pollution Control (3)

An introduction to various methods of waste management, including waste collection, transportation, recycling, treatment, and disposal and environmental monitoring. Focus is on hazardous and municipal solid waste, pollution prevention techniques, and waste minimization. An introduction to the process of disposal-facility site selection, design, and operation is also provided.

ENVM 650 Environmental and Natural Resources Economics (3)

An introduction to microeconomic principles as they relate to the efficient use of environmental resources and their impact on local, national, and global environmental policies. Topics include an overview of microeconomic principles and economic efficiencies, market failures, externalities, property rights, pollution damage and abatement costs, benefit and cost analysis, valuation methods, environmental policy analysis, federal control policies, and international issues.

ENVM 651 Watershed Planning Management (3)

An introduction to the concepts of watershed management and the development of watershed-related management planning documents. The physical characteristics of watersheds and their role in maintaining healthy environments and providing a natural resource to society are examined. Focus is on examining management techniques for the conservation and maintenance of watersheds.

ENVM 652 Principles of Air Quality Management (3)

An overview of management techniques for addressing air quality issues and managing air quality programs. Topics include air pollution law; air pollutants and their sources; effects of air pollution on health and welfare; sampling and analysis of air pollutants; standards, regulations, and enforcement systems; and quality assurance principles.

ENVM 653 Land Use Management (3)

An introduction to the powers, process, and practice of managing the patterns and land use implications of human settlement and the built environment. Discussion covers where to build, where not to build, how to build, and when to build. Topics also include the settlement history of the United States, as well as the constitutional and legislative mandates for government, private-sector participants, and institutions that shape land use policy. Emphasis is on the role of local government. Land use and environmental community planning, as well as best practices in land use management, are examined.

ENVM 670 Seminar in Environmental Management (3)

Prerequisite: Completion of 27 credits of program coursework. A capstone study of environmental management that integrates knowledge gained in previous study for the solution of environmental management problems encountered in industrial, commercial, institutional, and military organizations. Focus is on management guidelines, such as ISO 14001, that provide an organizational framework for developing an environmental management system that can be integrated with other management requirements to help organizations support environmental protection in balance with socioeconomic goals. Case studies are used to illustrate applications of environmental management systems to various types of organizations. The capstone project requires assessment of the efficiency and effectiveness of an environmental management system at an organization and the development of recommendations for improvement.

FIN (Financial Management)

FIN 610 Financial Management in Organizations (3)

(For students in an accounting or financial management specialization or program.) Prerequisite: MGMT 640. An investigation of financial management theory and applications in organizations. Discounted cash flow and rate-of-return analysis are used to evaluate projects and financial instruments. Discussion covers the role of the cost of capital and the capital asset pricing model (CAPM) in capital investment analysis and selection. Capital budgeting, stock and bond valuation, break-even analysis, capital market efficiency, real options, short-term financial management, and international finance are introduced.

FIN 615 Financial Analysis and Modeling (3)

Prerequisite: FIN 610. An exploration of how financial managers use financial modeling, analysis, and research to build forecasts and projections, evaluate financial alternatives, and support financial decision making in both operational and strategic contexts. Models are developed using Microsoft Excel; exercises and extended case studies are utilized to interpret and employ results. Topics include financial statements and ratio analysis, cash flow forecasting, operations budgeting, breakeven and leverage analysis, time value of money applications, and capital budgeting and risk assessment.

FIN 620 Long-Term Financial Management (3)

Prerequisite: FIN 610. An exploration of the long-term financial needs of an organization and the roles of the capital markets. Topics include the financial environment of organizations, options and futures instruments, long-term financing, the capital budgeting decision process, capital structure management, dividend and share repurchase policy, and investment banking and restructuring. Various types of long-term funding sources—including term loans, derivatives, debt and equity securities, and leasing—are analyzed. Alternate policies with regard to financial leverage, capital structure, dividends, and the issuance of preferred stock are evaluated. Mergers, leveraged buyouts, and divestitures are examined as special situations to create value.

FIN 630 Investment Valuation (3)

Prerequisite: FIN 610. An in-depth exploration and application of valuation models to support managerial decision making in a strategic framework. The theory, concepts, and principles underlying the valuation of firms, business/product lines, and mergers and acquisitions are addressed using extended exercises and applications. The discounted cash flow model is used as a tool. Discussion covers the financial drivers of value, including assessing and determining risk, competitive advantage period, and sales and earnings growth estimates. Other valuation techniques using earnings, revenues, and price/earnings multiples are also discussed and applied in selected examples.

FIN 640 Multinational Financial Management (3)

Prerequisite: FIN 610. A study of financial management issues in multinational organizations. Topics include the environment of international financial management, foreign exchange markets, risk management, multinational working capital management, and foreign investment analysis. The financing of foreign operations, international banking, and the role of financial management in maintaining global competitiveness are also considered.

COURSE DESCRIPTIONS

FIN 645 Behavioral Finance (3)

Prerequisite: FIN 630. A study of the key psychological obstacles to value-maximizing behavior and steps that managers can take to mitigate their effects, using the traditional tools of corporate finance. Focus is on understanding the underlying factors and processes that result in nonoptimal decision making by financial managers. Topics include perceptions about risk and reward and financial decision making in the areas of investing, trading, valuation, capital budgeting, capital structure, dividend policy, agency conflicts, corporate governance, and mergers and acquisitions. The key role played by emotions and recent findings from neuroscience are explored.

FIN 660 Strategic Financial Management (3)

Prerequisites: FIN 620 and 630. An integrative study of financial management through applied problems and case studies. Topics reflect the changing environment of financial management in organizations and include capital investment decision making, the role of intangibles in value creation, financial performance metrics, strategic financial planning and control, strategic valuation decisions, growth strategies for increasing value, the restructuring of financial processes, corporate governance and ethics, value-based management, strategic cost management, and the impact of information technology on the organization's financial systems. A finance simulation is used as an integrating mechanism.

GHCA (Health Care Administration—Global)

GHCA 635 Global Challenges in Women's and Children's Health (3)

A comprehensive multidisciplinary examination of the complex issues related to women's and children's health across the globe, based on the World Health Organization's 2007 Framework for Action for strengthening health systems and the United Nation's Millennium Development Goals and Universal Declaration of Human Rights. Topics include biological and medical issues, reproductive health, violence against women and children and its impact on health, infectious and chronic disease, and the relationship of environmental and social issues to health. Analysis also covers current national, regional, and global trends; program and policy responses to these trends; and prospects for the future.

HCAD (Health Care Administration)

HCAD 600 Introduction to Health Care Administration (3)

An introduction to the principles of management and leadership as the foundations for the administration of health care products and service delivery. The evolution of management principles and practices are traced, and the bases for health care administration are analyzed. Emphasis is on the management of global health care systems in technological societies and the need for innovation and creativity in health care administration. Focus is on mastering graduate-level critical thinking, writing, and ethical decision-making skills.

HCAD 610 Information Technology for Health Care Administration (3)

An overview of the management perspective of information technology (IT) and how health care administrators can use IT to maximize organizational performance. Fundamental principles of IT and data management and their implications for health care administrators are reviewed. Discussion explores the use of technology, databases, and other analytical tools to structure, analyze, and present information related to health care management and problem solving. Topics also include strategic information systems planning, analysis, design, evaluation, and selection. Current applications, such as patient care, administrative and strategic decision support, managed health, health information networks, and the Internet are examined to determine how they may be used to meet the challenges facing health care administrators today and in the future. Focus is on the legal and ethical issues related to IT and their practical implications for the health care administrator.

HCAD 620 The U.S. Health Care System (3)

A comprehensive examination of the complex, dynamic, rapidly changing health care system in the United States. The health care system's major components and their characteristics are identified. Emphasis is on current problems in health care financing and delivery. Social, economic, and political forces that have shaped and continue to influence the system are traced. The health care system in the United States is compared with systems in industrialized and developing nations. Analysis covers current trends in health care and prospects for the future.

HCAD 630 Public Health Administration (3)

An in-depth study of the field of public health, emphasizing leadership and management. The current U.S. public health system is analyzed, focusing on federal, state, and local public health entities and their management issues. Connections and relationships between the system of public health and the private personal health services market are also analyzed. Topics include the history and current status of public health, core functions, legislation, ethics, accountability (including assessment and evaluation), and the politics and financing of public health, particularly in light of the increased utilization of evidence-based budgeting. Contact with a public health agency to analyze a public health program or policy may augment text and lecture presentation.

HCAD 635 Long-Term Care Administration (3)

A study of the different components of the long-term-care service delivery system. Topics include residential settings (such as skilled nursing facilities, assisted living facilities, and continuing care retirement communities), home care services, community-based service programs, and hospice care. The goal is to apply contemporary management theories, concepts, and models to the entities that make up the long-term-care service delivery system. Specialized case studies are used to supplement course materials and examine best practices for fostering performance excellence.

HCAD 640 Financial Management for Health Care Organizations (3)

Prerequisite: MGMT 640. An in-depth study of health care economics and the financial management of health care organizations. The economic principles underlying the American health care market and the financial management of health services organizations within that market are examined. Analysis covers free market and mixed market economies; barriers to free market economies; health care industry regulation, licensure, and certification; and various coverage and health care payment mechanisms. Topics also include reimbursement mechanisms and their effect on health care provider organizations, managed care, capitation, and per case or per diagnosis payment, as well as how these financial strategies are utilized by third-party payers. Focus is on financial challenges—such as uncompensated care, cost increases, increased competition, and increased regulation—and how health care providers should respond to them. Ratio analysis, cost analysis, working capital, capital budgeting and investment in relation to net present value and value added to the organization, and other financial management techniques are also discussed.

HCAD 650 Legal Aspects of Health Care Administration (3)

A comprehensive analysis of the more significant legal issues encountered by health care administrators and the ramifications of those issues. Both theoretical and practical applications of law are addressed with an analytical focus on the prompt identification of legal and bioethical issues arising from and affecting various health care employment settings. The intersection of law, ethics, and bioethics is scrutinized in various contexts. The principles of health care law in a complex constitutional system are examined in relation to current proposals and policy developments in areas such as privacy, contracts, tort reform, and the regulation of the health care marketplace. Topics include legal and regulatory constraints imposed on the health care industry, the liability of health care providers, the rights of patients, employment law and labor relations, and administrative law for health care organizations.

HCAD 660 Health Care Institutional Organization and Management (3)

A study of the nature of management and how it is applied in various health care settings. Contemporary theories, critical perspectives, models, and best practices designed to foster performance excellence in the highly competitive health care environment are examined. Discussion also addresses the complexities and challenges of health systems.

HCAD 670 Health Care Administration Capstone (3)

Prerequisite: Completion of 30 credits of program coursework. A capstone study of health care administration that integrates knowledge and skills gained from previous study in the development of a systems approach to health care administration. Focus is on public and private health care delivery systems, alliances with internal and external environments, and strategic decision making and implementation in the rapidly evolving global arena of health care administration.

HIMS (Health Informatics Administration)

HIMS 650 Research Methods for Health Care Managers (3)

(Formerly HAIN 650.) An examination of how managers organize, analyze, and interpret health data for decision making. Focus is on developing skills in using statistical tools to make effective business decisions in all areas of public- and private-sector health care decision making, including accounting, finance, clinical practice, public health, marketing, production management, and human resource management. Topics include collecting data; describing, sampling, and presenting data; probability; statistical inference; regression analysis; forecasting; and risk analysis. Microsoft Excel is used extensively for organizing, analyzing, and presenting data.

COURSE DESCRIPTIONS

HIMS 655 Health Data Management (3)

(Formerly HAIN 655.) An examination of how data helps in attaining organizational goals by optimizing the effectiveness and quality of health care. Topics include the challenges and opportunities for applying health informatics to different health care services, the analysis of relevant data sources, the mapping of data terminologies and data structures, data architecture, and the development of related policies and procedures. Discussion also covers the importance of data stewardship, knowledge management, and analysis of data for evidence-based practices. Technology and management principles are applied to health informatics issues and the administration of health informatics projects.

HIMS 661 The Application of Information Technology in Health Care Administration (3)

(Formerly HAIN 661.) Prerequisite: HIMS 655 or HAIN 655. An integrative study of the information technology (IT) used in all facets of health care administration. Emphasis is on the management, synthesis, and transformation of information for tactical and strategic decision making throughout the health care enterprise. Topics include strategic information for systems planning, grant and contract development, e-health and electronic medical records, IT deployment and adoption, data security and data interoperability, privacy, confidentiality, information management planning, and legal and ethical issues related to IT and their implications on practice for the health care administrator. Evolving industry, government, and global initiatives and policies are applied in the practice of health care administration.

HIMS 670 Health Administration Informatics Capstone (3)

(Formerly HAIN 670.) Prerequisite: Completion of 30 credits of program coursework. Creation of a written capstone project that integrates the fields of health care administration and informatics and applies them to the delivery of health care services. Key elements are examined from the perspectives of both health care administration and informatics. These include informatics issues and challenges in U.S. and global health care systems, potential new health care delivery models, approaches to strategically shaping local and national informatics policy, and the role of information technology (IT) in supporting the full continuum of care in health organizations. Tools and methods for strategic planning, implementing, using, and evaluating the efficacy of IT systems are explored.

HRMD (Human Resource Management and Development)

HRMD 610 Issues and Practices in Human Resource Management (3)

(Strongly recommended as the first course in the human resources management specialization.) An overview of the human resource management profession, including the theories, research, and issues related to human resource management within modern organizations. The roles, responsibilities, relationships, functions, and processes of human resource management are discussed from a systems perspective. Expectations of various stakeholders, such as government, employees, labor organizations, staff/line management, and executive management, are explored. Particular attention is given to the general legal principles and provisions that govern human resource activities. The specialty areas of employee relations, staffing, human resource development, compensation, and organizational development are described. Current topics, such as human resource information systems and globalization, are addressed.

HRMD 620 Employee and Labor Relations (3)

An investigation of the rights and responsibilities of employees and organizations in union and nonunion environments in the United States. The federal legal framework for collective bargaining is reviewed. Topics include common employment contract trends, topics, and issues, as well as all phases of unionization, from organizing through contract maintenance. Emphasis is on conflict management, negotiation, and alternate dispute resolution.

HRMD 630 Recruitment and Selection (3)

An examination of the initial phases of staffing, focusing on the hiring process. The contemporary roles, relationships, and processes of recruitment and selection in the human resource management system are investigated. Emphasis is on productivity factors (such as the use of technology) and quality factors (such as legal, ethical, and validity issues). Topics include international and domestic concerns and consideration of multiple staffing levels (such as executive managers and temporary employees). Current issues in private, not-for-profit, and/or public sectors are discussed.

HRMD 640 Job Analysis, Assessment, and Compensation (3)

A study of the interrelated aspects of human resource management, including job design, job analysis, job evaluation, employee compensation, incentives to productivity, employee motivation, and performance appraisal. Various approaches for analyzing, weighing, and specifying the detailed elements of positions within modern organizations are presented. Discussion covers techniques for identifying and classifying the critical components of a job, defining the observable standards and measures, preparing and determining the job description and job worth, establishing equitable compensation for job performance, and developing an executive compensation program. The interaction of compensation, worker motivation, performance appraisal, and level of worker performance within the organization is examined.

HRMD 650 Organizational Development and Change (3)

A study of the issues, theories, and methodologies associated with organizational development and the management of change, with an emphasis on organizational culture and organizational change processes. Topics include the diagnostic process, intervention strategies, and overcoming resistance to change. Techniques such as goal setting, team-development procedures, productivity and strategy interventions, and interpersonal-change models are examined.

HRMD 651 Current Perspectives in Training and Development (3)

An examination of the theories, research, skills, and issues related to one major aspect of human resource development, the management of organizational training services. The role of training in the workplace and adult learning models are investigated. Topics include curriculum management, program development, and operations management with an emphasis on design and delivery issues. The impact of technology, the global environment, and modern organizational structures are considered. Ethical issues are also discussed. Assignments include the development of training proposals or programs.

HRMD 665 Managing Virtual and Global Teams (3)

(Not open to students who have completed HRMD 621, HRMD 652, or HRMD 660.) An investigation of the foundations of team development and performance from a human resource management and organizational behavior perspective. Focus is on maximizing the effectiveness and efficiency of global and virtual teams in organizations. Topics include the impact of global diversity and use of technology on intergroup development, communication, and outcomes. Scholarly research and field literature are examined and the implications of the findings for applied management are discussed.

HSMN (Homeland Security Management)

HSMN 610 Concepts in Homeland Security (3)

An overview of the basic concepts of homeland security, including infrastructure protection, jurisdiction, and issues in technical areas such as interconnectivity and interoperability. The nation's telecommunications and information technology networks are examined as both vulnerable assets and critical solutions.

HSMN 620 Physical Security (3)

A comprehensive study of the many interdependent elements involved in protecting man-made structures from direct or indirect physical and cyber attacks. Various factors that affect physical security (including construction materials, architectural design, location, function, occupancy, and life cycle management) are examined. Accessibility, access control, traffic patterns, and internal and external communications are analyzed. Review covers methods for protecting critical infrastructure support systems, such as electric power, water supply, airflow, and information systems. Typical security policies and procedures for various categories of physical facilities (such as those involved in power generation, finance, and telecommunications) are also evaluated.

HSMN 625 Critical Infrastructures (3)

Prerequisite: HSMN 610. An introduction to critical infrastructure assurance as a policy field. Review covers the concept of critical infrastructures and their interdependencies. Topics include the development of modern critical infrastructures, the reasons why they have become central elements of 21st century societies, efforts being made to safeguard them, and potential threats to their continued effective operation.

HSMN 630 Resilience Planning and Preparedness for Disaster Response and Recovery (3)

An in-depth examination of managerial strategies for developing and maintaining resilience in communities, the private sector, and the nation in the face of man-made, natural, and technological disruptions or catastrophes. Emphasis is on the importance of advanced planning. Techniques for performing risk assessment and potential impact analysis and for selecting appropriate risk treatments are explored. Discussion covers preparing to handle adverse events, responding to them, and recovering from them. Resilience management is explored within the context of a life cycle that includes programmatic review and continuous improvement planning. Actual and hypothetical cases are analyzed.

COURSE DESCRIPTIONS

HSMN 640 Energy Infrastructure Security (3)

Prerequisite: HSMN 610. An in-depth exploration of the energy sector and homeland security. Discussion covers resources, critical infrastructure protection, and vulnerabilities. Topics include pipeline security, security of the electrical grid, cyber-dependence and SCADA (supervisory control and data acquisition) systems. Focus is on risk methodologies as applied to the energy industry. Energy is evaluated as a national security issue.

HSMN 670 Seminar in Homeland Security (3)

(To be taken during the last semester of the program.) Prerequisite: Completion of 24 credits of program coursework, including HSMN 610, 620, 630, and 640; INFA 660; and BSBD 641. An up-to-date evaluation of vulnerabilities and protective countermeasures regarding various aspects of the nation's critical infrastructure, with emphasis on the food and water supply. Topics include various threat profiles and actions by government, industry, independent institutions, and private citizens that might prevent attack from domestic or foreign sources and mitigate harmful consequences should such an attack occur. Discussion reviews the federal government's organization and management of food and water security and explores what further efforts might be made, building upon the nation's health system and engaging government at all levels. The singularly important roles of first responders are also analyzed.

IMAN (International Management)

IMAN 601 Strategic Management in a Global Environment (3)

A study of global strategic management that establishes a framework for analyzing the competitive structure of industries and country environments, ascertaining the direction of industry change, and formulating strategy within an international context. Theories of competition and competitive strategy, as well as methodologies for formulating strategy relevant to major commercial environments, are examined. Discussion covers organizational and functional issues, including transnational company structures; the roles of marketing, finance, trade, and technology innovation; and the public/private interface in the formulation of firm strategy.

IMAN 615 Strategic Investment and Partnering (3)

An in-depth examination of major entry strategies for international markets. Case-intensive analysis is used to gain insight into how to formulate strategy, negotiate and select partners, structure and manage business transactions, and identify legal implications over a range of market-entry vehicles. These vehicles include various types of strategic alliances—such as outsourcing; distributorship; green-field investment and acquisitions; technology transfer; and licensing, franchising, and joint ventures—between companies based in different countries.

IMAN 625 International Trade and Economic Policy (3)

An examination of the theory and conduct of international trade and international economic policy and their effect on multinational enterprises. Focus is on the knowledge and skills needed by enterprises of all sizes to function effectively within trading rules. Discussion covers trade and international economic theory, especially how national trade policies affect the trading system. Topics include changes in the Bretton Woods system, the General Agreement on Tariffs and Trade (GATT), and the World Trade Organization (WTO) as they evolved and the effects of those changes on national policy and international business. The effects of various multilateral and regional trade agreements and national systems of trade laws and remedies are analyzed.

IMAN 635 Managing Country Risk (3)

An overview of the tools needed to analyze the economic, political, and cultural risks of doing business in various international environments and to develop strategies for thriving in the midst of social change. Topics include stakeholder analysis, varying rules of market competition and intellectual property protection, ethical conflicts, corporate social responsibility, and the conduct of government relations.

IMAN 670 Managing Overseas Operations (3)

Prerequisite: Completion of 30 credits of program coursework (3 credits may be taken concurrently). An examination of a wide range of management problems facing both large and mid-sized enterprises as they manage overseas operations. The development of a full-scale business plan for operating in a foreign market enhances skills (such as analyzing markets, designing business functions, solving staffing and control issues, and developing a supportive financial plan and organizational structure) for integrating entry strategy with strategy implementation. Emphasis is on identifying the major challenges to implementing a global supply chain strategy and the approaches to overcome these challenges.

IMAT (Informatics)

IMAT 637 IT Acquisitions Management (3)

A study of management practices related to the acquisition of IT systems, components, and services. Emphasis is on the importance of enterprise strategic planning and the concomitant IT strategic planning. Issues related to the development of the IT acquisition plan, financial planning and budgeting, integration of the proposed acquisition within the overall goals of the enterprise, and related IT program management are examined in the context of overarching management challenges. Federal IT systems, contract and procurement policies, and procedures provide examples for analysis of concepts with wider relevance.

IMAT 639 Internet Multimedia Applications (3)

A study of multimedia presentations as essential, strategic components of an organization's competitive web presence. Established principles of software development, aesthetics of typography and layout, benchmarking, and usability engineering are used to analyze websites and write successful site development plans. Emphasis is on basic webpage design techniques. Topics include standards for representing common media formats, compression algorithms, file format translation tools, hardware requirements and standards, system constraints. Java, CGI scripts, and virtual reality. Assignments require building a portfolio of rich media content.

IMAT 670 Contemporary Topics in Informatics (3)

A capstone study of emerging and current technologies, as well as some eternal verities in IT management, that integrates and augments concepts previously studied. Topics vary and may include aligning IT with the strategic goals of the enterprise, leadership in IT, software psychology in the design of user interfaces, geographical information systems, building and managing Internet communities, technology to ameliorate the digital divide, managing an enterprise's IT portfolio, and the social impact of information policy decisions.

