



University of Maryland University College

GRADUATE SCHOOL OF MANAGEMENT & TECHNOLOGY



2006-2007

CATALOG

www.umuc.edu



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. The leading education provider for the U.S. military, UMUC serves nearly 54,000 servicemembers worldwide. With more than 130 global course locations and 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 Web site or by phone or e-mail. All over the world, UMUC gives its students what they need to succeed, putting goals within their reach.

This catalog provides the degree requirements and recommended curriculum for students who begin continuous study on or after August 1, 2006. (Details are listed on p. 113.) Students should keep their catalog available for easy reference throughout their degree program.



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See additional policies and procedures on inside back cover.

FROM THE DEAN



It is my pleasure to welcome you to the 2006–2007 academic year. I am proud to tell you about two graduate programs recently recognized for excellence: the Master of Business Administration and the Master of Science in environmental management.

Both awards come from prestigious national organizations. Both recognize these UMUC programs to be among the “best of the best” in online education. And yet, neither award fully reflects the uncommon value

delivered by UMUC’s graduate programs.

While I welcome and appreciate the recognition these awards convey, I believe that the accolades rightly belong to the people who are behind our award-winning programs. The unique competitive advantage of the UMUC Graduate School of Management and Technology is not its programs or curriculum, but the many faculty members who create these programs, ensure the quality of our courses, and serve our students through their untiring efforts in front of classrooms (or computer screens) and behind the scenes, hundreds of times a day, all around the world.

Our faculty members willingly and generously share their depth of knowledge and real-world experience to help students prepare for a broad range of career paths in today’s changing world. Their dedication to the needs of our unique type of student—professional men and women with jobs and families, busy schedules and limited budgets—makes the telling difference in the success of our graduate programs. But more importantly, it has a huge impact on the success of our graduates.

Please take a moment to read the short awards article on p. 8. And then join me in a well-deserved round of applause for the people who have put UMUC in the forefront of globally relevant career education.

Sincerely,

Salvatore J. Monaco, PhD

Vice Provost and Dean

Graduate School of Management and Technology

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Page 2, left: Military personnel can take UMUC courses while they serve at more than 40 military installations in Japan, Guam, Korea, Okinawa, and Singapore. Photo by Cade Martin

Page 2, right: UMUC offers classes and services at five sites in Maryland, including Shady Grove Center in Rockville.

Page 3: For students attending UMUC-Europe, homework and field trips include weekend excursions to other European cities, such as London, Paris, and Naples. Photo by Cade Martin

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INTRODUCTION TO UMUC

For almost 60 years, University of Maryland University College (UMUC) has been focused exclusively on meeting the needs of adult students in the workforce. It is an institution defined by the students it serves—students who must balance the demands of higher education with those of family, career, and military service.

UMUC understands these competing responsibilities and strives to provide an education that fits busy lifestyles—through high quality academic programs and innovative course and service delivery formats. In addition, the university constantly explores new ways to further its mission, and has done so throughout its history.

HISTORY

In 1947 UMUC was founded as the College of Special and Continuation Studies at the University of Maryland in direct response to a need for education opportunities for adult students, especially military personnel and recent veterans returning to civilian life after World War II.

When, in 1949, the U.S. Department of Defense sought to provide educational opportunities for military servicemembers still stationed in Europe, UMUC answered the call. The university later expanded its outreach to military personnel in Asia in 1956.

With classroom sites spanning the globe, the university nevertheless recognized a need for programs that were not dependent on on-site instruction. As early as the 1950s, the university began to experiment with new ways of reaching students. Courses were offered first through instructional television, then voicemail and audiotapes, interactive television and video network technologies, and ultimately online.

UMUC developed and offered its first online courses in the 1990s using its own software

program—Tycho. As access to the World Wide Web became commonplace, Tycho developed into WebTycho and became the course format of choice for more and more students. Today it is a rare student who does not take at least some coursework online via WebTycho, and many students interact with the university entirely through distance technologies.

As UMUC evolved into a virtual university, it also ensured that student services and resources would be available to students worldwide. The Interactive Registration and Information System (IRIS) was created to allow students to register and access information by telephone. Recently, MyUMUC—the university's online gateway to academic and administrative information and resources—was launched. Through MyUMUC, students can apply for admission, register, access financial aid information, view grades, and pay tuition. More services are being developed.