INFA (Information Assurance)

INFA 610 Foundations of Information Security and Assurance (3)

(Must be taken as the first course in the program.) An overview of techniques for ensuring and managing information security. Topics include administrative and technical security controls to prevent, detect, respond to, and recover from cyber attacks; risk and vulnerability analysis to select security controls; security planning; security architecture; security evaluation and assessment; and legal, ethical, and privacy aspects of information assurance. Discussion also covers information security fundamentals, such as cryptography, authentication, and access control techniques, and their use in network, operating system, database, and application layers. Security issues of current importance are stressed.

INFA 620 Network and Internet Security (3)

An introduction to the security concepts needed for the design, use, and implementation of secure voice and data communications networks, including the Internet. A brief review of networking technology and standards (including an introduction to Internet communication protocols) is provided. Security subjects addressed include defense models, security policy development, authentication and authorization controls, firewalls, packet filtering, virtual private networks (VPNs), and wireless network security. A project on network security in a hypothetical scenario based on inputs from government agencies and commercial organizations is assessed by a team of experts who are working in the field.

INFA 630 Intrusion Detection and Intrusion Prevention (3)

An exploration of the theory and implementation of intrusion detection and intrusion prevention. Topics include network-based, host-based, and hybrid intrusion detection; intrusion prevention; attack pattern identification; deployment; response; surveillance; damage assessment; data forensics; data mining; attack tracing; system recovery; and continuity of operation. A specific project on intrusion detection and intrusion prevention in a hypothetical scenario based on the inputs from government agencies and commercial organizations is assessed by a team of experts who are working in the field.

INFA 640 Cryptology and Data Protection (3)

An overview of the theory of encryption using symmetric and asymmetric keys, current protocols for exchanging secure data (including the Data Encryption Standard and the Advanced Encryption Standard), and secure communication techniques. A review of the historical development of cryptographic methods and cryptanalysis tools is provided. Public Key Infrastructure and the use of digital signatures and certificates for protecting and validating data are examined. Strategies for the physical protection of information assets are explored.

INFA 650 Computer Forensics (3)

An introduction to the collection and analysis of the digital evidence left behind in a digital crime scene. Topics include the identification, preservation, collection, examination, analysis, and presentation of evidence for prosecution purposes. Discussion also covers the laws and ethics related to computer forensics and challenges in computer forensics. Network forensics is briefly explored. A project on computer forensics or network forensics in a hypothetical scenario based on inputs from government agencies and commercial organizations is assessed by a team of experts who are working in the field.

INFA 660 The Law, Regulation, and Ethics of Information Assurance (3)

An overview of the legal, regulatory, and ethical issues related to cyberspace. Emphasis is on developing skills in spotting ethical and legal issues and navigating through the complex and changing legal and regulatory environment as it applies to behavior in cyberspace. Various resources and materials about the ethical and legal operation of modern computer systems, applications, and networks are presented.

INFA 670 Information Assurance Capstone (3)

Prerequisites: INFA 610, 620, 630, 640, 650, and 660 (3 credits may be taken concurrently). A study of information assurance that integrates and applies concepts previously studied. Best practices and appropriate technologies to design, implement, manage, evaluate, and further improve information security are explored. Emerging trends are analyzed to understand their potential effect on information security and assurance.

COURSE DESCRIPTIONS

INMS (Intelligence Management)

INMS 600 Managing Intelligence Activities (3)

An introduction to management issues associated with intelligence activities in national and homeland security, law enforcement, and the private sector. Intelligence is evaluated from the perspectives of its consumers in government and business. Topics include the historical issues that led to extensive oversight of intelligence agencies and laws restricting their activities. Discussion also covers recent changes in national intelligence and current issues, such as the debate over security versus civil liberties and how to protect America from foreign espionage and exploitation.

INMS 610 Intelligence Collection: Sources and Challenges (3)

A study of the management challenges related to collecting intelligence for national security, law enforcement, and business purposes through case study analysis and planning exercises. Various problems with human source intelligence; open source intelligence; signals intelligence; imagery; technical intelligence; and the military's intelligence, surveillance, and reconnaissance (ISR) approach are assessed. Discussion covers law enforcement and correctional sources and the integration of multisourced intelligence. Topics include how requirements drive collection efforts, the relationship between collection and analysis, and the costs associated with collection of intelligence.

INMS 620 Intelligence Analysis: Consumers, Uses, and Issues (3)

An examination of the intelligence requirements of various clients in government and the private sector. The various purposes of analysis—such as warning, policy planning, research and development, systems or product planning, support for law enforcement and correctional agencies, support for operational activities, and investment—are examined. Discussion covers managing analytical methodologies and techniques, as well as dissent in analyses, and understanding the reasons for failures. Case studies illustrate issues in analysis management. The conflict between intelligence analysts and decision makers at national and local levels is explored.

INMS 630 Counterintelligence (3)

An examination of the vulnerabilities of the United States, allied countries, and private businesses to espionage. Discussion covers case studies of espionage against America, including economic espionage against U.S. technology and business. Topics include the roles, missions, and espionage activities of foreign intelligence services. Major threat groups are assessed, and management issues related to countering these threats are evaluated. U.S. policy issues and the management challenges of interagency cooperation among local, state, and international sources and public/private partnerships are explored.

INMS 640 Intelligence-Led Enforcement (3)

An evaluation of management approaches and assessment of issues associated with intelligence support for crime prevention and law and regulation enforcement. Topics include intelligence support for protective missions, domestic counterterrorism, drug law enforcement, and actions to counter financial crimes. Discussion covers business intelligence activities aimed at protecting intellectual property. Interagency cooperation and intelligence sharing with state, local, and tribal agencies and private-sector professionals are explored. Various laws and executive orders related to intelligence promulgated since 9/11 are examined. Assignments include case-study analysis and original research.

INMS 650 Intelligence Management and Oversight (3)

An examination of the relationships among intelligence organizations at the federal, state, and local levels, as well as with private corporations. Strategies for the management and control of intelligence activities establishing policies, setting budgets, and conducting reviews are examined. Discussion covers how intelligence oversight (including the roles and responsibilities of the executive, legislative, and judicial branches of government) works and how business intelligence activities are managed and overseen in the private sector.

INMS 660 Leadership Seminar (3)

Prerequisite: Completion of 30 credits of program coursework, including all core and specialization courses (except MGMT 670). An analysis and assessment of leadership challenges within intelligence environments. Topics include ethical dilemmas of managing intelligence operations, analysis, and delivery of judgments. Case studies are evaluated. Assignments include a scholarly study of a problem or issue related to intelligence that comprises purposeful research, a literature review, writing, analysis, and the defense of conclusions and proposals.

ISAS (Information Systems and Services)

ISAS 600 Information Systems for Managers (3)

(Designed for managers without a technical background in computers and information systems.) Prerequisite: Basic microcomputer skills. An investigation of different types of hardware and software and their application in organizations from a systems perspective. Case studies are used to reveal technical and organizational issues and operational considerations. Emphasis is on determining managers' needs for information and procuring and using appropriate computer systems.

ISAS 610 Information Systems Management and Integration (3)

A study of the life cycle of the information system, from inception, through systems development and integration, to system operation and maintenance. Emphasis is on the integration of information systems with management systems of an organization. Major phases, procedures, policies, and techniques in the information system life cycle are discussed in detail.

ISAS 620 Information Systems Sourcing Management (3)

A study of how best to make and implement appropriate decisions in providing information systems to an organization, as well as how to manage the outcomes of such decisions. Focus is on the frameworks, tools, and techniques for making sourcing decisions. Topics include “make or buy” decisions, the use of off-the-shelf package software (including enterprise resource planning software), various models of outsourcing, and the outsourcing of entire business processes. The implications of whether to source domestically or offshore are evaluated. Discussion also covers contemporary issues related to cloud computing and the options it offers.

ISAS 630 Systems Analysis and Design (3)

A study of current techniques and practices in requirements specification, software application selection, project management, and analysis and design of information system applications. Emphasis is on a management perspective in the specification of the information system’s logical and physical analysis and design.

ISAS 640 Decision Support Systems and Expert Systems (3)

An investigation of computer applications for management support. The technologies of decision support systems and expert systems and the organizational factors leading to the success or failure of such systems are introduced. Topics also include group decision support systems, integration and implementation issues, and related advanced technologies such as neural networks.

ISAS 650 Information Technology, the CIO, and Organizational Transformation (3)

An examination of how information technology can affect the strategic direction of an organization, how IT enables new ways of operating, and how the chief information officer can serve as a trusted member of the organization’s top management team to help it exploit IT effectively.

ITEC (Information Technology)

ITEC 610 Information Technology Foundations (3)

A fundamental study of technology and its applications, as well as the economic and social issues they have raised. Topics include computers, peripherals, databases, and networks; operations (of business, government, and other enterprises), decision support systems, and acquisition of information technology resources; and information security, productivity, equitable access by users, intellectual property rights, and global reach. Discussion also covers current and future developments in the field and their implications.

ITEC 625 Computer Systems Architecture (3)

An introduction to the evolution of computer systems design and hardware and software architectures. Focus is on computer organization (classical and advanced architectures), operating systems, and applications development. Emerging developments in computer systems architecture are also examined.

ITEC 626 Information Systems Infrastructure (3)

An introduction to information systems infrastructure. Focus is on data communications and networks. Discussion covers layered network architectures and communication hardware. Emerging technologies such as social media, mobile computing, cloud computing, big data, and the Internet of Things are also examined.

ITEC 630 Information Systems Analysis, Modeling, and Design (3)

(Formerly CSMN 635.) A study of systems analysis and design, using selected engineering and management science techniques and practices. Topics include requirements determination, modeling, decision making, and proposal development. The System Development Life Cycle Model, including system implementation and postimplementation activities, is examined. Emphasis is on the specification of the information system’s logical and physical analysis and design from a management perspective. Research and project assignments related to information systems analysis, design, implementation, and/or project planning and control require individual and group work.

COURSE DESCRIPTIONS

ITEC 640 Information Technology Project Management (3)

An examination of the fundamental principles and practice of managing programs and projects in an information processing and high-tech environment. The dynamic nature of IT and the effect of life cycles are explored. The fundamental building blocks of high-tech management styles (including project planning, organizational structure, team building, and effective control mechanisms) are addressed. Discussion covers the effect of product and project life cycles in delivering a successful IT project, considering the obsolescence factors in procurement/stakeholder contracts. The goal is to gain a solid foundation to successfully manage each phase of the project life cycle, work within organizational and cost constraints, set goals linked directly to stakeholder needs, and utilize proven management tools to execute a dynamic project on time and within budget. Emphasis is on how to apply the essential concepts, processes, and techniques in the management of large-scale governmental or commercial programs. Topics also include the need for global vision, strong planning techniques, appropriate training before introducing any IT product into the market, and discipline in executing tasks.

MGMT (Management)

MGMT 610 Organizational Theory (3)

An overview of the fundamental concepts of organizational theory and design in the context of a postindustrial and increasingly global society. The study of organizations encompasses several key knowledge areas essential to today's manager: the impact of technological and workforce changes on society, organizational ethics and social responsibility, global issues, history of management thought and its relevance for managers today, and systems thinking and the challenges of managing in today's complex and rapidly changing environment. Discussion addresses essential concepts in organizational theory and design, including measuring effectiveness, organizational life cycles, options for organizational structure, and becoming the learning organization.

MGMT 615 Intercultural Communication and Leadership (3)

(Not open to students who have completed MGMT 620 or MGMT 625.) A study of organizational communication, leadership, and decision-making skills essential for all managers in intercultural environments. Theories of culture are examined and applied in relation to leadership style and practices, as well as to organizational communication across cultural groups. Team development and leadership are explored in an intercultural environment.

MGMT 630 Organizational Theory and Behavior (6)

(Not open to students who have completed MGMT 610, MGMT 615, MGMT 620, MGMT 625, or MGMT 635.) An overview of the fundamental concepts of organizational theory and organizational behavior in the context of a postindustrial and increasingly global society. Topics include the impact of technological and workforce changes on society, organizational ethics and social responsibility, organizational communication, leadership and decision-making skills in intercultural environments, the history of management thought and its relevance for managers today, and systems thinking and the challenges of managing in today's complex and rapidly changing environment.

MGMT 640 Financial Decision Making for Managers (3)

Prerequisite: Knowledge of the fundamental concepts of financial accounting and economics, including opportunity cost, the time value of money, and financial analysis. An investigation of financial decision making in business, government, and not-for-profit organizations. Emphasis is on the application of financial and nonfinancial information to a wide range of management decisions, from product pricing and budgeting to project analysis and performance measurement. A variety of decision-making tools (such as break-even analysis, activity-based costing procedures, and discounted cash flow techniques) are studied. Contemporary managerial practices are explored.

MGMT 650 Statistics for Managerial Decision Making (3)

Prerequisite: Knowledge of the fundamentals of statistical methods, techniques, and tools. An examination of how managers organize, analyze, and interpret data for decision making. Focus is on developing skills in using statistical tools to make effective business decisions in all areas of public- and private-sector decision making, including accounting, finance, marketing, production management, and human resource management. Topics include collecting data; describing, sampling, and presenting data; probability; statistical inference; regression analysis; forecasting; and risk analysis. Microsoft Excel is used extensively for organizing, analyzing, and presenting data.

MGMT 670 Strategic Management Capstone (3)

Prerequisite: Completion of 24 credits of program coursework, including all core courses. A capstone investigation of how strategy interacts with and guides an organization within its internal and external environments. Focus is on corporate- and business unit-level strategy, strategy development, strategy implementation, and the overall strategic management process. Topics include organizational mission, vision, goal setting, environmental assessment, and strategic decision making. Techniques such as industry analysis, competitive analysis, and portfolio analysis are presented. Discussion covers strategic implementation as it relates to organizational structure, policy, leadership, and evaluation issues. The ability to “think strategically” and to weigh things from the perspective of the total enterprise operating in an increasingly global market environment is emphasized. Case analyses and text materials are used to integrate knowledge and skills gained through previous study. Problems and issues of strategy formulation are investigated through participation in the Business Strategy Game simulation.

MRKT (Marketing)

MRKT 600 Marketing Management (3)

A study of the theory and practices related to the management of the marketing function as applied by managers and administrators in organizations. Analyses of case studies are used to demonstrate the necessity of incorporating marketing with other business functions. Emphasis is on the planning and implementation activities required to attain the organization’s marketing goals. Topics include the product/service mix, pricing, marketing communications such as advertising and sales promotion, and channels of distribution. Control techniques for the overall marketing mix are also introduced.

MRKT 601 Legal and Ethical Issues in Global Communications (3)

A survey of the ethical and legal constraints on marketing and public relations practitioners. Topics include ethical models, First Amendment issues, libel, privacy, and confidentiality. The integration of public relations with advertising and marketing efforts is discussed, with emphasis on the ethical and legal issues inherent in this integration.

MRKT 602 Consumer Behavior (3)

A study of the cognitive and behavioral bases underlying consumers’ buying preferences and decision processes, intended for managers and administrators who have to evaluate the efficacy of the firm’s marketing plan. Emphasis is on the role of the communications strategy (e.g., advertising, promotion, public relations) in achieving the overall marketing objectives.

MRKT 603 Brand Management (3)

A presentation of the concepts and techniques for creating and selecting marketing strategies for an organizational unit that survives on its ability to provide products and services to other organizations. Discussion covers trends toward a “marketing culture” in both public and private institutions and the implications that this change has for all managers and administrators. Emphasis is on the role of brand equity in achieving a sustainable competitive advantage.

MRKT 604 Marketing Intelligence and Research Systems (3)

Prerequisite: MGMT 650. A study of marketing research methods and techniques useful to managers and administrators with responsibility for assessing or increasing the demand for their organization’s products, programs, and services. Methodologies and issues related to the design and completion of marketing research projects (including survey, observational, and experimental methods used in assessing and segmenting markets) are presented. Discussion covers data analysis that is especially useful for marketing research (i.e., focus groups, customer visits, conjoint analysis, and multidimensional scaling).

MRKT 605 International Marketing Management (3)

An overview of the fundamentals of marketing and marketing management, presented in the context of competitive global environments and diverse national economies. Topics include demand analysis, product development, product pricing, marketing organization, foreign representation and distribution systems, promotion, advertising, and sales and service. Review also covers regulatory issues as they relate to international marketing.

MRKT 606 Integrated Direct Marketing (3)

Prerequisite: MGMT 650. A systematic approach to integrated direct marketing—the process of precision deployment of multiple media and sales channels to maintain contact with the customer. Traditional direct marketing techniques such as database marketing, direct mail, and telemarketing, as well as digital techniques such as e-mail and websites, are explored. Topics include lifetime value, performance measurement, cost per million (CPM), and cost per response.

COURSE DESCRIPTIONS

MRKT 620 Marketing Principles, Regulation, and Ethical Issues (6)

An examination of the pivotal role of marketing in organizations and the ethical and legal constraints on marketing practitioners. Topics include competitive strategy, market segmentation, e-commerce issues, the product/service mix, pricing strategies, channels of distribution, customer service, and marketing communications (e.g., advertising, public relations, and sales promotions). Ethical and legal issues surrounding the practices of marketing, advertising, and public relations are examined in depth. The practical aspects of marketing management are analyzed through discussion of current marketing activities, emerging trends, problems, and cases. Students who receive credit for MRKT 620 may not receive credit for MRKT 600, MRKT 601, or PRPA 604.

MRKT 671 Special Projects in Marketing Analytics (3)

Prerequisite: Completion of the MS in Data Analytics degree and 15 credits of marketing specialization coursework. A case-based study of the application of analytics to marketing. Discussion covers the role of analytics in the marketing process and types of data and database structures maintained by marketers. Projects involve working with real marketing data sets to analyze patterns and address particular marketing issues, such as how to maximize sales of specific products and services.

MSAF (Accounting and Financial Management)

MSAF 670 Accounting and Financial Management Capstone (3)

Prerequisite: Completion of all program courses except FIN 645. A capstone study of accounting and financial management that integrates subject matter from both areas. Advanced principles, techniques, and theories are applied through the analysis and presentation of case studies by student teams. Assignments include a research paper that comprehensively assesses an important current issue or emerging trend in the fields of financial management and accounting.

MSAS (Accounting and Information Systems)

MSAS 670 Accounting and Information Systems Capstone (3)

(Formerly MSAT 670.) Prerequisite: Completion of all program courses except INFA 610. A capstone study of accounting and information systems that integrates subject matter from both areas. Advanced principles, techniques, and theories are applied through the analysis and presentation of case studies by student teams. Assignments include a research paper that comprehensively assesses an important current issue or emerging trend in the fields of accounting and information systems.

MSFS (Financial Management and Information Systems)

MSFS 670 Financial Management and Information Systems Capstone (3)

Prerequisite: Completion of all program courses except either FIN 645 or INFA 610. A synthesis of material from all previous study in financial management and information systems that reflects the importance of information systems in modern organizations and the role of the CFO/CIO in managing this resource to maximize value. Simulations provide the opportunity to apply theory to practice. Topics include the acquisition, installation, and management of information systems. Important current issues and emerging trends in the fields of financial management and information systems are emphasized through special readings, briefing papers, and discussion.

NPMN (Nonprofit Management)

NPMN 600 Nonprofit and Association Organizations and Issues (3)

A presentation of the roles and functions of the principal types of nonprofit organizations. Characteristics that distinguish nonprofit organizations from their counterparts in the private and public sectors are introduced. The challenges, opportunities, and common issues facing managers of nonprofit organizations are explored. These issues include administrative cost control, preserving the organization's legal status and revenue base, staffing and organizing in response to client needs, and ethical considerations. Specific laws, regulations, policies, and court rulings that affect the nonprofit sector are examined.

NPMN 610 Nonprofit and Association Law and Governance (3)

A study of current ideas and approaches related to nonprofit law, governance, and mission. Discussion covers distinctions between nonprofit, educational, charitable, social action, membership, cultural, scientific, environmental, and trade associations as they relate to incorporation, legal standing, tax-exempt status, and governance. Topics include nonprofit governance and trustee issues, as well as lobbying and advocacy, nonprofit liability, personnel, and unrelated business income tax. The relationship of governance and ethics in nonprofit management is examined.

NPMN 620 Nonprofit and Association Financial Management (3)

A detailed study of theories and practices of nonprofit financial management and decision making, including budgeting, reporting requirements, nonprofit accounting, and financial standards. Focus is on the role of financial management in maintaining the fiscal health and legal status of the nonprofit organization. Topics include budgeting, fund accounting, cash flow analysis, expenditure control, long-range financial planning, audits, and grant and contract management. Discussion also covers compliance with nonprofit accounting and financial management principles in reference to maintaining public access and ethical standards.

NPMN 640 Marketing, Development, and Public Relations in Nonprofit Organizations and Associations (3)

A study of the principles and practices required to develop and promote the products, services, positions, and image of nonprofit organizations. Focus is on fundraising and membership recruitment issues. Topics include the design of a marketing strategy and marketing mix, pricing issues, alternative revenue-generating mechanisms, and customer service. Discussion also explores use of the media, advertising and promotion methods, and relationships with business, government, and the community. The integration of sponsors, members, and chapters in the total marketing effort is examined.

NPMN 650 Fundamentals of Association Management (3)

A study of the unique and important niche of associations within the nonprofit sector. Analysis covers the history of associations, political groups, trade lobbying groups, and foundations in relation to their varying missions, internal capacity, shifting environments, and legal status. Associations also are assessed in terms of their wider environment, including the extent of their labor force and command of capital resources. Discussion also covers the wider influence of associations on U.S. economy and policy.

NPMN 655 Process and Outcome Evaluation for Nonprofit Organizations (3)

An examination of the growing importance of process and outcome evaluation to nonprofit organizations in supporting their missions. Various quantitative and qualitative evaluation strategies, as well as quality- and process-improvement methodologies, are explored. Topics include important evaluation concepts such as validity and reliability of various data collection tools, various approaches to sampling, and precision of results.

NPMN 660 Strategic Management in Nonprofit Organizations and Associations (3)

A study of the integration and application of strategic management principles, concepts, and practices in nonprofit organizations. Topics include the development of mission statements, goal-setting concepts, and strategy formulation and implementation approaches. Assignments focus on designing organizational plans and strategies relevant to the specific needs of organizations.

OMDE (Distance Education)

OMDE 601 Foundations of Distance Education and E-Learning (3)

A study of the history and evolution of distance education. Social and political/economic factors, theories, learning and teaching models, technology and media innovations, institutions and systems, and major writers that have shaped the development of the field are critically examined. Various technologies are used to support the development of foundational skills that are integral to current practice.

OMDE 603 Technology in Distance Education and E-Learning (3)

A review of the history and terminology of the technology used in distance education. The basic technology building blocks of hardware, networks, and software are identified. Analysis covers the characteristics of asynchronous and synchronous technologies and tools used in teaching and learning in distance education and administering distance education programs. The relationship between technology and the goals of the educational/training organization are examined critically. The relationship between information technology (especially online technology) and distance education is explored. Topics include the criteria and guidelines for selecting technologies for distance education and future directions of technology in distance education.

OMDE 606 Costs and Economics of Distance Education and E-Learning (3)

(Developed by Thomas Huelsmann of Germany.) A study of the economics of distance education in the larger context of the economics of education. A variety of methodological approaches (including cost/benefit and cost/effectiveness analysis) are applied to the distance education context. A variety of costing techniques and economic models are explored and applied to different institutional forms and levels of distance education.

COURSE DESCRIPTIONS

OMDE 608 Learner Support in Distance Education and Training (3)

An introduction to the theories and concepts of support for learners in distance education and training. The various types of learner support, including tutoring and teaching; advising and counseling; and library, registrarial, and other administrative services, are examined. Discussion addresses management issues, such as planning, organizational models, staffing and staff development, designing services to meet learner needs, serving special groups, and evaluation and applied research. Assignments include designing a learner support model for a particular context (e.g., public or private educational institution or corporate or military training).

OMDE 610 Teaching and Learning in Online Distance Education (3)

An exploration of the online teaching and learning dynamic, including its theoretical foundation and best practices. The themes that shape the online teaching/learning relationship are addressed through individual and collaborative projects. Topics include philosophical frameworks; instructional, social, and cognitive presence; interaction, collaboration, and participation; community and engagement; and administration and management.

OMDE 670 Portfolio and Research Project in Distance Education and E-Learning (3)

(Formerly OMDE 690.) A capstone study of distance education and training designed to demonstrate cumulative knowledge and skills through two major projects: an electronic portfolio and a case study. The personal e-portfolio documents credentials and accomplishments to date and also serves as an ongoing resource and record of continuing professional development. The case study, which focuses on a distance education/training program or organization, involves in-depth analysis of the setting and application of concepts and strategies to enhance practice and performance in distance education and training.

PMAN (Project Management)

PMAN 634 Foundations of Project Management (3)

An overview of the theory and practice of managing projects in any industry. Emphasis is on leadership in project management: managing projects or tasks in a team environment; building teams; and utilizing communication, organization, and conflict management skills. Discussion covers project management process groups and how these process groups (initiating, planning, executing, monitoring and controlling, and closing the project or project phase) interact throughout the life cycle of the project. Project management knowledge areas are examined and linked to industry practices for successful management of projects. The goal is to gain a solid understanding of how to successfully manage multiphase projects, work within organizational constraints, set goals linked directly to stakeholder needs, and utilize proven project management tools to complete projects on time and within budget while meeting specifications. Essential concepts, processes, and techniques are applied through management of a team project, which requires regular progress reports and reviews.

PMAN 635 Quantitative Methods in Project Management (3)

Prerequisites: MGMT 640, TMAN 625, or ITEC 640 (or an approved course in finance) and MGMT 650 (or an approved course in statistics). Prerequisite or corequisite: PMAN 634. An overview of quantitative aspects of managing projects, applying widely used statistical techniques and software tools for project management and risk analysis. Topics include analytical approaches and quantitative methods in project management, such as cash flow analysis, scheduling projects based on resource availability, resource leveling, expediting projects, quantitative risk analysis, and techniques for estimating actual vs. expected project duration and cost. Simulation tools and statistical techniques are used to analyze uncertainty in estimating project cost and duration. Discussion also covers project portfolio management and how multiple projects and programs fit into the strategic direction of an organization. The processes, tools, and techniques of project management are applied to a team project with emphasis on quantitative and analytical methods.

PMAN 637 Project Risk Management (3)

Prerequisites: PMAN 634 and 635. An in-depth analysis of risk management methods and cases and project management risk monitoring from strategic, applied perspectives. State-of-the-art tools and techniques for identifying, ranking, and monitoring risks in the project management environment are examined and utilized. Both qualitative and quantitative risk analyses are conducted, and strategies for proactive risk mitigation are developed. Focus is on how a comprehensive risk management approach can enable a project team to proactively manage issues that adversely impact the successful scope, scheduling, control, and completion of a project.

PMAN 638 Project Communications Management (3)

Prerequisite: PMAN 634. An overview of conflict resolution processes and methods and the skills needed to manage the human elements within project management—a task as challenging as managing the technical aspects. Topics include critical communication and conflict resolution issues faced by project workers in today's global corporate environment. Innovative approaches to successfully negotiating and resolving conflicts among team members, colleagues, managers, and stakeholders are introduced and practiced. Proven techniques to make conflict a constructive rather than a destructive experience are analyzed. Emphasis is on case study analysis, effective communication behaviors, negotiation skills, and virtual team processes to successfully lead both domestic and global projects.

PMAN 639 Project Quality Management (3)

Prerequisites: PMAN 634 and 635. A study of the policy, processes, and procedures involved in ensuring that projects will satisfy the objectives for which they were undertaken. Emphasis is on quality planning, quality assurance, quality control, and process improvement. Discussion covers all the activities that determine quality objectives, policies, and responsibilities. The importance of customer satisfaction, prevention over inspection, management responsibility, and continuous improvement is recognized. Topics include control charts, cause and effect diagrams, Pareto charts, failure mode and effect analysis, design reviews, and cost of quality. Course content and approach are compatible with the International Organization for Standardization.

PMAN 641 Project Procurement Management (3)

Prerequisite: PMAN 634. An examination of the tools needed for project procurement management. Focus is on determining what needs to be purchased or acquired and when and how to acquire it. Topics include planning the contracting efforts (documenting products and services and identifying potential sellers); requesting sellers' responses (obtaining information, quotation, bids, offers, or proposals); selecting the seller (receiving and reviewing offers, selecting among those potential offers, and negotiating a contract); administering contracts (managing the relationship between buyers and sellers, including documentation, corrective actions, and contract changes); and closing contracts (completing the contract and settling all open issues).

PMAN 650 Financial and Strategic Management of Projects (3)

Prerequisites: PMAN 634 and 635. An investigation of financial and strategic decision making in the management of projects. Topics include estimating project costs from work breakdown structure; formulating, monitoring, and controlling project budgets; monitoring, evaluating, and forecasting project costs, schedule, results, and performance using earned value management; and deriving project cash flows. Discussion also covers the impact of project scope, schedule, and changes; management reserves to cover risks and contingencies; top-down and bottom-up budgeting; investment project analysis; discounted cash flow, internal rate of return, and net present value methodologies; cost of capital; and capital budgeting. Broader issues (such as links between project and corporate financial performance, business ethics, corporate social responsibility, project and organizational culture, information flow, and project sustainability) are also examined.

PRPA (Public Relations)**PRPA 600 Public Relations Writing (3)**

Writing-intensive practice of the fundamental skills expected of public relations professionals. Topics include the essentials of effective writing; persuasive, informative, and educational writing; and the adaptation of writing styles for specific media and targeted publics. Emphasis is on the use of Associated Press (AP) style.

PRPA 601 Public Relations Theory and Practice (3)

Prerequisite: PRPA 600. A study of the relationship between the management function of policy formulation and the communication process of disseminating ideas and information to the organization's public. The process of planning and executing public information and public relations programs to address the concerns of the organization's various publics are examined. Topics include message formation, media selection, and audience differentiation. The impact of the Internet on public relations practices is explored in depth.

PRPA 602 Public Relations Techniques (3)

Prerequisites: PRPA 600 and 601. A presentation of advanced writing techniques designed to improve skills in the writing of specialized public relations materials. Emphasis is on audience, message, and channel identification. Topics include special communication techniques necessary for broadcast and electronic media.

COURSE DESCRIPTIONS

PRPA 610 Crisis Communication Management (3)

Prerequisite: PRPA 602. An examination of current approaches to crisis definition, issue management, and crisis communications management. Traditional and web-based approaches to analyzing crisis and communications management issues are applied using appropriate public relations research, theory, and case examples to better identify issues and audience segmentation requirements and develop strategic public responses to crisis situations.

PRPA 620 Global Public Relations (3)

Prerequisite: PRPA 602. A study of the role, function, and influence of public relations in a global environment. Topics include global trends, multicultural communication knowledge and skills, multiple cultures and diversity within nations, national media structures and public policy, and international legal and ethical codes in public relations. Global case studies are used to develop and implement strategic and creative communications plans.

PRPA 650 Public Relations Campaigns (3)

Prerequisite: Completion of 30 credits of program coursework, including all core and specialization courses (except MGMT 670); approval of program director required for internship option. A study of public relations campaigns that integrates content from previous coursework. Focus is on creating a public relations strategy and a plan to execute that strategy for an existing organization. Critical principles of public relations are reviewed and applied in real-world settings.

RMBA (Business Administration—Global)

RMBA 650 Environment of Global Business (6)

Prerequisite: AMBA 640. An examination of the external environments and frameworks that shape the organizational decisions of businesses operating in emerging economies and current issues in global business management. Readings and case studies focus on a specific country and illuminate lessons learned and best practices from different industries operating in that country and region. Discussion covers business challenges rooted in cultural environments, political and legal systems, international and national regulatory structures, financial and capital markets, and human resource management issues. Topics include globalization, corporate responsibility, ethics, industry analysis, supply chain management, and country risk assessments.

RMBA 660 Marketing in the Global Business Environment (6)

Prerequisite: RMBA 650. An examination of the complexities of marketing management in the global environment. Discussion covers fundamental marketing principles and marketing challenges in a specific country and region. Topics include consumer and business market behavior, market research and analysis, segmentation, positioning, brand management, marketing mix (product, price, distribution, and promotion), and marketing in the digital global environment. Readings and case studies focus on marketing best practices and lessons learned. Emphasis is on developing a strategic marketing plan for a company operating in a specific country.

RMBA 670 Formulating and Implementing Global Strategy (6)

Prerequisite: RMBA 660. A capstone consultancy practicum designed to develop the management skills needed to formulate and develop business strategies. The consultancy project is focused on providing a firsthand experience in solving an existing business challenge in a real company from a specific country. Teams work closely with companies with strategic business interests in a certain country and present recommendations for solutions to the company leadership (virtually or face-to-face).

SWEN (Software Engineering)

SWEN 603 Modern Software Methodologies (3)

An in-depth overview of widely used modern software development methodologies. Historical software development methods are introduced. Topics include rapid application development and agile development, Scrum, Extreme Programming (XP), Unified Process, EVO (Evolutionary Project Management), lean software development, test-driven development, feature-driven development, Crystal solutions, Rational Unified Process, and other Unified Process methods. Discussion also covers advantages and drawbacks of using each method.

SWEN 645 Software Requirements (3)

An examination of major models of software requirements and specifications, existing software standards and practices, and formal methods of software development. Topics include writing system and software requirements, formal specification analysis, formal description reasoning, models of “standard” paradigms, and translations of such models into formal notations.

SWEN 646 Software Design and Implementation (3)

An exploration of modern software development techniques, tools, and technologies. Topics include software development processes and the role of design in those processes. Discussion also covers major design methods, available computer-aided software engineering (CASE) tools, the proper application of design methods, and techniques for estimating the magnitude of the development effort. Object-oriented programming and aspect-oriented programming are presented. Focus is on building software products using these technologies.

SWEN 647 Software Verification and Validation (3)

A study of methods for evaluating software for correctness, efficiency, performance, and reliability. Skills covered include program proving, code inspection, unit-level testing, and system-level analysis. The difficulty and cost of some types of analysis and the need for automation of tedious tasks are examined. Emphasis is on problem-solving skills, especially in analyzing code.

SWEN 648 Software Maintenance (3)

A guide for the transition from program completion through the rest of the software life cycle to decomposition. Discussion covers a number of modern maintenance topics, including configuration management, change management, and processes related to maintenance. Topics also include design and implementation methods that make software maintainable.

SWEN 651 Usability Engineering (3)

A study of the theory and practice of designing user interfaces for interactive systems. Topics include the principles of usability engineering and basic rules for usable design. User interfaces are evaluated using techniques such as contextual inquiry, task analysis, and usability testing. Discussion also covers when these techniques are most appropriate.

SWEN 670 Software Engineering Project (3)

Prerequisites: SWEN 603, 645, 651, 646, and 647 and ITEC 610 and 620). A comprehensive examination of the tools, skills, and techniques of software engineering and their application. Completion of a major team project is designed to integrate knowledge and skills gained through previous study and provide experience of the constraints commonly experienced in industry (scheduling, vagueness of clients). Project requires forming teams (organization) and scheduling work to meet the deadlines imposed by the contract (syllabus).

SYSE (Systems Engineering)

SYSE 610 Systems Engineering Overview (3)

An introduction to systems engineering using examples of manufacturing, information, and mechanical systems that involve the integration of different technologies. Emphasis is on the role of the systems engineer. Systems thinking principles and complex systems and system-of-systems theory are reviewed. Discussion covers various approaches to system dynamics modeling. An overview of the system life cycle through conception, design and development, integration and testing, and deployment and support is provided.

SYSE 620 Requirements Engineering (3)

An in-depth examination of the various techniques used in establishing and specifying system requirements, both physical and functional. Topics include system decomposition, requirements traceability, configuration management, and requirements validation. Several U.S. and international standards are examined as examples of requirements specification.

SYSE 630 System Design and Development (3)

Prerequisites: SYSE 610 and 620. A detailed exploration of the design and development phases of the system life cycle. Discussion covers several tools used for systems simulation and computer-aided design. Topics also include methods and policies for change control and the principles of quality assurance as an underlying concept in systems design.

COURSE DESCRIPTIONS

SYSE 640 System Integration and Test (3)

Prerequisites: SYSE 610 and 620. A review of various strategies used to integrate system components and verify satisfaction of requirements at both subsystem and overall system levels. The concept of formal verification, validation, and accreditation (VV&A) is discussed. Examples of automated software testing tools are also examined.

SYSE 650 Design Considerations (3)

Prerequisites: SYSE 610 and 620. An introduction to system engineering subdisciplines that are critical in system design and deployment. Discussion covers reliability, availability, and maintainability (RAM) factors. Concepts in human factors engineering, system safety, and quality assurance are also reviewed.

SYSE 660 Systems Engineering Management (3)

Prerequisites: SYSE 630 and 640. An examination of the role played by the systems engineer as an liaison between technical specialists, business managers, and internal users or external customers. Discussion covers the traditional systems development life cycle, domestic and internal standards, and the evolving emphasis on agile methods and adaptive processes. Topics also include risk management and organizational considerations in outsourcing.

SYSE 670 Systems Engineering Capstone (3)

Prerequisites: SYSE 640 and 650. A project-based capstone study of systems engineering designed to integrate knowledge and skills gained in previous study. Both in individual projects and a group project focus on demonstrating the ability to construct a system design and develop a plan for a system's development and support.

TLMN (Telecommunications Management)

TLMN 602 Telecommunications Industry: Structure and Environment (3)

A study of major technological, legal, and regulatory developments (national and international) that have molded the structure of the current telecommunications industry. Topics include early legislation, the regulated monopoly, antitrust, divestiture, and recent legislation that has led to the current industry environment of competition and incipient integration of different industry segments. The roles of various national and international institutions in shaping the telecommunications industry are discussed.

TLMN 623 Telecommunications Networks (3)

A study of computer networks and telecommunications functionality, characteristics, and configurations. Recent advances in standardization, internetworking, and deployment of LANs (local area networks), MANs (metropolitan area networks), and WANs (wide area networks) are examined. Topics include network topologies; protocols; architectures; and current and emerging protocols such as asynchronous transfer mode (ATM), 10 gigabit Ethernet, and the Open Systems Interconnect (OSI) Reference Model. Emphasis is on emerging trends in telecommunications, network technologies, and services. Discussion also covers strategies for network planning, implementation, management, and security.

TLMN 630 Satellite Communication Systems (3)

An analysis of issues surrounding the design and use of satellite communications systems. Topics include satellite system characteristics such as type, class (bandwidth, standards, and availability), applications, interfaces, traffic patterns, network installation, performance criteria, hardware, and cost. Current and planned satellite communications are examined and compared to future needs and technologies.

TLMN 641 Network Management and Design (3)

A study of techniques that network managers can utilize to maintain and improve the performance of a telecommunications network. Network management systems are defined and explained. A description of how software package programs can monitor real-time performance of a network to identify problems is provided. Emphasis is on the five tasks traditionally involved with network management (fault management, configuration management, performance management, security management, and accounting management). Examples of current specific network management products are reviewed. Discussion also covers how the performance data gathered from monitoring can be archived and used later as an input when decisions are made on changes in the network architecture. Network design is studied for the development of a new network architecture when only user requirements are known.

TLMN 645 Wireless Telecommunications Systems (3)

A review of wireless telecommunications systems from microcell to global infrastructures. Emphasis is on the technology, applications, and limitations of these systems, which have become an essential element of the world information infrastructure. Topics include cellular communication principles, coding, antenna and propagation effects, channel access schemes, traffic engineering, and wireless network design, as well as terrestrial systems such as cellular, personal communication services (PCS), dispatch, wireless local-area networks (LANs), and wireless data systems. Discussion also covers market trends, regulations, and standards. The role of wireless systems is assessed and compared to other telecommunications alternatives available to organizations.

TLMN 670 Capstone Course in Telecommunications (3)

Prerequisite: Completion of 27 credits of program coursework. The application of knowledge and skills gained from previous study in telecommunications to real-world projects and to related business, technical, and ethical issues. Topics include entrepreneurship and venture creation, emerging telecommunications technologies and their applications, future trends, ethical development, and management. Focus is on demonstrating analytical, entrepreneurial, leadership, planning, managerial, and communication skills through a strategic research and development project for a telecommunications company.

UCSP (Special Topics)

UCSP 615 Orientation to Graduate Studies at UMUC (0)

(Required within the first 6 credits of graduate study for all new graduate students, including one-year MBA students.) An introduction to the skills and techniques needed to successfully complete a graduate program at UMUC and handle the scholarly challenges encountered in graduate school and beyond. Focus is on developing a skills “toolbox” that includes learner-readiness assessments, tools for studying in the online environment, and techniques for using library and information resources to effectively conduct and present research. Strategies for taking ownership of academic and professional success, goal setting, time management, critical thinking, and ethics and integrity are also covered.

UCSP 620 Financial Accounting (0)

(Recommended as preparation for MGMT 640 or ACCT 610 for students who lack a background in accounting and finance.) A basic study of financial accounting, encompassing basic financial concepts and their use in analyzing financial statements. The financial statements of actual companies are analyzed, and the process by which accounting principles are developed is explored. Emphasis is on gaining an appreciation for how financial accounting information can be used to evaluate the economic performance of companies.

UCSP 621 Economics (0)

(Recommended as preparation for MGMT 640 for students who lack a background in economics.) An overview of both the micro-economic issues of supply and demand for individual companies and products and macroeconomic issues concerning inflation, unemployment, and recession for the economy as a whole. Basic economic concepts such as opportunity cost, comparative advantage, economic efficiency, and the time value of money are explored in the context of business, government, and personal situations.

UCSP 630 Introduction to Research Methods (0)

(Recommended as preparation for MGMT 650 or HIMS 650 for students who lack a background in statistics.) A presentation of basic research techniques and methodologies used in organizational research and evaluation studies to make business decisions. Focus is on applying basic research techniques to assess the performance of individuals, work groups, and organizations. Topics include principles of good data collection, presentation of data in tables and charts, summary and description of numerical data, basic probability and discrete estimation, the fundamentals of hypothesis testing, and the use of existing research-based materials to solve business problems. Discussion emphasizes basic approaches and beginning skills necessary to evaluate research materials and their use in decision making.

UCSP 815 Introduction to Library Research Skills for Doctoral Studies (0)

(Required within the first 6 credits of study for all new doctoral students.) An introduction to the research skills needed to be successful in undertaking doctoral-level study at UMUC. Emphasis is on critical thinking and academic integrity. Topics include key UMUC policies, support services, and tools for succeeding in an online learning environment.

ADMINISTRATION

University System of Maryland

Board of Regents (2013–2014)

James L. Shea
Chairman

Barry P. Gossett
Vice Chairman

Gary L. Attman
Treasurer

Linda R. Gooden
Assistant Treasurer

C. Thomas McMillen
Secretary

Thomas G. Slater
Assistant Secretary

Norman R. Augustine

Patricia S. Florestano

Louise Michaux Gonzales

Earl F. Hance
Ex Officio

Francis X. Kelly Jr.

David Kinkopf

Robert Rauch

Frank M. Reid III

Tracye Turner

Paul L. Vance

Samim Manizade
Student Regent

Officers

William E. Kirwan
Chancellor

Joann Boughman
Senior Vice Chancellor for Academic Affairs

Leonard Raley
Vice Chancellor for Advancement

Joseph F. Vivona
*Chief Operating Officer and Vice Chancellor for
Administration and Finance*

Anne Moultrie
Vice Chancellor for Communications

Donald F. Boesch
*Vice Chancellor for Environmental
Sustainability*

Patrick J. Hogan
*Vice Chancellor for Government
Relations*

David Mosca
Director of Auditing

Presidents of the Institutions

Mickey L. Burnim
Bowie State University

Mortimer H. Neufville
Coppin State University

Jonathan C. Gibraltar
Frostburg State University

Janet Dudley-Eshbach
Salisbury University

Maravene Loeschke
Towson University

Robert L. Bogomolny
University of Baltimore

Jay A. Perman
University of Maryland, Baltimore

Freeman A. Hrabowski III
University of Maryland, Baltimore County

Wallace D. Loh
University of Maryland, College Park

Juliette B. Bell
University of Maryland Eastern Shore

Javier Miyares
University of Maryland University College

Donald F. Boesch
*University of Maryland Center for
Environmental Science*

Executive Directors of the Regional Higher Education Centers

Stewart Edelstein
Universities at Shady Grove

Mark Halsey
University System of Maryland at Hagerstown

UMUC

President's Cabinet

Javier Miyares
President

Joseph K. Adams
*Senior Vice President, Strategic Enrollment
Management*

Allan J. Berg
Senior Vice President, Overseas Operations

Lisa Branic
*Vice President,
Enterprise Project Management*

Darren Catalano
Vice President, Analytics

Marie A. Cini
*Provost and Senior Vice President,
Academic Affairs*

James Cronin
Vice President, Military Partnerships

Maureen Walsh David
Vice President and General Counsel

Sarah Dufendach
Vice President, Federal Government Relations

Michael Freedman
Senior Vice President, Communications

Blair H. Hayes
*Ombudsman and Vice President,
Diversity Programs*

Alexandra Kim
*Vice President,
Information Technology Services*

Aric Krause

*Vice Provost and Dean
The Graduate School*

Eugene D. Lockett Jr.