In 1970 UMUC became a separate, degree-granting institution, and in 1988 the university became part of the newly organized University System of Maryland (USM).





CARRYING OUT THE MISSION

As it seeks to serve adult students, UMUC focuses on three areas: quality, access, and affordability.

Quality

An 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 scholar-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 Education.

Access

UMUC is committed to eliminating any barriers that stand between the student and his or her educational goals. That includes

admission—UMUC requires no standardized exams. Most students can apply and register for their first class at the same time, before presenting transcripts.

As a global university, UMUC also ensures that students can take classes any time, any place, by offering the largest selection of online programs available—in addition to classes at sites throughout the metropolitan Washington area and at military sites in Europe and Asia. Services can also be accessed online and by phone, as well as on-site.

Affordability

UMUC prides itself on making education affordable. While universities throughout the country have experienced massive increases year after year, UMUC has kept its tuition increases to a minimum. At the same time, UMUC has worked to expand its range of financial aid opportunities—from scholarships and grants, to a monthly payment plan, to special rates for active-duty service personnel.

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 School of Undergraduate Studies and the Graduate School of Management and Technology. The Graduate School also comprises the National Leadership Institute (which provides noncredit leadership development training), the Institute for Environmental Management, and the Institute for Global Management.

Headquarters for these programs are located in Adelphi, Maryland, and also serve as home to a prestigious art collection and a conference facility, the Inn and Conference Center, operated by Marriott.

Most classes and services, however, are provided at nearly 150 sites worldwide. UMUC also delivers education and services to students all over the world through cutting-edge technology—via the university Web site, its online course delivery system WebTycho, its online service portal MyUMUC, and its telephone service system IRIS.

FOR ASSISTANCE

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

MISSION STATEMENT

UMUC's Graduate School of Management and Technology prepares students for effective leadership and citizenship in a global environment characterized by workforce diversity, increasing competition, and technological innovation. Programs are offered at the doctoral and master's levels and 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 encompasses a 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. Its goal is to become one of the premiere world-wide graduate institutions of choice among students and faculty.

ACADEMIC PROGRAMS

The Graduate School of Management and Technology currently has 20 graduate degree programs, more than 30 specialty tracks, and more than 30 certificates, including a doctor of management with five specializations. Dual degree programs enable students to acquire two graduate degrees for substantially fewer credits than would be required if the two degrees were earned separately. Most of these programs are available online. Students who take these programs online can pursue their degrees from anywhere in the world.

The Graduate School also offers several executive degree and certificate programs. An accelerated route to teacher certification in Maryland is offered for students with a bachelor's degree who wish to teach in the Maryland public school system.

A complete list of graduate programs can be found on pp. 8–9. For more information, students should call 800-888-UMUC or e-mail gradschool@info.umuc.edu.

INSTRUCTIONAL SITES

Graduate courses are offered at the following Maryland sites:

Adelphi/College Park

UMUC Headquarters
3501 University Boulevard East
Adelphi, MD 20783
800-888-UMUC

Arundel Mills

Anne Arundel Community College at Arundel Mills
7009 Arundel Mills Circle
Hanover, MD 21076
410-777-1882

Dorsey Station

6865 Deerpath Road
Elkridge, MD 21075
410-796-3178

Rockville

USM Shady Grove Center
9640 Gudelsky Drive
Rockville, MD 20850
301-738-6090

Waldorf

Waldorf Center for Higher Education
3261 Old Washington Road, Suite 1020
Waldorf, MD 20602
301-632-2900

STUDENT PROFILE

UMUC's graduate students are from diverse industry and educational backgrounds. Approximately 75 percent of graduate students have completed nonbusiness-related studies such as engineering, computer science, biological and medical science, or social science. Most of the Graduate School's students are midcareer professionals who have made steady progress in their chosen fields and are now seeking additional preparation in anticipation of a new managerial assignment. The average student age is 36 years. Approximately 4 percent of all applicants hold prior graduate degrees, and slightly more than 50 percent of the students are women.