Vice President and Chief Financial Officer

John Petrov

*Vice President and
Chief Human Resources Officer*

Matthew Prineas

*Acting Vice Provost and Dean,
The Undergraduate School*

Jason Reed

Vice President, Technology

Joyce T. Shirazi

Senior Vice President and Chief of Staff

George A. Shoenberger

*Senior Vice President and Chief
Business Officer*

Cathy Sweet

Vice President, Institutional Advancement

Kara Van Dam

Vice Provost, Faculty Affairs

Marcia Watson

Vice Provost, Academic Affairs

Nancy Williamson

*Vice President and Director, Europe
Operations*

Robb Wilmot

*Chair, University Advisory Council
Ex-Officio Member*

Peter C. Young

*Senior Vice President, Analytics, Planning,
and Technology*

Nicholas H. Allen

Provost Emeritus

Board of Visitors

Mark Gerencser

Chair

Chairman of the Board, CyberSpa LLC

Evelyn J. Bata

Collegiate Professor, UMUC

Richard F. Blewitt

Member Emeritus

*President and Chief Executive Officer,
The Blewitt Foundation*

Joseph V. Bowen Jr.

*Senior Vice President, Operations,
and Managing Principal (Ret.),
McKissack & McKissack, Inc.*

David W. Bower

*President and Chief Executive Officer,
Data Computer Corporation of America*

Karl R. Gumtow

*Founder and Chief Executive Officer,
CyberPoint International*

Michèle E. Jacobs

*Managing Director,
Special Events at Union Station*

Donald S. Orkand

*Former Chair and Member Emeritus
Founding Partner, DC Ventures
and Associates, LLC*

Lt. Gen. Emmett Paige Jr.

*(U.S. Army, Ret.)
Vice President, Operations (Ret.),
Department of Defense/Intelligence Services,
Lockheed Martin Information Technology*

Charles E. (Ted) Peck

*Chairman and Chief Executive Officer (Ret.),
The Ryland Group, Inc.*

Sharon R. Pinder

President and CEO, The Pinder Group

Brig. Gen. Velma L. Richardson

(U.S. Army, Ret.)

*Vice President, DoD IT Programs
and Special Projects IS&GS, Lockheed
Martin Corporation*

Gen. John Vessey Jr. (U.S. Army, Ret.)

Member Emeritus

Former Chairman, U.S. Joint Chiefs of Staff

William T. (Bill) Wood

Founder, Wood Law Offices, LLC

Joyce M. Wright

*Senior Associate Consultant, Fitzgerald Claims
Consulting*

The Graduate School

Graduate Council

The Graduate Council serves in an advisory capacity to the dean of The Graduate School. The council is responsible for advisement on academic affairs, including curriculum development, program initiatives, policies, and standards. The council meets monthly or more frequently, at the dean's request, and comprises the following members:

Aric Krause

Vice Provost and Dean

Kathryn Klose

Associate Dean

Alexis Hill White

Assistant Dean

Jennifer Thompson

Assistant Dean

Bryan Booth

Executive Director, Doctoral Programs

Alan Carswell

*Chair, Cybersecurity and Information
Assurance*

Virginia H. Pilato

Chair, Education

Alfred S. Raider

Chair, Business and Management

ADMINISTRATION

Rana Khan
Chair, Information and Technology Systems

Richard Pauli
Program Director, Business and Management

Faculty

The Graduate School has a large and distinguished faculty. UMUC faculty consistently win awards, publish scholarly works, and contribute to the intellectual understanding of their fields. They are well respected by both practitioner and academic peers. In keeping with UMUC's mission, UMUC faculty are as nontraditional as their students, bringing practical as well as academic experience in their fields of expertise. Because of this, they are uniquely qualified to teach and guide students toward a richer and more robust understanding of how their academic learning translates into practice.

The full list of graduate faculty, including their academic rank and credentials as well as any administrative title, is available online at www.umuc.edu/gradfacultylist.

Graduate Advisory Boards

GRADUATE SCHOOL ADVISORY BOARD

Gail Davis Bourdon
Personnel Director, Calvert County Government

Art Fritzson
Vice President, Booz Allen Hamilton, Inc.

Ruth C. Kiselewich
Director, Special Projects and Supplier Services, Baltimore Gas and Electric

James G. Melonas
Vice President, International Development, Mobile Satellite Ventures

Isabelle de Montagu
President, Atlantek, LLC

Patricia Toregas
Past President, UMUC Alumni Board

Barry West
Chief Information Officer, U.S. Department of Commerce, and Adjunct Assistant Professor, UMUC

Thomas Zoretich
President and Chief Executive Officer, Opinion One, Inc.

BUSINESS AND MANAGEMENT PROGRAMS ADVISORY BOARD

Lorraine Creely
Manager, Corporate Business Performance, Pepco Holdings, Inc.

William Heflin
Managing Director, Kinetic Ventures

Jerry Henderson
Assistant Vice President, Perioperative Services, LifeBridge Health Sinai Hospital of Baltimore

Barry Ingram
Vice President (Ret.), U.S. Government Solutions, EDS

George Ripol
President, CEO, and Chairman, Georator Corporation

Jon Waldrop
Director, International Operations, Lockheed Martin Corporation

EDUCATION ADVISORY BOARD

Kathy Andrews
Principal, Academy of Health Sciences, Prince George's Community College/Prince George's County Public Schools

Ani Seker Ba
*UMUC Graduate (MAT)
English Teacher, Green Valley Academy, Prince George's County Public Schools*

Jennifer Craft
National Board Certified Teacher, Staff Development Teacher, Reading Resource Teacher, Montgomery County Public Schools

Russ Fazio
Program Coordinator, University Partnership Programs, Montgomery County Public Schools

Judy Flood
Executive Director, Maryland Society for Educational Technology

Michelle Lipson
K-12 Content Specialist, Division of Curriculum and Instruction, Montgomery County Public Schools

Peggy O'Brien
Principal, If Not Now When, LLC

Elizabeth Neal
Teacher Education Specialist, Program Approval and Assessment Branch, Maryland State Department of Education

Tanaga Rodgers
National Board Certified Teacher, Carole Highlands Elementary School, Prince George's County Public Schools

Dawn Rodrigues
Adjunct Professor, UMUC

Paul Sandrock
Director of Education, American Council on the Teaching of Foreign Languages

Stacey Smith
Vice Principal, Old Mill High School, Anne Arundel County Public Schools

Inger Swimpson
Director, Department of Certification and Continuing Education, Montgomery County Public Schools

Selena Ward
*UMUC Graduate (MEd)
International Society for Technology in Education Award Winner, Prince George's County Public Schools*

Eric Wood
Instructional Specialist, Talent Development, Prince George's County Public Schools

Andrea Zamora
*Director, Division of Professional
Growth and Development
Anne Arundel County Public Schools*

**FINANCIAL MANAGEMENT
AND ACCOUNTING PROGRAM
ADVISORY BOARD**

Sarah Abedin
Cotton & Company, LLP

O. Anthony Avans
President, Interim Business Solutions, LLC

Scot Browning
President, Capital Bank

James Demarest Jr.
*Director of Strategy,
Pepco Holdings, Inc.*

Jason Howell
*President and Chief Executive Officer,
Jason Howell Company*

Najma Khan
*Senior Financial Accountant,
American Capital Strategies, Ltd.*

Linda Kostic
*Director, Enterprise Risk Management,
E*Trade Financial*

Kimberly Palmisano
*Partner, Mister, Burton, Palmisano &
French, LLC*

Michael Syracuse
*Chief Financial Officer,
Technology Service Corporation*

Angela Walter
Senior Manager, Ernst & Young, LLP

**HEALTH CARE ADMINISTRATION
ADVISORY BOARD**

Cornelius McKelvey
*Senior Vice President, Project Executive,
Holy Cross Hospital*

Frances B. Phillips
*Deputy Secretary of Public Health, Maryland
Department of Health*

Marjorie E. Vincent
*Principal, Director of Clinical Services,
Woodrum/Ambulatory System Development*

CONTACT INFORMATION

The Graduate School
University of Maryland University College
3501 University Boulevard East
Adelphi, MD 20783

800-888-UMUC (8682), ext. 2-2400,
or 240-684-2400

Graduate School Personnel

Administration

VICE PROVOST AND DEAN

Aric Krause, PhD
aric.krause@umuc.edu

ASSOCIATE DEAN

Kathryn Klose, PhD
kathryn.klose@umuc.edu

ASSISTANT DEANS

Alexis Hill White
alexis.white@umuc.edu

Jennifer Thompson
jen.thompson@umuc.edu

DIRECTOR, STUDENT RELATIONS

Laurie Hulcher
laurie.hulcher@umuc.edu

DIRECTOR, ACADEMIC WRITING
AND STUDENT SUPPORT

Sarah Rothschild
sarah.rothschild@umuc.edu

Program Staff

BUSINESS AND MANAGEMENT

CHAIR

Alfred S. Raider, JD, LL.M.
al.raider@umuc.edu

ASSOCIATE CHAIRS

Diane Bartoo, PhD
diane.bartoo@umuc.edu

Anna Seferian, PhD
anna.seferian@umuc.edu

Rosemary Hartigan, JD
rosemary.hartigan@umuc.edu

ASSISTANT DIRECTOR OF ADMINISTRATION

Todd Cinani
todd.cinani@umuc.edu

PROGRAM DIRECTORS, MASTER OF BUSINESS
ADMINISTRATION

Anita Baker, PhD
anita.baker@umuc.edu

Christina Hannah, PhD
christina.hannah@umuc.edu

John (Les) Livingstone, PhD
john.livingstone@umuc.edu

Charles Newman, PhD
charles.newman@umuc.edu

Sandeep Patnaik, PhD
sandeep.patnaik@umuc.edu

Richard A. Pauli, JD
richard.pauli@umuc.edu

Monica Sava, PhD
monica.sava@umuc.edu

Mary Ann Spilman, PhD
mary.spilman@umuc.edu

James Stewart, DSc
james.stewart@umuc.edu

PROGRAM DIRECTOR, MASTER OF
INTERNATIONAL MANAGEMENT

Robert Jerome, PhD
robert.jerome@umuc.edu

PROGRAM DIRECTOR, MASTER OF SCIENCE IN
ACCOUNTING AND FINANCIAL MANAGEMENT

James Howard, PhD
james.howard@umuc.edu

PROGRAM DIRECTOR, MASTER OF SCIENCE
IN ACCOUNTING AND INFORMATION SYSTEMS

Kathryn Klose, PhD (Interim)
kathryn.klose@umuc.edu

PROGRAM DIRECTOR, MASTER OF SCIENCE
IN DATA ANALYTICS

W. Randolph Ford, PhD
william.ford@umuc.edu

PROGRAM DIRECTOR, MASTER OF SCIENCE IN
FINANCIAL MANAGEMENT AND INFORMATION
SYSTEMS

Jayanta Sen, PhD
jayanta.sen@umuc.edu

PROGRAM DIRECTOR, MASTER OF SCIENCE
IN HEALTH INFORMATICS ADMINISTRATION

Katherine Marconi, PhD
katherine.marconi@umuc.edu

PROGRAM DIRECTORS, MASTER OF SCIENCE
IN HEALTH CARE ADMINISTRATION

Diane Bartoo, PhD
diane.bartoo@umuc.edu

Katherine Marconi, PhD
katherine.marconi@umuc.edu

Don Zimmerman, PhD
don.zimmerman@umuc.edu

PROGRAM DIRECTORS, MASTER OF SCIENCE
IN MANAGEMENT

Monica Sava, PhD
monica.sava@umuc.edu

Accounting

Kathryn Klose, PhD (Interim)
kathryn.klose@umuc.edu

Acquisition and Supply Chain Management

Freda Powell-Bell, PhD
freda.powell-bell@umuc.edu

Criminal Justice Management

Kathleen Hogan, PhD
kathleen.hogan@umuc.edu

Emergency Management

Irmak Renda-Tanali, DSc
irmak.renda-tanali@umuc.edu

Financial Management

James Howard, PhD
james.howard@umuc.edu

Health Care Administration

Diane Bartoo, PhD
diane.bartoo@umuc.edu

Katherine Marconi, PhD
katherine.marconi@umuc.edu

Don Zimmerman, PhD
don.zimmerman@umuc.edu

Homeland Security Management

Irmak Renda-Tanali, DSc
irmak.renda-tanali@umuc.edu

Human Resource Management

Glenda Barrett, PhD
glenda.barrett@umuc.edu

Donna Drake-Clark, PhD
donna.drake-clark@umuc.edu

Information Systems and Services

Les Pang, PhD
les.pang@umuc.edu

Intelligence Management

Kathleen Hogan, PhD
kathleen.hogan@umuc.edu

Interdisciplinary Studies in Management

Harriet Smith, PhD
harriet.smith@umuc.edu

Marketing

Alfred S. Raider, JD, LLM
al.raider@umuc.edu

Nonprofit and Association Management

Margaret Elgin, PhD
maggie.elgin@umuc.edu

Project Management

Theresa Marron-Grotsky, PhD
theresa.marron-grotsky@umuc.edu

Moe Shahdad, PhD
moe.shahdad@umuc.edu

Public Relations

Julia E. Hill, PhD
julie.hill@umuc.edu

**CYBERSECURITY AND
INFORMATION ASSURANCE****CHAIR**

Alan Carswell, PhD
alan.carswell@umuc.edu

ASSOCIATE CHAIR

Rosemary Shumba, PhD
rosemary.shumba@umuc.edu

**PROGRAM DIRECTORS, MASTER OF
SCIENCE IN CYBERSECURITY**

Emma Garrison-Alexander, DM
emma.garrison-alexander@umuc.edu

Paul Wang, PhD
paul.wang@umuc.edu

**PROGRAM DIRECTORS, MASTER OF SCIENCE
IN CYBERSECURITY POLICY**

Bruce deGrazia, PhD
bruce.degrazia@umuc.edu

Martin Stytz, PhD
martin.stytz@umuc.edu

**PROGRAM DIRECTOR, MASTER OF
SCIENCE IN DIGITAL FORENSICS
AND CYBER INVESTIGATION**

Rosemary Shumba, PhD
rosemary.shumba@umuc.edu

**PROGRAM DIRECTOR, MASTER OF
SCIENCE IN INFORMATION TECHNOLOGY****Information Assurance**

Balakrishnan Dasarathy, PhD
balakrishnan.dasarathy@umuc.edu

DOCTORAL PROGRAM**EXECUTIVE DIRECTOR, DOCTORAL PROGRAM**

Bryan Booth, PhD
bryan.booth@umuc.edu

PROGRAM DIRECTORS, DOCTORAL PROGRAM

Leslie Dinauer, PhD
leslie.dinauer@umuc.edu

Ronald Head, PhD
ronald.head@umuc.edu

Patricia Keir, DEd
pat.keir@umuc.edu

Thomas Mierzwa, DPA
tom.mierzwa@umuc.edu

Claudine SchWeber, PhD
claudine.schweber@umuc.edu

EDUCATION**CHAIR**

Virginia H. Pilato, PhD
virginia.pilato@umuc.edu

ASSOCIATE CHAIR

Datta Kaur Khalsa, PhD
dattakaurkhalsa@umuc.edu

**DIRECTORS, MASTER OF ARTS IN
TEACHING****Certification Programs**

Warna Gillies, PhD
warna.gillies@umuc.edu

MAT Field and Clinical Experiences

Theodore E. Stone, PhD
theo.stone@umuc.edu

**ASSISTANT DIRECTOR, MASTER OF ARTS
IN TEACHING****MAT Student Success Initiatives**

Kristin Kubik
kristin.kubik@umuc.edu

CONTACT INFORMATION

PROGRAM DIRECTOR, MASTER OF DISTANCE EDUCATION AND E-LEARNING

Stella Porto, DSc
stella.porto@umuc.edu

PROGRAM DIRECTOR, MASTER OF EDUCATION IN INSTRUCTIONAL TECHNOLOGY

Randall Hansen, EdD
randall.hansen@umuc.edu

INFORMATION AND TECHNOLOGY SYSTEMS

CHAIR

Rana Khan, PhD
rana.khan@umuc.edu

ASSOCIATE CHAIRS

Garth MacKenzie, DM
garth.mackenzie@umuc.edu

Rudy Watson, PhD
rudy.watson@umuc.edu

PROGRAM DIRECTORS, MASTER OF SCIENCE IN BIOTECHNOLOGY

James Coker, PhD
james.coker@umuc.edu

Rana Khan, PhD
rana.khan@umuc.edu

PROGRAM DIRECTOR, MASTER OF SCIENCE IN ENVIRONMENTAL MANAGEMENT

Robert G. Ouellette, PhD
robert.ouellette@umuc.edu

PROGRAM DIRECTORS, MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

Database Systems Technology

Elena Gortcheva, PhD
elena.gortcheva@umuc.edu

Homeland Security Management

Irmak Renda-Tanali, DSc
irmak.renda-tanali@umuc.edu

Informatics

Les Pang, PhD
les.pang@umuc.edu

Project Management

Theresa Marron-Grodsky, PhD
theresa.marron-grodsky@umuc.edu

Moe Shahdad, PhD
moe.shahdad@umuc.edu

Software Engineering

Michael S. Brown, PhD
michael.brown@umuc.edu

Systems Engineering

Garth MacKenzie, DM
garth.mackenzie@umuc.edu

Telecommunications Management

Irena Bojanova, PhD
irena.bojanova@umuc.edu

PROGRAM DIRECTORS, MASTER OF SCIENCE IN TECHNOLOGY MANAGEMENT

Rudy Watson, PhD
rudy.watson@umuc.edu

Emergency Management/ Homeland Security Management

Irmak Renda-Tanali, DSc
irmak.renda-tanali@umuc.edu

Information Systems and Services

Les Pang, PhD
les.pang@umuc.edu

Project Management

Theresa Marron-Grodsky, PhD
theresa.marron-grodsky@umuc.edu

Moe Shahdad, PhD
moe.shahdad@umuc.edu

Systems Engineering

Garth MacKenzie, DM
garth.mackenzie@umuc.edu

Graduate School General Contact Information

Students who need assistance or information should call 800-888-UMUC (8682) for all their student needs. Graduate academic advisors are available to help students make decisions about courses and programs. Students may also call a number of UMUC locations (listed on p. 162) to schedule in-person academic advising.

Graduate Orientation and Writing Courses

Students taking COMM 600 Academic Writing for Graduate Students or the noncredit course UCSP 615 Orientation to Graduate Studies at UMUC may reach one of the following individuals for assistance and information.

GRADUATE WRITING COURSE

DIRECTOR, GRADUATE ACADEMIC
WRITING AND STUDENT SUPPORT

Sarah Rothschild
sarah.rothschild@umuc.edu

ORIENTATION AND RESEARCH SKILLS COURSES

COURSE MANAGER

Julie Harding, MLS
julie.harding@umuc.edu

Instructional Sites

**Adelphi (UMUC Headquarters)
and UMCP Campus**
3501 University Boulevard East
Adelphi, MD 20783

800-888-UMUC (8682)

Dorsey Station
6865 Deerpath Road
Elkridge, MD 21075
443-459-3500

Shady Grove
9640 Gudelsky Drive
Rockville, MD 20850
301-738-6090

UMUC at Quantico
525 Corporate Drive
Stafford, VA 2554
703-441-7000

Waldorf Center for Higher Education
3261 Old Washington Road
Waldorf, MD 20602
301-632-2900

ACADEMIC AND ADMINISTRATIVE REQUIREMENTS

Grading Methods

There are four grading methods at UMUC. The most commonly used is the standard method. The pass/fail alternative is available only under limited conditions. The satisfactory/incomplete/fail method is restricted to certain specified courses. Any course may be audited. Regulations for each are given in the following paragraphs.

GRADE OR MARK	INTERPRETATION	QUALITY POINTS
A	Excellent	4
B	Good	3
C	Below standards	2
F	Failure	0
FN	Failure for nonattendance	0
G	Grade pending	0
P	Passing	0
S	Satisfactory	0
I	Incomplete	0
AU	Audit	0
U	Unsatisfactory	0
W	Withdrawal	0

Standard

Unless students choose the audit option at the time of registration, they will be given a letter grade according to the standard method. Under the standard grading method, students are given a grade of A, B, C, or F on the basis of their performance in meeting the requirements of each course.

Pass/Fail

Noncredit courses, such as the required graduate library skills course, are graded on a pass/fail basis. Students may not choose to take other graduate courses on a pass/fail basis.

Satisfactory/Incomplete/Fail

This grading method is available only on a limited basis. Although a grade of satisfactory (S) earns credit toward graduation, it is not included in calculating grade point averages. The mark of incomplete (I) earns no credit and is not included in computing grade point averages, but is included in computing the course completion rate. While a failing grade (F) earns no credit, it is included in computing grade point averages.

Audit

Students who do not wish to receive credit may register for courses as auditors after they have been admitted. Students must indicate this intention when they register. Students may request a change from credit to audit status anytime before the end of the second week of classes.

Audited courses are listed on the permanent record, with the notation AU. No letter grade is given for audited courses, nor are credits earned. Students receiving financial aid should check with a financial aid advisor before selecting audit as a grading option as this may affect financial aid.

Grades and Marks

The Grade of A: Excellent

Only students who demonstrate exceptional comprehension and application of the course subject matter merit an A.

The Grade of B: Good

The grade of B represents the benchmark for The Graduate School. It indicates that the student has demonstrated competency in the subject matter of the course. For example, the student has fulfilled all course requirements on time, has a clear grasp of the full range of course materials and concepts, and is able to present and apply these materials and concepts in clear, reasoned, well-organized, and grammatically correct responses, whether written or oral.

The Grade of C: Below Standards

The grade of C indicates that the student has passed the course. However, the grade of C is not considered to meet overall standards for graduate work. Students should refer to Academic Standards (p. 158) for further information on the implications of a grade of C.

The Grade of F: Failure

The grade of F means a failure to satisfy the minimum requirements of a course. Although it carries no credit, it is included in calculating the grade point average. If applicable, a student assigned the grade of F must register again for the course, pay the applicable fees, repeat the course, and earn a passing grade to receive credit for that course.

The Grade of FN: Failure for Nonattendance

The grade of FN means a failure in the course because the student has not attended or participated in course assignments and activities. It is assigned when the student ceases to attend class but has not officially withdrawn. If applicable, a student assigned the grade of FN must register again for the course, pay the applicable fees, repeat the course, and earn a passing grade to receive credit for that course.

The Mark of G: Grade Pending

The mark of G is an exceptional and temporary administrative mark given only when the final grade in the course is under review. It is not the same as a mark of Incomplete.

The Mark of I: Incomplete

The mark of I (Incomplete) is an exception and is given only to students whose completed coursework has been qualitatively satisfactory, but who have been unable to complete all course requirements because of illness or other extenuating circumstances beyond their control. To be eligible for an I, students must have completed 60 percent or more of the course requirements with a grade of B or better. Students must request an I from their faculty member before the end of the session. Faculty, however, are not required to grant the request. Students with a mark of I must arrange fulfillment of course responsibilities with their teachers to receive credit. The teacher must set a deadline within four months of the last day for the term in which the course occurred. Marks of I are automatically converted to F after four months.

The Grade of P: Passing

Since the grade of P is awarded only for noncredit graduate courses, it is not included in calculating the grade point average. It does, however, appear on the permanent record.

The Grade of S: Satisfactory

The grade of S is awarded only for select courses. Although the grade of S confers credit and appears on the permanent record, courses graded S are not used in determining grade point averages.

The Mark of W: Withdrawal

Students who officially withdraw from a course receive a mark of W. This mark appears on the permanent record unless withdrawal is completed before a course begins. For purposes of financial aid, the mark of W is counted as attempted hours. It is not used in determining grade point averages.

The withdrawal process is described on p. 164.

Computing the GPA

The grade point average is calculated using the quality points assigned to each grade or mark (chart on p. 156). First, the quality point value of each grade or mark is multiplied by the number of credits; then the sum of these quality points is divided by the total number of credits attempted for which a grade of A, B, C, or F was received.

Changes in Grade

In accordance with relevant policies, faculty members may revise a grade previously assigned if a student's grade has been miscalcu-

lated or a mark of I has been submitted and must be changed. Any revision must be made no later than four months after the original grade was awarded.

Grading Repeated Courses

When a course is repeated, only the higher grade earned in the two attempts is included in the calculation of the GPA. For purposes of financial aid, both attempts are counted. Both grades are entered on the permanent record, with a notation indicating that the course was repeated. Students cannot increase the total hours earned toward a degree by repeating a course for which a passing grade was conferred previously.

To establish credit in a course previously failed or withdrawn from, students must register, pay the full tuition and fees, and repeat the entire course successfully.

Scholastic Recognition

Academic Honor Societies

PHI KAPPA PHI

As the nation's oldest, largest, and most selective collegiate honor society for all academic disciplines, Phi Kappa Phi promotes the pursuit of excellence in all fields of higher education. It recognizes the outstanding achievements of students, faculty, and others through election to membership and through awards for distinguished scholarly achievement. To qualify, graduate students must be in the final term of their degree coursework and in the upper 10 percent of their graduating class. Additional information on the Phi Kappa Phi chapter can be found at polaris.umuc.edu/phikappaphi.

UPSILON PHI DELTA

Upsilon Phi Delta is a national academic honor society founded by the Association of University Programs in Health Administration for students in health care management and policy designed to recognize, reward, and encourage academic excellence in the study of health administration. To be eligible for graduate student membership, UMUC students must have a cumulative GPA of 3.5 or higher and at least 18 credits of graduate coursework and provide evidence of outstanding scholarship. Students may obtain more information on the UMUC chapter, including membership criteria, by sending an e-mail to HonorsHCAD@umuc.edu.

Presidential Management Fellows Program

Degree-seeking graduate students at UMUC may apply to the Presidential Management Fellows Program, a prestigious leadership development program that is a pathway to a senior-level career with

ACADEMIC AND ADMINISTRATIVE REQUIREMENTS

an agency of the federal government. This highly selective program seeks master's or doctoral degree candidates who demonstrate a strong commitment to a career in public service. Those selected participate in a fellowship working with federal agencies in locations throughout the country.

The Presidential Management Fellows Program operates under the auspices of the federal Office of Personnel Management. To learn about the application process, students should contact Student Relations at 800-888-UMUC, ext. 2-2400, or graduateschool@umuc.edu. More information is available at www.pmf.gov.

Academic Standards

Grade Point Average

Graduate students are expected to maintain a 3.0 or higher GPA at all times.

ACADEMIC LEVELS OF PROGRESS

An assessment of academic standing is made for each student at the end of every term. Each student's GPA is computed for all UMUC graduate-level graded coursework to make a determination of academic standing as described below.

Good Academic Standing

A student with a cumulative GPA of 3.0 or higher with no grade of F is in good academic standing. Students must be in good academic standing to be considered for graduation.

Academic Probation

A student with a cumulative graduate GPA below 3.0 or with a grade of F is placed on academic probation. Academic probation is a temporary status. Students placed on academic probation must restore their GPA to 3.0 or higher by the end of their next term of enrollment. Any course in which a grade of F is earned, or one in which a grade of C puts the student below a 3.0 GPA, must be repeated in the student's next term of enrollment. Failure to restore the GPA to 3.0 or higher in the next term of enrollment will result in academic dismissal. A student who successfully restores his or her GPA to 3.0 or higher will be in good academic standing. Students on academic probation should seek guidance and advice from an academic advisor.

Dismissal

A student on academic probation who fails to raise the GPA to 3.0 or higher by the end of his or her next term of enrollment is dismissed. A student who is dismissed is ineligible to enroll in UMUC graduate courses and may be readmitted to The Graduate School only under the conditions listed in the following paragraph.

Reinstatement After Dismissal

A student who was academically dismissed from UMUC and who has not attended the university for a period of at least seven consecutive years may request a one-time reinstatement. Grades and credits previously earned will not apply toward the new program of a reinstated student.

Program Completion Requirements

Students are responsible for applying for graduation (for degrees and/or certificates) by completing and submitting the appropriate diploma application and fees by the deadlines published on the UMUC website. The award of degrees and certificates is conditional upon satisfactory completion of all program requirements and compliance with all UMUC policies. Graduation clearance will not be granted for a student with outstanding debt to UMUC or any outstanding misconduct charges or unsatisfied sanction terms. Regardless of GPA, no grade of F can remain on the graduate record at the time a student applies for graduation. Individual programs may have additional requirements that must be met before graduation clearance can be granted.

Time Limit for Degrees and Certificates

All requirements established for the completion of a graduate degree or certificate program—including prerequisite courses and UCSP 615—must be fulfilled within seven consecutive years, except for the Master of Business Administration, which must be completed within five years. For dual degree programs, both degrees must be completed within seven years. This regulation includes courses transferred from other institutions. Any transfer of credit must be completed within the seven-year time frame to be applied toward the degree or certificate program.

Doctoral Program Standards

The Doctor of Management (DM) program has requirements in addition to those listed for academic standing. In addition to a minimum GPA of 3.0, a DM student who receives a grade of C in a course must repeat that course in the next term of enrollment and earn a grade of B or better. The option to repeat a course may be exercised only once. A DM student who receives a grade of F or FN or a second grade of C is dismissed from the DM program, regardless of GPA.

DM students must also successfully complete a comprehensive examination at the end of each doctoral content course (i.e., all nondissertation courses). A DM student who fails the first comprehensive examination for a given course has one opportunity to repeat the exam. A DM student who fails the second comprehensive exam for the same content course is dismissed from the DM program.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

A DM student who receives a grade of U (unsatisfactory) in a dissertation course (DMGT 890, 891, and 892) must repeat that dissertation course in the next term of enrollment and earn a grade of S (satisfactory) to continue in the program. Students may repeat a dissertation course only once. A DM student who receives a second grade of U will be dismissed from the program.

Further information is available in section IV of UMUC policy 158.00 Academic Levels of Progress (www.umuc.edu/policies/academicpolicies/aa15800.cfm).

Degree Requirements and Continuous Enrollment

In general, the UMUC degree and certificate requirements that apply to a student are those that were in effect when the student began continuous enrollment in the program. If a student has not been continuously enrolled, the requirements that apply are those in effect at UMUC when the student resumes continuous enrollment. To be considered continuously enrolled, students must be or have been enrolled at UMUC and have had no more than two years of nonenrollment. When a continuously enrolled student chooses to change his or her program, the student may be subject to the requirements in effect at the time of the change.

Responsibilities of the Student

Attendance

Students are expected to attend all on-site or online classes and any related activities regularly and punctually.*

Students who are absent from class retain responsibility for completing any missed coursework, as indicated in the course outline. Students are also responsible for obtaining information about each class session, including any announcements and assignments they missed. Failure of the student to complete any required coursework as scheduled may adversely affect the grade earned. Faculty are not expected to repeat material that a student missed because of absence.

Students may not give permission to another person to accompany them to an on-site class, attend an on-site class in their place, or access or attend their online class.

Academic Integrity

Integrity in teaching and learning is a fundamental principle of a university. UMUC believes that all members of the university community share the responsibility for academic integrity, as expressed in the University System of Maryland (USM) policy “Faculty, Student, and Institutional Rights and Responsibilities for

Academic Integrity.” At UMUC, faculty members are expected to establish classroom environments conducive to the maintenance of academic integrity by giving students a complete syllabus describing the course and its requirements, by providing clear-cut directions for assignments and adequate and timely feedback, and by arranging appropriate testing conditions. Students at UMUC are expected to conduct themselves in a manner that will contribute to the maintenance of academic integrity. The USM policy is located at www.usmd.edu/regents/bylaws/SectionIII.

Academic dishonesty is the failure to maintain academic integrity. Academic dishonesty includes but is not limited to cheating; fabrication; bribery offered for grades, transcripts, or diplomas; obtaining or giving aid on an examination; having unauthorized prior knowledge of an examination; doing work for another student; presenting another student’s work as one’s own; and plagiarism.

Plagiarism is the presentation of another person’s idea or product as one’s own. Plagiarism includes copying verbatim all or part of another’s written work without quotation marks and citation of the source in the text and in reference lists; using phrases, charts, figures, illustrations, or mathematical or scientific solutions without citing the source; paraphrasing ideas, conclusions, or research without citing the source in the text and in reference lists; or using all or part of a literary plot, poem, film, musical score, or other artistic product without attributing the work to its creator.

Students can avoid unintentional plagiarism by carefully following accepted scholarly practices. Notes taken for papers and research projects should accurately record sources of material to be appropriately cited, quoted, paraphrased, or summarized. All coursework submitted by students should acknowledge these sources both in text and in a reference list, in accordance with accepted citation practices.

Attempts to violate academic integrity or assist others in doing so are prohibited. Resources to educate students about academic integrity are available at www.umuc.edu/academicintegrity. Additional information on UMUC’s policy on Academic Dishonesty and Plagiarism may be viewed at www.umuc.edu/policies/academicpolicies/aa15025.cfm.

Academic Load

Generally, graduate students are considered full-time if they are registered for at least 9 credits per term. Graduate students who are enrolled in 6 credits per term are considered half-time.

Doctoral and MBA students are considered full-time when they register for at least 6 credits per term in their degree program, half-time if they register for 3 credits per term.

* The UMUC policy on religious holidays is available online at www.umuc.edu/policies/academicpolicies/aa05100.cfm.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

ACADEMIC AND ADMINISTRATIVE REQUIREMENTS

UMUC's policy 215.00 on Student Academic Load and Enrollment Status is provided at www.umuc.edu/policies/academicpolicies/aa215.00.cfm.

Students are advised to limit their academic loads to conform with the demands of their employment and the time they have to prepare for class. Given the time commitment required for graduate study, the maximum recommended load for graduate students is 6 credits per term.

Students (except those in the DM; MBA; or MS in Cybersecurity, Cybersecurity Policy, Data Analytics, or Digital Forensics and Cyber Investigation programs) who have a compelling need to take more than 6 credits per term may submit a written request to take an additional credits or one additional course to their advisor. In the request, the student must indicate his or her acceptance of the academic risk entailed in adopting the course overload.

All requests for exceptions to the maximum recommended course load must be made at least one month before the beginning of a term and are subject to approval by the Office of the Dean for The Graduate School.

To be considered for a course overload, a student must

- Be a degree- or certificate-seeking student.
- Have no previous grades of C or F.
- Have no current marks of I.
- Have never been on academic probation.

Students pursuing the DM; MBA; or MS in Cybersecurity, Cybersecurity Policy, Data Analytics, or Digital Forensics and Cyber Investigation cannot take course overloads.

Grievance/Appeal Procedure

Students who have legitimate complaints about Graduate School faculty, staff members, academic departments, or administrative units should contact their program director. For information on the procedure to file a formal appeal or grievance about the actions of a faculty or administrative staff member, students should contact Student Relations, Graduate School, at 800-888-UMUC, ext. 2-2400, or graduateschool@umuc.edu. More information is available online at www.umuc.edu/policies/academicpolicies/aa13070.cfm and www.umuc.edu/policies/academicpolicies/aa13080.cfm.

Connectivity and Computer Literacy

To take full advantage of The Graduate School's educational offerings, students must own or have access to a personal computer and have access to the Internet. In some classes, students may be required

to participate in synchronous computer-based class discussions and study group activities.

All graduate students must be able to reach their fellow students, faculty, and the university via e-mail. Students are assigned a UMUC Google account, which includes e-mail, as soon as they register. While students are not required to use the UMUC e-mail address, they must maintain a current e-mail address through MyUMUC (<https://my.umuc.edu>). More information on UMUC's Google applications is available at www.umuc.edu/umucgmail.

All graduate students are expected to have a working knowledge of, and access to, a basic word processing program such as Microsoft Word, a spreadsheet program such as Microsoft Excel, and Internet electronic mail services. Knowledge of Microsoft Windows and Internet information services such as the World Wide Web is also necessary.

Applicants and students who require further training in the use of Internet services and basic software packages may wish to consult the UMUC undergraduate schedule of classes or speak to an undergraduate advisor regarding appropriate classes. The schedule may be obtained by calling 800-888-UMUC, and advisors may be reached at 800-888-UMUC, ext. 2-2100. Schedules and catalogs are also available for download on the UMUC website.

Electronic File Sharing

Peer-to-peer programs permit computers to share data in the form of music, movies, games, computer files, and software.

All users of the UMUC network are required to comply with federal copyright laws. UMUC network users are not permitted to share unauthorized copyrighted material over the UMUC network, whether on personally owned or university computers.

Any unauthorized distribution of copyrighted materials on the university network, including peer-to-peer file sharing, is a violation of federal law and UMUC policies. Violations may lead to disciplinary proceedings and, in some cases, civil and criminal legal action. UMUC's computing resources policies can be found online at www.umuc.edu/computerresource. UMUC's Computer Use Policy can be found at www.umuc.edu/computerpolicy.

More information on how to legally download music is provided on the Recording Industry Association of America website at www.riaa.com. Information on how to legally download movies and television programs is available on the Motion Picture Association of America website at www.mpa.org.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Code of Student Conduct

UMUC policy 151.00 Code of Student Conduct outlines prohibited conduct and the procedures by which such conduct is addressed. The university reserves the right to take appropriate action to protect the safety and well-being of the UMUC community.

Students may be accountable to both civil authorities and to UMUC for acts that constitute violations of law and of this code. Disciplinary action at UMUC will normally go forward pending criminal proceedings and will not be subject to challenge on the grounds that criminal charges involving the same incident have been dismissed or reduced.

To encourage the development and growth of a supportive and respectful academic environment for all students, faculty, and staff, UMUC has created the Code of Civility, which is available at www.umuc.edu/civility and in UMUC publications.

In every case of alleged Code of Conduct violation, the burden of proof rests with the complainant who must establish the responsibility of the person accused by a preponderance of evidence. In cases where the complainant wishes to remain anonymous, the burden of proof rests with the administrator.

Additional information on the UMUC Code of Student Conduct may be found at www.umuc.edu/policies/studentpolicies/stud15100.cfm.

ADMISSION AND ENROLLMENT

General Information

Before the beginning of each academic session, UMUC holds various events online, as well as open houses in the Maryland area, for new and prospective students. These events offer an opportunity to learn about UMUC and its programs, student services, academic and career options, faculty members, and fellow students. Prospective students can apply for admission and enroll in courses during the on-site open houses.

For general information or to be directed to specific offices, students may call 800-888-UMUC (8682). Phone representatives are available for general information from 6 a.m. to 10 p.m., Monday through Saturday. Most UMUC offices are open weekdays from 8:30 a.m. to 5 p.m. eastern time.

Admission

Admission Requirements

For **master's degree and certificate programs**, most applicants who have graduated from a regionally accredited degree-granting university or college are eligible for admission. Transcripts are required, but Graduate Record Examination (GRE) or Graduate Management Admission Test (GMAT) scores are not. (Information on optional submission of GMAT scores for enrollment in the one-year MBA program is provided on p. 32.) Some graduate programs—such as the one-year program for the MBA, the MS in Data Analytics, and all accounting programs—also require the submission of additional information before an admission decision can be made (more details are provided under individual program descriptions).

Applicants to the **Master of Arts in Teaching** program must submit standardized text scores, usually Praxis I scores. (More information on MAT admission criteria may be found on p. 52.)

To be eligible for the **doctoral programs**, students must have a master's degree from a regionally accredited college or university and must apply before the application deadline (or with permission of the department). Students must receive notice of eligibility to enroll in DMGT 600 before registering. Applicants must successfully complete DMGT 600 with a grade of A or B for full admission to the program.

The prerequisite requirement may be waived for applicants who submit a GRE verbal and quantitative score or GMAT score in the 75th percentile or higher or (for the DM in Community College Policy and Administration) with permission of the program director. Test scores must be no more than five years old at the time of application. Application procedures are detailed on pp. 10 and 11.

READMISSION OF STUDENTS WHO WERE DISMISSED

Students who were academically dismissed from The Graduate School may be considered for a one-time readmission after a period of seven years. Grades and credits earned seven or more years before readmission will not apply toward the student's new program or academic progress status.

READMISSION OF STUDENTS ON ACADEMIC PROBATION

Students on academic probation who cease study and wait seven years before reapplying for admission are eligible to have grades and credits earned seven or more years before waived from the student's new program and academic progress status.

Admission Procedures

Applicants for **graduate certificate and master's degree programs** must complete and submit the graduate admission application, pay the nonrefundable fee, and provide an official transcript indicating completion of a bachelor's (or higher) degree from a regionally accredited degree-granting university or college. Applications for admission are accepted throughout the year.

Information on documentation required for admission to the **doctoral program** is provided on pp. 10 and 11. Doctoral applicants should also visit www.umuc.edu/dm for further details and application deadlines. The doctoral program office may be contacted at 800-888-UMUC, ext. 2-2400.

Students may apply to all UMUC graduate programs online via MyUMUC at <https://my.umuc.edu>.

DETERMINATION OF RESIDENCY FOR TUITION PURPOSES

An initial determination of in-state or out-of-state status for tuition purposes is made when a student applies for admission. The determination made at that time remains in effect thereafter unless it is successfully challenged. The student is responsible for providing the information necessary to establish eligibility for in-state status. Official criteria for determining residency are provided at www.usmd.edu/regents/bylaws/SectionVIII. Information on tuition and fees may be found on p. 165.

REENROLLMENT

Students who have not enrolled in graduate classes at UMUC for a period of two years (six semesters) or more must complete a new application for admission but are not required to pay the application fee. Information on how an extended break from study may affect degree requirements is on p. 159.

CHANGING DEGREE PROGRAMS

Students who are considering a change from one degree program or specialization to another—whether they are switching programs in a first degree or starting a second degree in a dual degree program—must first consult an advisor. The advisor can determine whether another application is required and when the student may begin to take classes in the second program.

INTERNATIONAL APPLICANTS

To be considered for admission, international students must present

- Official documents indicating successful completion of the equivalent of a regionally accredited U.S. bachelor's degree.
Applicants educated in countries other than the United States must have their official transcripts evaluated by an independent evaluation service. The evaluating organization will send a copy of the evaluation both to the applicant and to The Graduate School. UMUC accepts credit evaluations from any National Association of Credential Evaluation Services (NACES)—approved organization, including World Education Services (WES) and the American Association of Collegiate Registrars and Admissions Officers (AACRAO). A list of NACES-approved agencies is available at www.naces.org/members.htm. Applicants may access AACRAO request forms online at www.aacrao.org/international or may contact the organization by phone at 202-296-3359 or by e-mail at ies@aacrao.org.
- Proof of English language proficiency.
Applicants who have not received a baccalaureate degree from an English-speaking country must demonstrate English language proficiency to be eligible for admission. (A complete list of countries recognized as English-speaking is available online at www.umuc.edu/internationalstudents.) The following are accepted as proof of English proficiency:
 - A minimum TOEFL (Test of English as a Foreign Language) score of 550 on the paper-based version or 79 on the Internet version and a minimum Test of Written English (TWE) score of 4 (unless the Internet-based TOEFL is submitted—then no TWE is required)
 - A minimum score of 6.5 on the IELTS (International English Language Testing System), including the academic writing and academic reading modules
 - A passing grade of Pre-1 on the Eiken Test in Practical English Proficiency
 - A transcript indicating completion of at least 12 credits of graduate coursework at a regionally accredited U.S. degree-granting institution. Credits must have been earned in the past two years with a grade of B or higher. All credit is subject to review before being accepted as evidence of English proficiency.

Applicants must arrange to have official score reports sent directly from the testing agency to The Graduate School. The TOEFL score recovery code for UMUC is 5804. Test scores must be less than two years old.

- Documentation of residency status.

Applicants must provide a photocopy (front and back) of a permanent residency card or the visa page of a valid passport.

Merely providing these documents does not ensure admission. An interview may also be required. The official transcript evaluation must be submitted and evaluated before admission is considered.

Note: UMUC no longer issues Form I-20 A-B Certificate of Eligibility for F-1 student status.

Restrictions

Students may be admitted to only one institution in the University System of Maryland at any one time. Students may be admitted as either graduates or undergraduates, but no one may hold both classifications simultaneously. A student's most recent application for admission invalidates any previous admission.

Students may be admitted to only one graduate program at any time. Application for admission to a second graduate program is not permitted until notification of resignation has been presented to the first program. Students admitted to any other graduate program in the University System of Maryland must notify UMUC. Students retain active status for two years (six consecutive terms) even without being registered in the program. However, after two years without a completed graduate course, students must submit a new application.

Registration

Ways to Register

Registration begins each term as soon as the class schedule becomes available on the web and continues until the deadline listed. Students should check the current graduate schedule of classes or the online academic calendar (www.umuc.edu/calendar) for registration deadlines.

Students in some programs (e.g., the Master of Business Administration) must register through the program office for most courses.

UMUC offers four ways to register for most courses: online via MyUMUC, by mail, by fax, and on-site.

ONLINE VIA MYUMUC

Students may register online at <https://my.umuc.edu>. If a student has questions regarding confirmation of the registration, he or she should contact Graduate Advising.

ADMISSION AND ENROLLMENT

BY MAIL

Students may mail their registration to Graduate Advising, University of Maryland University College, 3501 University Boulevard East, Adelphi, MD 20783. Forms are available online at www.umuc.edu/register and in the graduate schedule of classes.

BY FAX

Students may fax their registration to 240-684-2151. Forms are available in the graduate schedule of classes and online at www.umuc.edu/register.

Students who have employer-provided tuition must be sure to fax their registration and employer contract at the same time. Any fees not covered by the contract must be charged to American Express, Discover, MasterCard, or Visa.

ON-SITE

Walk-in registration is available in the Academic Center at Largo, in Largo, Maryland, and at a number of other locations in the Baltimore-Washington metropolitan area. Students may register for any course offered (regardless of location or format) during regular office hours.

Adjustments to Registrations

The university reserves the right to make changes to class sections to ensure that such sections are adequately sized to create an appropriate learning environment. Such class section changes include changing faculty members and moving students between course sections to balance enrollments.

Waiting List

If a class is already full at the time of registration, the student has the option of placing his or her name on a waiting list for that class. Students can check on class availability by visiting MyUMUC at <https://my.umuc.edu>.

- If a space becomes available, the first student on the waiting list will automatically be registered for it, and the charge will appear on his or her account. An e-mail notification of the enrollment from the waiting list will be sent. If a space becomes available but the first student is ineligible to enroll in the class (for reasons such as failing to meet the prerequisites, being enrolled in another section of the same class, or being enrolled in a class that conflicts in time), the space will go to the next person on the waiting list.
- Students who no longer want a class should remove their name from the waiting list to prevent the possibility of an automatic enrollment.

- Students who are already enrolled in the maximum number of allowable credits (6 credits) and who are on a waiting list for a third course will not be registered in the third course even if space becomes available in the class.
- Students who are already enrolled in a different section of the same class for which they are waitlisted will not be enrolled in the waitlisted section even if space becomes available.
- Faculty members and academic advisors are not authorized to add students to a full class.

Withdrawals or Dropped Courses

Stopping payment on checks for registration fees, or not paying at registration, does not constitute an official withdrawal or relieve the student of his or her financial obligation to UMUC. Never attending or ceasing to attend class(es) does not constitute a withdrawal.

Students who officially withdraw from a course receive a mark of W (described on p. 157). Graduate students must officially withdraw before 65 percent of the class has expired. Specific deadlines are provided online at www.umuc.edu/withdrawals.

Students may withdraw from a course by three methods:

- Students may access MyUMUC online at <https://my.umuc.edu> and follow the directions for dropping a course. The use of student and personal identification numbers is considered official authorization for the withdrawal, which is effective immediately.
- Students may complete a withdrawal form request to be processed by an advisor. The withdrawal becomes effective the date the form is filed with UMUC.
- Students may request in writing to withdraw from a course or courses. The letter should specify the course, course number, and section, and include the student's full name, student ID number, and signature. The request should be addressed to Graduate Advising, University of Maryland University College, 3501 University Boulevard East, Adelphi, MD 20783. The postmark on the envelope becomes the official date of withdrawal. **Note:** Because The Graduate School can only honor withdrawal requests actually received, UMUC recommends that students ask for a return receipt from the post office to ensure that delivery of the withdrawal will be acknowledged.

In all cases, the student should maintain a copy of the transaction for his or her records.

UMUC cannot accept withdrawals verbally over the telephone. Failure to withdraw in the required manner results in the forfeiture of any refund and may result in a failing grade. For financial aid recipients, failure to withdraw in the required manner may result in cancellation/reversal of financial aid awards. Students should contact a financial aid advisor before withdrawing to determine whether or how this will affect his or her financial aid.

Enrollment Across Programs

In general, students are not allowed to enroll in coursework that does not fulfill prerequisites or requirements for their specified program. Students who wish to change their degree program or specialization should first contact a graduate advisor and must wait until the next standard term (fall, spring, or summer) before enrolling in classes. Those who plan to pursue a dual degree option must complete the first degree and apply for the second program and must also wait until the next standard term before beginning the second program. In no case may students take coursework for different programs in the same session or term or in overlapping sessions or terms (e.g., where the MBA or executive winter term overlaps the standard spring term).

Students who are interested in taking courses outside their academic program should first consult Graduate Advising. Information on advising is provided on p. 168. The complete text of UMUC policy 211.00 on cross-enrollment is available at www.umuc.edu/policies.

Financial Information

Tuition and Fees

Tuition rates and fees are published each session in the graduate schedule of classes and are available online at www.umuc.edu/tuition. Students should review the fee schedule carefully to see which ones apply. Information on student classification and residency is provided at www.usmd.edu/regents/bylaws/SectionVIII.

UMUC students are expected to make payment at the time of registration. If a student's payment is not received by the due date, he or she may be penalized by being disenrolled from courses or having his or her account balance transferred to the State Central Collections Unit.

Several payment options are available to UMUC students who are unable to make payment at the time of registration. To find out more about payment options, students should visit www.umuc.edu/payoptions.

Payment may be made by cash, check, money order, or American Express, Discover, MasterCard, or Visa credit cards. Checks should be payable to University of Maryland University College. Students who qualify for tuition assistance, financial aid, or veterans benefits should consult the appropriate sections of this catalog. Students interested in the monthly payment plan, administered by ECSI should visit www.umuc.edu/payoptions or call 866-927-1438.

CURRENT TUITION AND FEES

Tuition rates and fees are published each term in the graduate schedule of classes and are available on the Web at www.umuc.edu/tuition. Students should review the fee schedule carefully to see which ones apply. Fees are commonly charged for admission and

graduation applications, makeup testing, technology, and transcripts. There is also a service charge for dishonored checks.

Refunds

A student who drops a course during the official drop period receives a full tuition refund. A student who withdraws after the drop period is refunded a portion of the tuition, the amount to be determined by the date of the withdrawal. The schedule for partial refunds is provided online at www.umuc.edu/refundpolicy.

The official date used to determine a refund is the date of the drop or withdrawal transaction. The official date for federal financial aid recipients is the last date of class attendance as determined by federal regulations.

REFUNDS FOR COURSE CANCELLATIONS

The university refunds 100 percent of tuition, technology, and registration fees for courses canceled by the university. The admission application fee is nonrefundable, even when a course is canceled.

REFUNDS AND FINANCIAL AID

If the tuition for a student who withdraws was paid by employer contract, the refund is returned to the employer. If the tuition assistance was a partial payment, it is returned to the employer, and excess payments are refunded to the student. Financial aid awards may be canceled or reduced for financial aid recipients who withdraw from classes. Financial aid recipients should check with a financial aid advisor when withdrawing from a course to determine the impact on their awards.

No offer of financial aid is considered an active, final award until the refund period has ended. Students who withdraw before the end of that period are liable for all costs incurred and are billed accordingly.

Note: Students in their first enrollment period at UMUC who are receiving financial aid (grants, work-study, or loans) and withdraw from the institution (not merely from a course) before completing 60 percent of the enrollment period for which they have been charged are subject to a federal pro-rata refund policy. Financial aid advisors can provide further information.

ADMISSION AND ENROLLMENT

Dishonored Checks

For each paper or electronic check returned to UMUC by the payer's bank (whether because of insufficient funds, stopped payment, postdating, or drawing against uncollected items), UMUC assesses a service charge of \$30 (over and above any service charges levied by the financial institution).

A student who stops payment on a check for tuition is thereby neither disenrolled nor relieved of responsibility for paying tuition and fees. Anyone whose checks for tuition or fees remain dishonored may be barred from classes.

Indebtedness to the University

Students who incur debts to UMUC must clear them to be permitted to register. Requests for transcripts and diplomas are denied until all debts have been paid. Outstanding debts are collected against refunds due the student. After a reasonable period, uncollected debts are forwarded to the Central Collection Unit of the State Attorney General's Office.

The Board of Regents has authorized UMUC to charge students' delinquent accounts for all collection costs incurred by UMUC. The normal collection fee is 17 percent plus attorney and/or court costs. Delinquent accounts are reported to a credit bureau.

Employer-Provided Tuition Assistance

If an employer is going to pay for part or all of a student's tuition, at the time of registration the student must submit two copies of a document (purchase order, tuition assistance form, or contract on company letterhead) containing the following information:

- A specific description of types of fees and charges (such as tuition, application fee, or books) and the amount to be assumed by the employer
- The student's name and student identification number
- The session covered by the document
- The billing address
- The signature and phone number of the authorizing official

A student who does not have an authorizing document at the time of registration must pay the bill in full and arrange for direct reimbursement from the employer. UMUC cannot issue refunds for authorizing documents submitted after registration.

Documents that restrict payment or are in any way conditional will not be accepted. If the employer does not pay UMUC, the student is responsible for payment.

Monthly Tuition Payment Plan

UMUC offers a cost-effective alternative for students who are budgeting for college tuition: an interest-free, monthly tuition-payment plan. This plan allows students to spread all or part of their tuition bills into monthly installments on an academic session basis. All UMUC students are eligible to participate in the payment plan, regardless of financial need. More complete information is available online at www.umuc.edu/payoptions.

SERVICES AND RESOURCES

Availability of Services

UMUC provides services and resources to help students all over the world complete their educational programs—through automated systems and resources available online or by telephone, by e-mail and telephone communication, and in person at sites throughout the Maryland area. A number of offices are responsible for the delivery of these services, including Career Services, the UMUC Library, and the offices of Enrollment Management, Financial Aid, and Information Technology.

Among these, the Office of the Registrar and the Office of Enrollment Management (which includes Graduate Advising) respond to most of the student's academic needs throughout his or her college career, providing general information; admission assistance; academic advising; registration, graduation, and transcript services; and veterans benefits assistance.

All regional sites offer graduate services. In the Maryland area, services are available at the following locations:

Aberdeen Proving Ground

Phone 410-272-8269

Arundel Mills

Phone 410-777-1882

Dorsey Station

Phone 443-459-3500

Fort Belvoir

Phone 703-781-0059

Fort Detrick

Phone 301-619-2854

Fort Meade

Phone 410-551-0431 or 301-621-9882

Joint Base Anacostia-Bolling

Phone 202-563-3611

Joint Base Andrews Naval Air Facility Washington

Phone 301-981-3123

Joint Base Myer-Henderson Hall

Phone 703-527-4952 (Fort Myer)
703-232-9752 (Henderson Hall)

Largo (UMUC Academic Center)

Phone 800-888-UMUC (8682)
gradinfo@umuc.edu

Laurel College Center

Phone 866-228-6110

Patuxent River Naval Air Station

Phone 301-737-3228

Quantico

Phone 703-630-1543 (Marine Corps Base)
703-441-7000 (UMUC at Quantico)

Shady Grove

Phone 301-738-6090

Southern Maryland Higher Education Center

Phone 301-737-2500, ext. 215

Waldorf Center for Higher Education

Phone 301-632-2900

Walter Reed National Military Medical Center (Bethesda)

Phone 301-654-1377

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

SERVICES AND RESOURCES

General Information

UMUC phone representatives are available 24 hours a day, seven days a week, at 800-888-UMUC (8682) to provide answers to general questions and help navigating UMUC's website. Representatives can also make sure that callers are on the UMUC mailing list to receive upcoming class schedules and other important announcements.

Admission Assistance

Academic advisors serve individuals who are inquiring about becoming UMUC students at some future time or are admitted but have not yet registered. They can help prospective students apply for admission, identify financial aid opportunities, plan their curriculum, and register for their first term of classes.

Advisors can also help qualified senior citizens apply for Golden Identification benefits. More information is on p. 170.

Prospective and new students may contact an academic advisor by phone at 800-888-UMUC or by e-mail at newgrad@umuc.edu. More detailed information on admission is available on p. 162.

Automated Services

Through MyUMUC (available online at <https://my.umuc.edu>), students have access to many of their personal UMUC records. MyUMUC enables them to change personal information (such as home address, e-mail address, or phone numbers); register; pay bills; check grades, financial aid, and student account status; apply for graduation; request certification for VA educational benefits and check the status of the request; and view and print reports (such as their class schedule, grade report, statement of account, and unofficial transcript).

Advising

All students are assigned an advisor, who will help guide them through all the steps that lead to a graduate-level degree or certificate. Advisors will also recommend ways for the student to complete academic requirements quickly and efficiently.

It is up to the student to seek advising and to keep track of his or her program requirements. Students should retain and refer to the catalog of the year they entered their program as it contains all degree requirements for which they will be held accountable as long as they maintain continuous enrollment.

Students who have not attended UMUC for a year or more should also contact an advisor for assistance in getting back on track. If it has been more than two years since the student's last enrollment, he or she must first reapply for admission. Once readmitted, such stu-

dents must fulfill the degree requirements detailed in the catalog of the year in which they resume study. More information on continuous enrollment is provided on p. 159.

Whenever possible, students should get advising information in writing. Students who fail to meet all degree requirements will not be cleared for graduation.

Students may contact advisors by phone at 800-888-UMUC, fax at 240-684-2154, or e-mail at gradinfo@umuc.edu. In the Washington, D.C., metropolitan area, students also have the option of scheduling an appointment with an advisor in person at the sites listed on the previous page.

Evaluation of Transfer Credit

Up to 6 credits of graduate coursework may be considered for transfer to most graduate degree programs at UMUC if earned at an approved institution and if applicable to the student's program of study. The Graduate School may accept up to 3 graduate transfer credits for a certificate program.

UMUC may accept more than the usual maximum credit (3 credits for certificates or 6 credits for degree programs) under approved articulation agreements. Decisions regarding the eligibility of students to enter a graduate program under an existing articulation agreement are made at the time of admission and may not be made retroactive after enrollment.

The DM; MBA; MS in Cybersecurity, Cybersecurity Policy, Data Analytics, and Digital Forensics and Cyber Investigation programs do not accept transfer credit. Students should contact their advisors for details.

All graduate credits offered for transfer credit must meet the following criteria:

- The credits must have been earned as graduate credit.
- The credits must not have been used to meet the requirements for any degree the student previously earned or is expected to earn.
- The credits must have been awarded within the time limit for the degree or certificate.
- The student must have earned a grade of B or better in the courses considered for transfer. (However, these grades are not included in the calculation of the student's grade point average.)
- The department advisor and the program director must have determined that the transfer courses are relevant to the student's program of study.

- The credits must have been earned at an approved institution (defined below) and be equivalent to graduate-level coursework or recommended for graduate-level credit by the American Council on Education (ACE) or other nationally recognized bodies or as part of an approved articulation agreement.

APPROVED INSTITUTIONS

Approved institutions include those accredited by the following regional associations:

- Middle States Association of Colleges and Schools Commission on Higher Education
- Northwest Commission of Colleges and Universities
- North Central Association of Colleges and Schools, The Higher Learning Commission
- New England Association of Schools and Colleges Commission on Institutions of Higher Education
- Southern Association of Colleges and Schools Commission on Colleges
- Western Association of Schools and Colleges Accrediting Commission for Senior Colleges and Universities

Other institutions may be approved based on agreements and/or joint programs with UMUC.

Accessibility Services

Reasonable accommodations are available for students who have disabilities and are enrolled in any program offered at UMUC.

Requests for accommodations should be made as early as possible to allow sufficient time to review requests and documentation and make proper arrangements. Such requests must be made every semester.

Students with disabilities who wish to receive accommodations must officially register with Accessibility Services. To do so, students must first submit documentation of their disability. Depending on the disability, documentation may include secondary school records; medical, psychiatric, or psychological reports and diagnoses; or a psychoeducational evaluation. The documentation must provide clear and specific evidence of a disability and recommended accommodations from a qualified licensed professional.

Once documentation is received, Accessibility Services will notify the student of the status of his or her file and schedule an intake appointment, which may be held by phone, e-mail, or in person. During the appointment, an intake form is completed and services and procedures are discussed.

Note: All UMUC students are required to comply with university policies and procedures and meet the academic requirements of all graduate certificate and degree programs. Students with disabili-

ties should review the requirements listed in this catalog. Students should not apply to a UMUC certificate or degree program with the expectation that any academic requirement will be waived or that substitutions will be allowed.

For more information, students should visit www.umuc.edu/accessibility. Accessibility Services may be contacted by phone at 800-888-UMUC, ext. 2-2287, or 240-684-2277 (TTY) or by e-mail at accessibilityservices@umuc.edu.

Transcript Services

Official transcripts are maintained by the Office of the Registrar. These transcripts show all coursework taken at UMUC; if graduate credit from another university has been accepted in transfer, that also is noted.

Students' records are considered confidential. Therefore, UMUC releases transcripts only upon receipt of a signed request from the student and payment of the appropriate fee. (With online requests, the student and personal identification numbers are considered an official signature.)

Procedures and forms for requesting transcripts are provided online at www.umuc.edu/transcripts. A fee is charged for each UMUC transcript issued; additional fees are charged for rush processing. Students should allow at least two weeks for transcript requests to be processed. All financial obligations to the university must be satisfied before a transcript may be released.

Graduation Clearance and Services

UMUC holds a graduation ceremony in Adelphi each year in May. Students who completed degree requirements the previous August and December (or in the previous September, December, or March for the MBA), as well as those MBA students who are enrolled in their final courses and will complete their requirements by the end of the MBA spring term, are invited to participate.

Students who expect to complete the requirements for a degree or certificate are responsible for filing an application for a diploma (available online at <https://my.umuc.edu>) with Student Affairs and paying the appropriate fee (currently \$50). For students in most graduate degree and certificate programs, applications for diploma may be submitted at the time of the final term's registration or up to the following deadlines:

December graduation	October 15
May graduation	February 15
August graduation	June 15

For students in the regular (two-year) MBA program and the CIO certificate program, applications for diploma may be submitted

SERVICES AND RESOURCES

at the time of the final term's registration or up to the following deadlines:

December graduation	October 15
March graduation	February 15
June graduation	April 1
September graduation J	July 15

Students whose applications for a diploma are received after the deadlines will be considered for receiving degrees at the next graduation. Students who do not complete degree requirements in the term in which they first applied for graduation must complete a new application for diploma and pay the fee for the term in which they will graduate.

Students pursuing certificates must apply for certificates by the same deadlines. The application form is available online at <https://my.umuc.edu>.

Advisors are available to answer any questions about requirements for graduation and the application for diploma or certificate at 800-888-UMUC, ext. 2-2100, or gradinfo@umuc.edu.

Verification Services

Enrollment Verification

UMUC participates in the National Student Clearinghouse which, in turn, supplies verification of enrollment to lending agencies. UMUC reports enrollment data on students to the clearinghouse two times each month. Enrollment data is provided for all students who are enrolled in classes, whether they are attending full-time, half-time, or less than half-time, as well as for students who are considered to have withdrawn from the university. UMUC also reports degree information, including graduation date, for students who have completed an academic program.

Current students may request enrollment verification through MyUMUC for free. Students who are no longer enrolled at UMUC may request a transcript of their academic record to verify past enrollment.

All enrollment verifications requested via MyUMUC are mailed out the next business day.

Loan Deferment Form Certification

UMUC does not grant or deny deferment requests; any deferments are at the sole discretion of the lender. UMUC processes deferment forms, certifying the student's official dates of enrollment. Students who are not enrolled in the current term (fall, spring, or summer) are reported as having withdrawn, regardless of whether they plan to enroll or have already enrolled in a future term.

Students with William D. Ford Federal Direct Loans who wish to apply for a deferment must complete the In-School Deferment Request (available at www.umuc.edu/finaidforms) and submit it to the Registrar's Office by fax at 240-684-2005 or 240-684-2006 for certification.

Students should be aware both of their lender's deadlines for receiving deferment requests and UMUC's reporting schedule to avoid having deferment forms processed and forwarded to the lenders before enrollment data has been reported.

Degree Verification

UMUC has authorized the National Student Clearinghouse to provide degree verification. Employers and background screening firms must contact the clearinghouse directly for this information, for which a fee is charged. Information on this service may be found at www.studentclearinghouse.org.

Golden ID Program

Senior citizens may qualify for participation in the Golden Identification program, which allows them to register for up to 6 credits per semester without paying tuition. Students must be Maryland residents, U.S. citizens, or documented permanent residents; 60 years old by the beginning date of the term for which they are applying; and not employed more than 20 hours per week to qualify for this program. Golden ID students may only register the week before classes begin on a space-available basis. Benefits do not apply to MBA, MS in Cybersecurity, MS in Cybersecurity Policy, MS in Data Analytics, and MS in Digital Forensics and Cyber Investigation program courses or 800-level courses. To request an application, students should contact Graduate Advising at 800-888-UMUC. More information on this program is available online at www.umuc.edu/goldenid.

Student Advisory Council

The purpose of the Student Advisory Council is to provide a means for UMUC students to provide input on and be informed about significant institutional decisions. The council consists of 12 members, elected by their fellow students, who act in an advisory capacity to the university president, provost, deans, and other officials on behalf of all students.

Students who would like to provide input on policy issues or who have questions should contact their council representative by e-mail at stac@umuc.edu.

More information on shared governance is available online at www.umuc.edu/gov.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

Financial Aid

UMUC's Financial Aid Office administers a variety of financial assistance programs—including grants, scholarships, federal work-study, and loans—to help students meet the costs of their educational goals. Aid is available for students who can demonstrate financial need, academic merit, or both. Regardless of income level, all students are encouraged to apply for assistance; many financing alternatives are available.

General Eligibility Requirements

An eligible applicant for UMUC need-based assistance must

- Be admitted to UMUC as a degree-seeking or eligible certificate-seeking student.
- Be a U.S. citizen or an eligible noncitizen.
- Be enrolled half-time for federal loan programs; institutional aid requires enrollment for at least 3 credits. (**Note:** Audited courses do not count.)
- Demonstrate satisfactory academic progress toward a degree or certificate according to UMUC policy.
- Have a high school diploma or GED.
- Possess a valid Social Security number.
- Register with Selective Service, if required to do so.
- Not be in default on any federal student loans, nor have borrowed in excess of loan limits, nor owe a refund on any grant under Title IV federal student aid programs.
- Not be ineligible based on a drug conviction.

Financial Aid Programs

Most aid programs are available to both full- and part-time students. UMUC may offer the following types of financial aid: grants, scholarships, work-study, and loans. In most cases, at least half-time enrollment is required. (Full- and part-time status is explained on p. 159.)

Amounts and eligibility for financial aid vary from year to year. Following is a description of programs available for the upcoming award year.

GRANTS AND SCHOLARSHIPS

Gift assistance, for which no repayment is required, is offered by the state of Maryland and UMUC. The UMUC Financial Aid Office administers several types of gift assistance: UMUC scholarships and grants and Maryland state scholarships and grants.

The UMUC President's Grant program offers grants to students who demonstrate financial need. Typical awards range from \$300 to \$700 per semester, based on need.

UMUC scholarship programs, which include the UMUC President's Scholarship, offer a number of institutional scholarships as well as scholarships from corporate donors and foundations. Students who meet eligibility requirements are automatically prompted to complete the scholarship application through MyUMUC. Requirements vary according to the individual scholarship programs. Typical awards range from \$200 to \$1,500 per semester. Most scholarships require a minimum GPA and completion of a minimum number of credits at UMUC for consideration. Scholarships are awarded for the academic year on a first-come, first-served basis, so it is essential that students submit scholarship applications as early as possible. More information is available online at www.umuc.edu/scholarships.

Maryland state grant and scholarship programs provide financial assistance to Maryland residents based primarily on financial need. Awards to graduate students typically require enrollment of at least 6 credits per semester. Award amounts range from \$400 to \$10,000 annually. Senatorial and Delegate Scholarship awards are based on criteria established by the elected official. For more information, students should contact the Maryland Higher Education Office of Student Financial Assistance at 410-260-4565 or 800-974-1024 or visit www.mhec.state.md.us.

Many UMUC students receive private scholarships offered by corporations, associations, foundations, and other organizations. These private scholarships offer awards on a competitive basis to students who meet specific criteria. Scholarship links and search tools are available online at www.umuc.edu/financialaid.

LOANS

Loan programs are available to students enrolled at least half-time per semester. Students who take loans to pay for college expenses must repay the principal and interest in accordance with the terms of the promissory note.

The Federal Perkins Loan program provides need-based low-interest loans to help students finance their costs at UMUC. Award amounts typically range between \$500 and \$2,000 per semester. The current interest rate is 5 percent. Repayment is made to UMUC and begins nine months after the borrower leaves school or attendance drops below half-time.

The William D. Ford Federal Direct Loan program offers low-interest federal loans to students. Repayment begins six months after the student leaves school or attendance drops below half-time. For annual award amounts and general repayment terms, students should visit www.umuc.edu/financialaid.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

SERVICES AND RESOURCES

Graduate PLUS and other alternative student loan programs are also options for UMUC students. Students whose financial aid awards do not meet their financial need may be able to borrow up to their cost of attendance through the graduate PLUS program offered by the U.S. Department of Education. Students may also borrow additional funds through alternative loan programs offered by many banks and other lenders. Both programs require applicants to be credit-worthy. More information on graduate PLUS loans and alternative loan programs is available online at www.umuc.edu/financialaid.

FEDERAL WORK-STUDY PROGRAM

The Federal Work-Study program is a need-based program that provides jobs to help students meet college costs. Award amounts vary according to financial need and availability of funds. Funds are paid biweekly, based on hours worked. Students must apply and be hired for employment at a UMUC location. More information may be obtained by visiting www.umuc.edu/financialaid.

UMUC Financial Aid Standards for Satisfactory Academic Progress

Federal regulations require students receiving financial aid to maintain satisfactory academic progress toward their degree or certificate. Students who fail to meet the minimum academic standard are not eligible to receive financial aid. Details of the appeal process are provided in the complete Satisfactory Academic Progress policy for financial aid students, located at www.umuc.edu/gradsap.

The Financial Aid Application Process

Students must complete the Free Application for Federal Student Aid (FAFSA) to be considered for any type of federal, state, or institutional financial aid at UMUC. The FAFSA (which may be completed online at www.fafsa.gov) must also be completed for a student to be considered for need-based Maryland state scholarships. UMUC's school code is 011644.

UMUC FINANCIAL AID PRIORITY DEADLINES

One of the most important aspects of the financial aid process is applying for assistance as early as possible. Priority deadlines are listed below. Students who apply by the priority deadlines may be considered for additional grant and scholarship programs with limited funds.

Students who apply late may still receive aid, depending on their eligibility and the availability of funds. Late applications are still processed and considered. Students are always encouraged to apply for financial aid.

Program or Period Being Applied for	Priority Deadline for Filing Financial Aid Forms
Maryland State Scholarships	March 1
Full Academic Year or Fall Semester Only	June 1
Winter and Spring Semesters	November 1
Summer Semester	April 1

Federal Return of Funds Policy

Federal student financial aid is awarded under the assumption that the student will be enrolled for a specified period of time, such as a semester. When a student receives these funds but does not enroll as expected, the Financial Aid Office is required to determine whether the student has been enrolled long enough to keep all of the financial aid paid to him or her.

Therefore, UMUC's Financial Aid Office must perform a return of Title IV funds calculation any time a student stops his or her enrollment (i.e., withdraws, drops, or stops participating in classes and receives an FN grade) before the end of the semester and does not certify his or her intent to return in another session before the end of the semester.

For further information, students should visit www.umuc.edu/enrollmentchanges.

For Further Information

Students with additional questions should visit the Financial Aid Online Support Center at www.umuc.edu/help to e-mail, chat, request a call, or view the extensive list of frequently asked questions in the Knowledge Base.

Veterans Benefits

Veterans Benefits Programs

The following educational assistance programs administered by the U.S. Department of Veterans Affairs are available for active-duty military personnel, reservists, veterans, and their dependents who are attending UMUC:

- Montgomery GI Bill—Active Duty Educational Assistance Program (Chapter 30)
- Vocational Rehabilitation (Chapter 31)
- Post–Vietnam Era Educational Assistance Program (Chapter 32)

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

- Survivors' and Dependents' Educational Assistance Programs (Chapter 35)
- Montgomery GI Bill—Selected Reserve Educational Assistance Program (Chapter 1606)
- Educational Assistance for Reserve Component Members Supporting Contingency Operations and Certain Other Operations (Chapter 1607)
- Post-9/11 Veterans Educational Assistance Program (Chapter 33)
- Transfer of Post-9/11 GI Bill Benefits to Dependents
- Yellow Ribbon Program
- Marine Gunnery Sergeant John David Fry Scholarship

Detailed information on these programs is available online at www.umuc.edu/vabenefits and www.gibill.va.gov.

Application Procedures

Every educational assistance program requires different paperwork and documentation to process a claim. Initial applications for benefits may be submitted online directly to the U.S. Department of Veterans Affairs. Students must also complete a UMUC Request for Certification form (available online via MyUMUC) each session they wish to receive benefits. The U.S. Department of Veterans Affairs processes claims and issues payment six to eight weeks after receiving completed paperwork.

Amounts and Methods of Payment

The amount of money a student may receive from the U.S. Department of Veterans Affairs depends on the educational assistance program for which the student is eligible, the number of credits for which the student is registered, the length of the session, and (for certain programs) the number of dependents the student has. The current monthly payment for each educational assistance program is available online at www.gibill.va.gov.

The U.S. Department of Veterans Affairs offers an accelerated payment program to students eligible for Montgomery GI Bill (MGIB) benefits. The program provides a lump-sum payment of 60 percent of a student's tuition and fees for certain high-cost, high-tech programs. To receive accelerated payment, the tuition and fees for a session must be more than double the MGIB benefits that a student would receive otherwise for the session. More information on the accelerated payment program is available on the U.S. Department of Veterans Affairs website at www.gibill.va.gov.

Evaluation of Prior Training

When a student files a claim for educational benefits, the U.S. Department of Veterans Affairs requires previous training to be

evaluated so that the student receives correct transfer credit. Students who have graduate credit earned from a regionally accredited institution must have an evaluation completed during the first session of attendance. Students who do not comply may find future benefits delayed. After their first registration, eligible students are provided with information on the necessary procedure.

Students' Responsibilities

Students receiving benefits are expected to follow all regulations and procedures of the U.S. Department of Veterans Affairs while attending UMUC.

At UMUC, all regulations of the U.S. Department of Veterans Affairs are enforced. Students should be aware of the following requirements and consequences:

- Students are expected to make satisfactory progress toward a degree or certificate; everyone must comply with the academic standards of UMUC.
- Students must report all changes in enrollment—including drops, adds, withdrawals, changes to audit, and changes in degree objective.
- Registering for a course and then not attending, or ceasing to attend without officially withdrawing, is a misuse of federal funds that is punishable by law.
- Payment of benefits will be disallowed for any course in which a grade of FN is assigned.
- Payment of benefits will be disallowed for repeating a course for which transfer credit has been granted or for which a passing grade of A, B, C, D, P, or S was assigned.
- Payment of benefits will be disallowed for any course that is not a requirement in a student's degree or certificate program.
- Payment of tuition and fees is required at time of registration, unless the student is applying for Chapter 31, Vocational Rehabilitation, or Chapter 33, Post-9/11 benefits.
- Students are responsible for paying the balance of any tuition fees remaining after payment of Post-9/11 benefits.

Noncredit Graduate Courses

The U.S. Department of Veterans Affairs does not pay benefits for noncredit graduate courses.

Tutorial Assistance

Veterans, active-duty military personnel, and reservists receiving funding assistance from the U.S. Department of Veterans Affairs may qualify for tutorial assistance. Students enrolled at least half-

SERVICES AND RESOURCES

time may qualify. Payments are allowed when students demonstrate deficiency in courses that are required for their degree programs.

For Further Information

Information and applications are available from the student's advisor or at www.umuc.edu/vabenefits on the UMUC website.

Other Resources

Bookstores

Students can order books from MBS Direct online through the UMUC Virtual Bookstore. In conjunction with MBS Direct, UMUC offers convenient online and mail-order shipping for required textbooks and software for courses in classroom and distance education formats. MBS guarantees availability of new and used inventory, shopping discounts if books are ordered online, no sales tax, and an easy return and buyback program. Orders are shipped via UPS, Monday through Friday, within 24 hours of receipt. Overnight and two-day delivery is available for an additional fee. Payment by personal check, American Express, Discover, MasterCard, and Visa is accepted. Some employer contracts may be accepted.

University Book Center/Barnes & Noble in College Park also carries materials for UMUC classes held on the College Park campus. Walk-in customers should inquire at the customer service desk. Most major credit cards and some employer-provided assistance documents are accepted. Students should call 800-343-6621 for additional information and store hours.

Career Services

Career Services provides resources and services to assist UMUC students and alumni worldwide with their career and job search needs. Services are available by appointment (on-site and by phone, Skype, and e-mail) and on a walk-in basis at the Academic Center at Largo during specified hours. For additional information, students should call 800-888-UMUC, ext. 2-2720, or visit www.umuc.edu/careerservices.

CAREER DEVELOPMENT AND PLANNING

Career Services professionals are available to provide personalized attention to help students clarify their skills, interests, and work-related values; make career/life-related decisions; research career options; plan for further study; and search for employment.

JOB-SEARCH SERVICES

Services designed to assist the employment needs of UMUC students and alumni include job fairs; employability skills workshops, such as résumé writing and interview preparation; job-search tutorials; and CareerQuest, UMUC's online job and internship database, which enables students to search job listings and post résumés for prospective employers.

RESOURCE LIBRARY

Career Services offers a variety of print and online materials that can be useful in the career planning and job search process. Resources include occupational information, employer and graduate school directories, job hunting guides, and career resource literature.

Computer Labs and Services

Computer labs are available at many UMUC sites (including Dorsey Station, Largo, Shady Grove, and Waldorf). These labs are available primarily for the use of students completing coursework but are also open to faculty members, staff, and alumni on a first-come, first-served basis on presentation of a valid library bar code. Students must bring a disk or flash drive to save data or documents.

Lab assistants are available during scheduled hours to help users with resident software programs but cannot provide tutoring.

Students may also access host computers at UMUC via the Internet using Telnet. Two host systems are accessible: Nova and Polaris. Students must have an account for the particular system they wish to use. For most students taking courses in computing, accounts are set up automatically as part of the coursework and are valid for the duration of the class.

Technical support for MyUMUC, the learning management system, and other learning applications is available 24 hours a day, seven days a week, through Help@UMUC online at umuc.edu/help or by phone at 888-360-UMUC (8682).

The UMUC Library

The UMUC Library (www.umuc.edu/library) serves to educate students, faculty, and staff in the use of library and information services, emphasizing the critical importance of information literacy knowledge and skills for success in today's information-rich world. The office also develops and manages extensive online research resources and user-centered services for UMUC students, faculty, and staff worldwide.

More information about certificates, including gainful employment disclosures, is available at www.umuc.edu/gradcertificates.

LIBRARY RESOURCES

The UMUC Library provides access to a rich collection of research materials on a wide variety of topics (business, social science, science, arts and humanities, computer and information systems). Students can access an extensive array of subscription research databases containing tens of thousands of full-text articles, as well as thousands of electronic books, through the UMUC Library home page at www.umuc.edu/library or through the learning management system. UMUC Library OneSearch allows users to search for scholarly articles, books, and other research resources via a single search engine in most of the databases to which the UMUC Library subscribes, either directly or as additional resources. The UMUC Library has also created subject-specific resource guides to serve as a starting point for research. Each guide includes subject-relevant research databases, books, websites, and (where applicable) other Web 2.0 technologies.

LIBRARY SERVICES

Currently enrolled students in the continental United States have borrowing privileges at the 16 University System of Maryland and affiliated institutions libraries. The library collections can be searched and books can be requested through the online library catalog, available via the library home page. All UMUC students may use the DocumentExpress service to request that journal articles or book chapters not available online in full text be sent to them electronically.

LIBRARY INSTRUCTION AND RESEARCH ASSISTANCE

To help students gain the in-depth research skills needed to locate, evaluate, and use the rich research resources available to them, the UMUC Library offers library instruction both in person and via the learning management system. This instruction serves to complement and reinforce the skills and information gained through UCSP 615 Orientation to Graduate Studies at UMUC. Faculty members may contact the UMUC Library to request an on-site or online library instruction session. In addition, students can obtain individualized research assistance by contacting the UMUC Library or by visiting the Peck Virtual Library Classroom (VLIB 101) within the learning management system, which serves as an additional free resource to help students improve their research skills.

Reference and research assistance is available daily (except holidays), during regularly scheduled hours, through the office's webpage under "Ask a Librarian." For a complete list of library services, students should visit www.umuc.edu/library or call the UMUC Library at 240-684-2020 or 800-888-UMUC, ext. 2-2020, during regularly scheduled office hours.

UNIVERSITY POLICIES

The information contained in this catalog reflects the policies of both UMUC and the University System of Maryland (USM). The complete list and text of UMUC's policies can be found at www.umuc.edu/policies. USM policies can be found at www.usmd.edu/regents/bylaws.

Student Classification for Admission and Tuition Purposes

For information on student classification and residency, students should review USM policy VIII-2.70 at www.usmd.edu/regents/bylaws/SectionVIII.

Student Drug and Alcohol Use

UMUC complies with all federal, state, and local laws that regulate or prohibit the possession, use, or distribution of alcohol or illicit drugs. Violations of such laws that come to the attention of UMUC officials will be addressed through UMUC procedures, through prosecution in the courts, or both.

All UMUC students are prohibited by UMUC from unlawfully possessing, using, manufacturing, distributing, or dispensing alcohol or any controlled substance on UMUC premises or at UMUC-sponsored activities. UMUC expects all students to comply with applicable federal, state, and local laws and regulations pertaining to possession, use, manufacture, distribution, or dispensation of alcohol and/or controlled substances.

Any student who violates any of the applicable standards of conduct is subject to corrective disciplinary actions and penalties up to and including expulsion from UMUC academic programs and referral to the appropriate federal, state, and/or local authorities for prosecution in the courts. Students should see section III of the most current annual information report (www.umuc.edu/inform) for additional information.

Disclosure of Student Records

UMUC complies with the Family Educational Rights and Privacy Act ("FERPA"), a federal law which protects the privacy of students' education records. In accordance with FERPA, students have the right to inspect and review their education records; seek an amendment of their education records, where appropriate; limit disclosure to others of personally identifiable information from education records without the student's prior written consent; and file formal complaints alleging a violation of FERPA with the Department of Education. UMUC's policy on Disclosure of Student Records, which contains a list of directory information, is provided at www.umuc.edu/policies/academicpolicies/aa21014.cfm.

Nondiscrimination

UMUC is committed to ensuring that all individuals have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by UMUC and/or University System of Maryland policy or by federal, state, or local authorities. UMUC does not discriminate against or harass any person because of race, religion, color, creed, gender, marital status, age, national origin, ancestry, political affiliation, mental or physical disability, sexual orientation, or veteran status (including Vietnam Era veterans). All inquiries regarding UMUC's Nondiscrimination Statement or compliance with applicable statutes and regulations should be directed to the associate vice president of Fair Practices and Compliance, Office of the President, 3501 University Boulevard East, Adelphi, MD 20783-8000 (Phone: 301-985-7930; Fax: 301-985-7678; E-mail: FPC@umuc.edu).

Intellectual Property

The primary mission of universities is to create, preserve, and disseminate knowledge. When that knowledge takes the form of intellectual property, a university must establish a clear and explicit policy that will protect the interests of the creators and the university while ensuring that society benefits from the fair and full dissemination of that knowledge. More information about UMUC's policy on intellectual property is available online at www.umuc.edu/policies/researchpolicies/research19000.cfm.

UMUC Peer-to-Peer Notification

Unauthorized use of copyrighted materials may bring civil and criminal penalties to the user. UMUC is committed to combating the unauthorized use of copyrighted materials on UMUC's network, and, therefore, has established a written plan to achieve this goal. The intent of this plan is to inform UMUC students, faculty, and staff members of the appropriate use of copyrighted material on the network and to deter, detect, and discipline prohibited use while reasonably maintaining the educational use of UMUC's network.

Summary of Civil and Criminal Penalties for Violation of Federal Copyright Laws

Copyright infringement is the act of exercising, without permission or legal authority, one or more of the exclusive rights granted to the copyright owner under section 106 of the Copyright Act (Title 17 of the United States Code). These rights include the right to reproduce or distribute a copyrighted work. In the file-sharing context, downloading or uploading substantial parts of a copyrighted work without authority constitutes an infringement.

Penalties for copyright infringement include civil and criminal penalties. In general, anyone found liable for civil copyright infringement may be ordered to pay either actual damages or “statutory” damages affixed at not less than \$750 and not more than \$30,000 per work infringed. For “willful” infringement, a court may award up to \$150,000 per work infringed. A court can, in its discretion, also assess costs and attorneys’ fees. For details, students should see Title 17, United States Code, Sections 504, 505.

Willful copyright infringement can also result in criminal penalties, including imprisonment of up to five years and fines of up to \$250,000 per offense.

More information is available on the U.S. Copyright Office website at www.copyright.gov.

UMUC Procedures for Handling Unauthorized Distribution

UMUC implements an active protocol to respond to copyright infringement allegations. In accordance with the Digital Millennium Copyright Act (DMCA), UMUC has designated the following individual to receive and respond to reports of alleged copyright infringement on UMUC’s website:

Nancy Williamson
Senior Vice President and General Counsel
University of Maryland University College
3501 University Boulevard East
Adelphi, MD 20783

301-985-7080
legal-affairs@umuc.edu

To be effective under the DMCA, a notification of claimed infringement must be in writing and include the following information:

1. A physical or electronic signature of a person authorized to act on behalf of the owner of an exclusive right that is allegedly infringed;
2. Identification of the copyrighted work claimed to have been infringed, or, if multiple copyrighted works at a single online site are covered by a single notification, a representative list of such works at that site;
3. Identification of the material that is claimed to be infringing or to be the subject of infringing activity and that is to be removed or access to which is to be disabled, and information reasonably sufficient to permit the service provider to locate the material;
4. Information reasonably sufficient to permit the service provider to contact the complaining party, such as an address, telephone number, and, if available, an electronic mail address at which the complaining party may be contacted;

5. A statement that the complaining party has a good faith belief that use of the material in the manner complained of is not authorized by the copyright owner, its agent, or the law; and
6. A statement that the information in the notification is accurate, and, under penalty of perjury, that the complaining party is authorized to act on behalf of the owner of an exclusive right that is allegedly infringed.

Once an effective DMCA takedown request is submitted, UMUC will act expeditiously to remove or block access to the infringing material.

APPENDIX

State Registrations

As an online university, UMUC courses and services are available worldwide. Within the United States, individual states may require some form of registration. The following information is designed to meet such state requirements:

Alabama

State authorization to provide a program related to the preparation of teachers or other P–12 school/system personnel does not indicate eligibility for an Alabama certificate. Applicants for an Alabama certificate, based on reciprocity, must meet Alabama's test requirements and submit a valid, renewable professional educator certificate/license issued by another state at the degree level, grade level, and in the teaching field or area of instructional support for which an Alabama certificate is sought and for which Alabama issues a certificate. Applicants for Alabama certification in an area of administration must also document at least three years of full-time employment as an administrator in a P–12 school system.

More information is available at www.alsde.edu.

Iowa

UMUC is registered by the College Student Aid Commission on behalf of the state of Iowa.

UMUC complies with Iowa refund requirements found at Iowa Code section 261.9(1)(g), which require institutions to offer not less than the following options to a student who is a member, or the spouse of a member if the member has a dependent child, of the Iowa National Guard or reserve forces of the United States and who is ordered to state military service or federal service or duty:

- i. Withdraw from the student's entire registration and receive a full refund of tuition and mandatory fees.
- ii. Make arrangements with the student's instructors for course grades, or for incompletes that shall be completed by the student at a later date. If such arrangements are made, the student's registration shall remain intact and tuition and mandatory fees shall be assessed for the courses in full.
- iii. Make arrangements with only some of the student's instructors for grades, or for incompletes that shall be completed by the student at a later date. If such arrangements are made, the registration for those courses shall remain intact and tuition and mandatory fees shall be assessed for those courses. Any course for which arrangements cannot be made for grades or incompletes shall be considered dropped and the tuition and mandatory fees for the course refunded.

Qualified students seeking accommodation should fully complete and submit a Request for Exception Form to the Office of the Registrar and make reference to Iowa Code section 261.9(1)(g).

Minnesota

University of Maryland University College is registered as a Private Institution with the Minnesota Office of Higher Education pursuant to sections 136A.61 to 136A.71. Registration is not an endorsement of the institution. Credits earned at the institution may not transfer to all other institutions.

Minnesota students should refer to the Minnesota Baccalaureate Degree Standards for the general education requirements of that state.

Virginia

UMUC is certified by the State Council of Higher Education for Virginia.

The university's largest site in Virginia is

UMUC at Quantico
525 Corporate Dr.
Stafford, VA 22554

The university maintains locations with administrative capability at

Fort Belvoir
Barden Education Center, Building 1017
9625 Belvoir Road
Room 128
Fort Belvoir, VA 22060

Joint Base Myer-Henderson Hall
Education Center, Building 417
239 Sheridan Avenue
Room 215
Fort Myer, VA 22211

Joint Expeditionary Base Little Creek-Fort Story
1481 D Street
Building 3016
Virginia Beach, VA 23459

Washington

University of Maryland University College is authorized by the Washington Student Achievement Council and meets the requirements and minimum educational standards established for degree-granting institutions under the Degree-Granting Institutions Act. This authorization is subject to periodic review and authorizes University of Maryland University College to offer field placement components for specific degree programs. The Council may be contacted for a list of currently authorized programs. Authorization by the Council does not carry with it an endorsement by the Council of the institution or its programs. Any person desiring information about the requirements of the act or the applicability of those requirements to the institution may contact the Council at P.O. Box 43430, Olympia, WA 98504-3430.

INDEX

A

AACRAO. *See* American Association of Collegiate Registrars and Admission Officers

Academic advising, 168

Academic and administrative requirements

- academic standards, 158
- changes in grade, 157
- computing the GPA, 157
- degree requirements and continuous enrollment, 159
- grades and marks, 156
- grading methods, 156
- grading repeated courses, 157
- responsibilities of the student, 159
- scholastic recognition, 157

Academic dishonesty, 159

Academic honor societies, 157

Academic integrity, 159

Academic probation, 158

Academic progress, financial aid and, 172

Academic relationships, 5

Academic standards, 158

Academic Writing for Graduate Students, 6, 117, 154

Accessibility Services, 169

Accounting

- certificate program, 25
- course descriptions, 110
- specialization in, 24

Accounting and finance programs, 13

Accounting and financial management

- course description, 140
- dual degree with Master of Science in
 - Accounting and Information Systems, 16
 - Financial Management and Information Systems, 17
- Master of Science in, 15

Accounting and information systems

- certificate program, 20
- course description, 140
- dual degree with Master of Science in
 - Accounting and Financial Management, 19
 - Financial Management and Information Systems, 19
- Master of Science in, 18

Accreditation of the university, inside back cover

Acquisition and supply chain management

- certificate program, 40
- course descriptions, 112
- specialization in, 39

ACTFL. *See* American Council on the Teaching of Foreign Languages

Adelphi headquarters, 4, 152, 155

Administration

- Graduate School, 149
- UMUC, 148
- UMUC Board of Visitors, 149
- University System of Maryland, 148

Admission and enrollment

- academic advising, 168
- admission procedures, 10, 11, 162
- assistance, 168
- general requirements, 162
- international applicants, 163
- readmission, 162
- registration, 163
- restrictions, 163
- student residency classification for, 165, 176

Advising, academic, 168

Advisory boards, 150

Advisory Council, Student, 170

Alcohol use. *See* Drug and alcohol use

American Association of Collegiate Registrars and Admissions Officers (AACRAO), 163

American Council on the Teaching of Foreign Languages (ACTFL), 61

Appeal procedure, 160

Application

- fee, 165
- for admission, 162
- for financial aid, 172
- for Golden Identification program, 170
- for graduation, 158, 169
- for veterans benefits, 173
- procedures for doctoral program, 10, 11

Arts in Teaching, Master of, 52

Attendance, 159

Audit grade, 156

Automated services, 168

B

Bioinformatics

- certificate program, 65
- course descriptions, 113
- specialization in, 64

Biosecurity and biodefense

- certificate program, 66
- course descriptions, 114
- specialization in, 65

Biotechnology

- dual degree with Master of Business Administration, 64
- Master of Science in, 63

Biotechnology management

- certificate program, 67
- course descriptions, 115
- specialization in, 66

Biotechnology regulatory affairs

- certificate program, 68
- course descriptions, 115
- specialization in, 67

Biotechnology studies, course descriptions, 114

Board of Regents, 148

Board of Visitors, 149

INDEX

Bookstores, 174
Business administration
 course descriptions, 111
 dual degree with Master of Distance Education and E-Learning, 28
 dual degree with Master of International Management, 28
 dual degree with Master of Science in
 Biotechnology, 28
 Cybersecurity Policy, 29
 Environmental Management, 29
 Financial Management and Information Systems, 29
 Health Care Administration, 29
 Information Technology, 29
 Management, 29
 Master of, 27, 32
 time limits for completion of coursework, 158
Business administration—dual degree, course descriptions, 121
Business administration—global focus, course descriptions, 144
Business administration—one year, course descriptions, 116
Business and management programs, 27
Business and management programs advisory board, 150

C

Career services, 174
Certificate programs
 Accounting, 25
 Accounting and information systems, 20
 Acquisition and supply chain management, 40
 application for diploma, 158, 169
 Bioinformatics, 65
 Biosecurity and biodefense, 66
 Biotechnology management, 67
 Biotechnology regulatory affairs, 68
 Criminal justice management, 104
 Cybersecurity policy, 49
 Cybersecurity technology, 47
 Database systems technology, 79
 Digital forensics and cyber investigation, 51
 Distance education, globalization, and development, 55
 Distance education leadership, 55
 Emergency management, 98
 Environmental management, 70
 Financial management in organizations, 22
 Foundations in business analytics, 37
 Foundations of cybersecurity, 47
 Foundations of distance education and e-learning, 55
 Foundations of human resource management, 41
 Foundations of information technology, 78, 100
 Health care administration, 72
 Health informatics administration, 74
 Homeland security management, 101
 Informatics, 80
 Information assurance, 81

Instructional design for e-learning, 56
Instructional technology integration, 62
Integrated direct marketing, 94
Intelligence management, 108
International marketing, 91
International trade, 35
Leadership and management, 41
Library and intellectual property in distance education and e-learning, 56
Nonprofit and association financial management, 44
Policy and management in distance education and e-learning, 57
Predictive analytics, 37
Project management, 45, 83
Public relations, 95
Software engineering, 84
Systems analysis, 89
Systems engineering, 85
Teaching and training at a distance, 58
Technology in distance education and e-learning, 59
Telecommunications management, 86
time limits for completion of coursework, 158
Certification, state teaching, 53
Changes in grade, 157
Code of Student Conduct, 161
Communication studies, course description, 117
Community college policy and administration
 course descriptions, 122
 Doctor of Management in, 11
Comprehensive examinations, 6, 10, 11, 158
Computer labs, 7, 174
Computing
 connectivity and literacy requirements, 160
 technical requirements for online study, 7
Contact information, 152
Continuous enrollment, 159, 168
Course cancellations, refund of fees for, 165
Course evaluations, 7
Course load, 159
Course prerequisites, 110
Credit. *See also* Noncredit courses
 evaluation of transfer credit, 168
 unit of, 110
Criminal justice management
 certificate program, 104
 course descriptions, 116
 specialization in, 103
Cybersecurity
 certificate programs, 47
 course descriptions, 117
 dual degree with Master of Business Administration, 47
 Master of Science in, 46
 programs, 46

Cybersecurity policy
certificates in, 49
dual degree with Master of Business Administration, 49
Master of Science in, 48
Cybersecurity technology, certificate program, 47

D

Data analytics
certificates in, 37
course descriptions, 118
dual degree with Master of Business Administration, 37
dual degree with Master of Science in Management:
Marketing specialization, 37
Master of Science in, 36
Database systems technology
certificate program, 79
course descriptions, 119
specialization in, 78
Deadlines
for admission to doctoral program, 162
for applying for a diploma, 158, 169
financial aid, 172
registration, 163
withdrawal, 164
Dean's letter, 1
Degree requirements and continuous enrollment, 159
Digital forensics and cyber investigation
certificate program, 51
dual degree with Master of Business Administration, 51
Master of Science in, 50
Diploma, application for, 158, 169
Direct Loan program, 170, 171
Disabilities, students with, 169
Disclosure of student records, 176
Dishonesty, academic, 159
Dishonored check fee, 166
Dismissal
academic, 158
readmission after, 158
Distance education and e-learning
certificates in, 55
course descriptions, 141
dual degree with Master of Business Administration, 55
dual degree with Master of Education in Instructional
Technology, 55
dual degree with Master of Science in Management, 55
Master of, 54
Oldenburg University Academic Relationship, 5, 55
Distance education leadership, certificate program, 55
Distance education policy and management
course descriptions, 120
specialization in, 56

Distance education teaching and training
course descriptions, 121
specialization in, 57
Distance education technology
course descriptions, 121
specialization in, 58
Doctor of Management
academic standards, 158
admission requirements, 162
application procedures, 10, 11
comprehensive examinations, 10, 11
in community college policy and administration, 12
programs, 10, 11
Doctoral studies in community college policy and administration, 122
Doctoral studies in management, course descriptions, 123
Dorsey Station location, 155, 167, 174
Dropped courses, 164
Drug and alcohol use, policies and regulations, 176
Dual degree programs. *See* individual degree programs

E

Education. *See also* Teacher education *and* Distance education and e-learning
certificate in, 62
dual degree with Master of Distance Education and E-Learning, 61
Master of, 60
Education and teaching programs, 52
Education: Instructional technology, course descriptions, 124
Education: Teacher preparation, course descriptions, 126
Eiken Test in Practical English Proficiency, 163
E-mail accounts, 7, 160
Emergency management
certificate program, 98
course descriptions, 127
specialization in, 97, 104
Employer-provided tuition assistance, 166
Employment programs for students, 172
English language proficiency, 163
Enrollment. *See also* Admission and enrollment; Registration
verification of, 170
Environmental and waste management, course descriptions, 128
Environmental management
certificate program, 70
dual degree with Master of Business Administration, 70
Master of Science in, 69
Examinations, comprehensive, 6, 10, 11, 158
Expenses. *See* Tuition and fees

INDEX

F

Faculty, 150
FAFSA. *See* Free Application for Federal Student Aid
Failing grades, 156
Federal Direct Loan program, 170, 171
Federal Perkins Loan program, 171
Federal return of funds policy, 172
Federal Work-Study program, 172
Fees. *See* Tuition and fees
Financial aid. *See also* Veterans benefits; Golden Identification program
 appeal process, 172
 application for, 172
 contact information, 172
 employer-provided tuition assistance, 166
 employment programs for students, 172
 federal return of funds policy, 172
 general eligibility requirements, 171
 grants, 171
 loans, 171
 priority deadlines, 172
 programs available, 171
 repeated courses, 157
 return of funds, 172
 satisfactory academic progress, 172
 scholarships, 171
 withdrawals and, 165
Financial information
 employer-provided tuition assistance, 166
 indebtedness to the university, 166
 monthly tuition payment plan, 166
 refunds, 165
 tuition and fees, 165
Financial management. *See also* Accounting and financial management
 course descriptions, 129
 specialization in, 13, 25
Financial management and accounting program
 advisory board, 151
Financial management and information systems
 course description, 140
 dual degree with Master of Business Administration, 22
 dual degree with Master of Science in
 Accounting and Financial Management, 22
 Accounting and Information Systems, 22
 Master of Science in, 21
Financial management in organizations, certificate program, 22
Form I-20 for international students, 163
Foundations in business analytics, certificate program, 37
Foundations of cybersecurity, certificate program, 47
Foundations of distance education and e-learning
 certificate program, 55
Foundations of human resource management, certificate program, 41
Foundations of information technology, certificate program, 78, 100
Free Application for Federal Student Aid (FAFSA), 172

G

GMAT. *See* Graduate Management Admission Test
Golden Identification program, 170
Grade pending, 156
Grade point average
 computing, 157
 minimum requirement, 6, 158
Grades and marks, 156
Grading
 audited courses, 156
 changes in grade, 157
 grades and marks, 156
 methods of, 156
Graduate Council, 149
Graduate Management Admission Test (GMAT), 162
 for the doctoral program, 10
 for the MBA, 28, 32
 for the MS in Data Analytics, 36
Graduate Record Examination (GRE), 36, 162
Graduate School
 academic relationships, 5
 advisory boards, 150
 contact information, 152
 description, 5
 instructional sites, 155
 personnel, 152
 preparing for graduate study, 6
 programs, 8
 transfer credit acceptance, 168
Graduation
 application for, 158, 169
 program completion requirements, 158
 services, 169
Grants, 171
GRE. *See* Graduate Record Examination
Grievance procedures, 160

H

Health care administration
 advisory board, 151
 certificate program, 72
 course descriptions, 130
 dual degree with Master of Business Administration, 72
 Master of Science in, 71
 specialization in, 76
Health care and science programs, 63
Health informatics administration
 certificate program, 74
 course descriptions, 131
 Master of Science in, 73
Homeland security management
 certificate program, 101
 course descriptions, 133
 specialization in, 100, 106

Honor societies, 157

Human resource management
 certificate program in, 41
 course descriptions, 132
 specialization in, 40

I

IELTS. *See* International English Language Testing System

Immigration status, 163

Incomplete grade, 157

Indebtedness to the university, 166

Informatics
 certificate program, 80
 course descriptions, 134
 specialization in, 79

Information, general, 162, 168

Information assurance
 certificate program, 81
 course descriptions, 135
 specialization in, 80

Information systems. *See* Accounting and information systems

Information systems and services
 certificate in, 89
 course descriptions, 135
 specialization in, 88

Information technology
 certificates in, 60–61
 course descriptions, 137
 dual degree with Master of Business Administration, 78
 dual degree with Master of Science in Cybersecurity Policy, 78
 Master of Science in, 77
 programs, 77

Instructional design for e-learning, certificate program, 56

Instructional sites, 4, 155

Instructional technology
 certificate in, 62
 course descriptions, 124
 dual degree with Master of Distance Education and E-Learning, 61
 Master of Education in, 60

Integrated direct marketing, certificate program, 94

Integrity, academic, 159

Intellectual property policy, 176

Intelligence management
 certificate program, 108
 course descriptions, 136
 specialization in, 107

Interdisciplinary studies in management, specialization in, 42

International English Language Testing System (IELTS), 163

International management
 course descriptions, 134
 dual degree with Master of Business Administration, 13, 90
 Master of, 13, 90

International marketing management
 certificate program, 91
 specialization in, 91

International students, admission requirements, 163

International trade, certificate program in, 35

Internet connectivity and computer literacy requirements, 170

J

Job-search services, 174

L

Largo, 4, 164, 167, 174

Leadership and management, certificate program, 41

Library and intellectual property in distance education and e-learning,
 certificate program, 56

Library research skills, course in, 6, 147

Library services. *See* UMUC Library

Loans, 171

M

Management
 course descriptions, 138
 Doctor of, 10, 11
 dual degree with Master of Business Administration, 23, 38, 75, 87, 92, 102
 dual degree with Master of Distance Education and E-Learning, 24, 39, 75, 88, 93, 103
 Master of Science in, 23, 38, 75, 87, 92, 102

Marketing. *See also* International marketing management
 certificate program, 91, 94
 course descriptions, 139
 specialization in, 93

Marketing and communication programs, 94

Maryland state grant and scholarship programs, 171

Maryland state teaching certification, 53

Master's degrees. *See also* Graduate School
 academic standards, 158
 program overview, 8–9
 programs, 13–108

Military academic relationships, 5

Military benefits. *See* Veterans benefits

Mission of the university, 4, inside front cover

MyUMUC, 162, 163, 164, 168, 170, 171, 173, 174

N

NACES–approved agencies, 163

National Leadership Institute (NLI), 4

NLI. *See* National Leadership Institute

Nonattendance, failing grade for, 156

Noncredit courses, 6, 156, 157, 173

INDEX

Nondiscrimination policy, inside back cover, 176

Nonprofit and association management

- certificate program, 44
- course descriptions, 140
- specialization in, 43

O

Oldenburg University, 5, 55

Online study, 4, 6

Orientation to Graduate Studies at UMUC, 6, 147, 154, 175

P

Pass/fail grading, 156

Passing grade, 157

Payment. *See* Tuition and fees

Perkins Loan program, 171

Phi Kappa Phi honor society, 157

Plagiarism, 159

Policies, 1, inside back cover

- academic integrity, 159
- academic levels of progress, 159
- academic load, 159
- code of student conduct, 161
- computer use, 160
- disclosure of student records, 176
- enrollment across programs, 165
- financial aid satisfactory academic progress, 172
- intellectual property, 176
- peer-to-peer notification, 176
- refunds, 165
- return of funds, 172
- shared governance, 170
- student drug and alcohol use, 176
- student residency classification for admission, tuition, and charge differential purposes, 176

Policy and management in distance education and e-learning, certificate program, 57

Praxis tests, 52, 162

Predictive analytics, certificate program, 37

Prerequisites, 110

Presidential Management Fellows, 157

President's Grant, 171

Privacy. *See* Disclosure of student records

Probation, academic, 158

Program completion requirements, 158

Program overview, 8–9

Program staff, 152

Project management

- certificate program, 45, 83
- course descriptions, 142
- specialization in, 44, 82

Public relations

- certificate program, 95
- course descriptions, 143
- specialization in, 94

Public safety and intelligence programs, 96

R

Readmission, 162

Records, student, 176

Refunds

- and financial aid, 165
- course cancellations, 165
- federal return of funds policy, 172
- withdrawal from courses, 164, 165

Registration

- dropped courses, 164
- Golden Identification program, 170
- methods, 163
- waiting list, 164
- withdrawal, 164

Regulatory affairs. *See* Biotechnology regulatory affairs

Repeated courses

- failing grade and, 156
- grading method, 157

Residency determination, 162, 176

Residency status of international students, 163

Resources. *See* Student services

Responsibilities of students, 159, 173

Return of funds policy, federal financial aid, 172

S

Satisfactory academic progress

- financial aid and, 172

Satisfactory grade, 157

Satisfactory/incomplete/fail grading method, 156

Scholarships, 171

Scholastic recognition

- academic honor society, 157
- Presidential Management Fellows, 157

Science, Master of

- in Accounting and Financial Management, 15
- in Accounting and Information Systems, 18
- in Biotechnology, 63
- in Cybersecurity, 46
- in Cybersecurity Policy, 48
- in Data Analytics, 36
- in Digital Forensics and Cyber Investigation, 50
- in Environmental Management, 69
- in Financial Management and Information Systems, 21
- in Health Care Administration, 71
- in Health Informatics Administration, 73
- in Information Technology, 77, 99
- in Management, 23, 38, 75, 87, 92, 102

Senior citizen benefits, 170

Services. *See* Student services
 Shady Grove location, 155, 167, 174
 Shared governance, policy on, 170
 Software engineering
 certificate program, 84
 course descriptions, 145
 specialization in, 83
 Special topics, course descriptions, 147
 Student Advisory Council, 170
 Student Conduct, Code of, 161
 Student employment programs, 172
 Student records, disclosure of, 176
 Student responsibilities, 159, 173
 Student services
 academic advising, 168
 accessibility services, 169
 admission assistance, 168
 automated services, 168
 availability of, 167
 bookstores, 174
 career services, 174
 computer labs and services, 7, 174
 financial aid, 171
 general information, 168
 Golden Identification program, 170
 graduation services, 169
 library services, 174
 Student Advisory Council, 170
 transcript services, 169
 verification services, 170
 veterans benefits, 172
 Students with disabilities, services for, 169
 Systems analysis, certificate program, 89
 Systems engineering
 certificate program, 85
 course descriptions, 145
 specialization in, 84

T

Teacher education. *See also* Education
 Master of Arts in Teaching, 52
 Master of Education in Instructional Technology, 60
 Teaching and training, distance education and e-learning
 certificate in, 58
 course descriptions, 121
 specialization in, 57
 Technology fee, 165
 Technology, distance education and e-learning
 certificate program, 59
 course descriptions, 121
 specialization in, 58

Technology requirements
 connectivity and computer literacy, 160
 for education programs, 52, 60
 for online courses, 7
 Telecommunications management
 certificate program, 86
 course descriptions, 146
 specialization in, 85
 Test of English as a Foreign Language (TOEFL), 163
 Test of Written English (TWE), 163
 Time limit for degrees and certificates, 158
 TOEFL. *See* Test of English as a Foreign Language (TOEFL)
 Transcripts
 admission requirements, 162
 fees for, 165
 international student, 163
 requests for, 169
 Transfer credit, evaluation of, 168
 Tuition and fees. *See also* Financial aid
 application fee, 162
 collection fee, 166
 dishonored checks, 166
 employer-provided tuition assistance, 166
 monthly tuition payment plan, 166
 publication of, 165
 refunds, 165
 residency determination, 162, 176
 Tuition payment plan, 166
 Tutorial assistance for veterans, 173
 TWE. *See* Test of Written English (TWE)

U

UMUC. *See* University of Maryland University College
 UMUC Library, 174
 UMUC President's Grant program, 171
 UMUC scholarship programs, 171
 Unit of credit, 110
 University Book Center/Barnes & Noble, 174
 University of Maryland University College
 accreditation, inside back cover
 administration, 148
 indebtedness to, 166
 military academic relationships, 5
 overview, 4
 policies, 1, 176
 sites, 4, 155, 167
 University System of Maryland
 administration, 148
 library services, 175
 Upsilon Phi Delta, 157

INDEX

V

Verification services, 170

Veterans benefits

- amounts and methods of payment, 173

- application procedures, 173

- evaluation of prior training, 173

- noncredit graduate courses, 173

- programs, 172

- students' responsibilities, 173

- tutorial assistance, 173

Virtual Bookstore, 174

W

Waiting list policies, 164

Waldorf Center for Higher Education location, 155, 167, 174

Webpages

- admission, 162

- financial aid forms, 172

- Golden ID program, 170

- Phi Kappa Phi, 157

- registration, 163

- technology requirements, 7, 52, 60

- tuition and fees, 165

- UMUC Library, 174

- UMUC policies, 176

WES. *See* World Education Services

William D. Ford Federal Direct Loan program, 171

Withdrawal from courses

- financial aid and, 165

- mark for, 157

- methods, 164

- refunds, 165

Work-study program, 172

World Education Services (WES), 163

NOTES

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

NOTES

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

ACCREDITATION

University of Maryland University College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104 (267-284-5000), one of six regional accrediting agencies recognized by the U.S. Department of Education. UMUC is governed by the University System of Maryland Board of Regents and certified by the State Council of Higher Education for Virginia. UMUC is a constituent institution of the University System of Maryland.

NONDISCRIMINATION

UMUC is committed to ensuring that all individuals have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by UMUC and/or University System of Maryland policy or by federal, state, or local authorities, in accordance with UMUC Policy 040.30 Policy and Procedures on Affirmative Action, Equal Opportunity, and Sexual Harassment (www.umuc.edu/policies/adminpolicies/admin04030.cfm). UMUC prohibits discrimination or harassment of any individual due to race, religion, color, creed, gender, gender identity or expression, marital status, age, national origin, ancestry, political affiliation, mental or physical disability, sexual orientation, or veteran status (including Vietnam-era veterans). All inquiries regarding UMUC's Nondiscrimination Statement or compliance with applicable statutes and regulations should be directed to the assistant vice president of Fair Practices and Compliance, Office of the President, UMUC, 3501 University Boulevard East, Adelphi, MD 20783-8000 (phone 301-985-7930 or e-mail FPC@umuc.edu).

ANNUAL INFORMATION REPORT

UMUC is committed to assisting all members of the UMUC community in providing for their own safety and security. UMUC provides this Annual Information Report to current and prospective students, faculty, and staff pursuant to U.S. Department of Education regulations. The report is organized into five sections: campus crime and security, notification of rights under FERPA for postsecondary institutions, drug prevention program, campus law enforcement, and peer-to-peer notification. It is available on the Office of Legal and Government Affairs Web page at www.umuc.edu/legal/annualinfoareport.cfm. If you have any questions or if you would like to request a printed copy of the report, please contact Security at 301-985-7371.

Visit UMUC on the web at
www.umuc.edu.

To speak with an advisor,
call **800-888-UMUC (8682)** or send an e-mail
to **gradinfo@umuc.edu**.

BUILD YOUR FUTURE WITH CONFIDENCE

Read about our students' aha moments and learn how you can achieve your own with UMUC.

UMUC.edu/moments



ABOUT UMUC

University of Maryland University College (UMUC) specializes in high-quality academic programs that are convenient for busy professionals. Our programs are specifically tailored to fit into the busy lives of those who wish to pursue a respected degree that can advance them personally and grow their careers.

UMUC has earned a worldwide reputation for excellence as a comprehensive virtual university and, through a combination of classroom and distance-learning formats, provides educational opportunities to more than 90,000 students. The university is proud to offer highly acclaimed faculty and world-class student services to educate students online, throughout Maryland, across the United States, and in more than 20 countries and territories around the world.

UMUC serves its students through undergraduate and graduate programs, noncredit leadership development, and customized programs. For more information regarding UMUC and its programs, visit www.umuc.edu.



University of Maryland University College

The Graduate School
3501 University Boulevard East
Adelphi, MD 20783-8030 USA



Using forest-friendly papers during the production of this catalog saved

NET ENERGY: 10,363,200 BTUs
GREENHOUSE GASES: 1,353 LBS CO₂
WASTEWATER: 6,215 GALLONS
SOLID WASTE: 688 LBS

Estimates were made using the Environmental Defense Fund Paper Calculator.

For more information, visit www.papercalculator.org.