ACADEMIC RELATIONSHIPS

The Graduate School of Management and Technology has established various partnerships with the following academic and government institutions:

Capitol College

UMUC and Capitol College have an academic agreement to allow students from either school to transfer one preapproved course into his or her electronic commerce degree program. More information on this arrangement may be obtained from the program director at 800-888-UMUC, ext. 7883.

Maryland Alternative Route to Certification Options (MARCO)

UMUC's teacher education department has a MARCO partnership with the Maryland State Department of Education's Division of Certification and Accreditation and Prince George's County School District. The partnership is designed to address Maryland's need to increase the numbers of highly qualified teachers in critical-need subject areas. Grant funding is available for students interested in teaching in Prince George's Public Schools. More information is available on p. 60.

Military Relationships

UMUC also has established special relationships with a number of the military's institutions of higher education: Air War College; Army Signal Center; Army Management Staff College; Defense Acquisition University; Naval War College; and the National Defense University's Joint Forces Staff College, Information Resources Management College, and School of National Security Executive Education. More information on these partnerships is available online at www.umuc.edu/military.

Oldenburg University

The Master of Distance Education degree is offered in partnership with Carl von Ossietzky University of Oldenburg, Germany, a leading institution with extensive experience in distance education. Oldenburg University is contributing two certificates and several courses to this program, all of which earn full credit in the master's degree program. Oldenburg's participation helps to ensure that the program has a broad global perspective that is critical for distance educators today.

OTHER PROGRAMS

The following programs are also administered by the Graduate School of Management and Technology.

Institute for Environmental Management

The Institute for Environmental Management provides educational services in the field of environmental management to individuals and corporations, and to federal, state, and local governments. The institute contributes to the exchange of knowledge in this field by conducting workshops and short courses. Further information may be obtained by contacting the director of the Institute for Environmental Management at 800-888-UMUC, ext. 7875, or rbeauchamp@umuc.edu.

Institute for Global Management

The Institute for Global Management conducts research and provides educational and training services on topics central to the management of international enterprises. The institute offers customized seminars and consulting services and engages in applied research on topics that prepare managers for the effective conduct of international business. Further information may be obtained by contacting the director of the Institute for Global Management at 800-888-UMUC, ext. 7200, or cmann@umuc.edu.

National Leadership Institute Programs

The National Leadership Institute (NLI) offers a wide range of noncredit programs and services designed to help managers, executives, and organizations enhance their overall leadership effectiveness. NLI programs include the Leadership Development Program (LDP)[®] and Foundations of Leadership (FOL), both offered in association with the Center for Creative Leadership. NLI also offers an Online Leadership Assessment Program (OLAP)[®], designs training programs and consulting services, and provides executive coaching. For more information, students should visit the Web site at www.umuc.edu/NLI, call 877-999-7195, or e-mail nli@umuc.edu.

PROGRAM OVERVIEW

Doctoral Program

Doctor of Management*

- Information technology management
- International operations management
- Organizational processes management
- Security management
- Technological systems management

Business and Executive Programs

MASTER'S DEGREE PROGRAMS

Global Master of Business Administration

Master of Business Administration

Master of International Management

- Energy resources management and policy development
- International commerce
- International finance
- International marketing

EXECUTIVE MASTER'S DEGREE PROGRAMS

Master of Business Administration

Master of Science in information technology

Master of Science in technology management

EXECUTIVE DUAL DEGREE PROGRAM

Master of Science in technology management/Master of Business Administration

CERTIFICATE PROGRAMS

International Marketing

International Trade

EXECUTIVE CERTIFICATE PROGRAMS

Chief Information Officer (CIO)

Strategic Management of Technology and Innovation

Information and Technology Systems Programs

MASTER'S DEGREE PROGRAMS

Master of Distance Education

Master of Science in biotechnology studies

- Bioinformatics practice

Master of Science in computer systems management

- Applied computer systems

TWO PROGRAMS RECOGNIZED FOR EXCELLENCE

The Master of Business Administration program was named the "2005 Most Outstanding Online Teaching and Learning Program" by the Sloan Consortium, a national consortium of institutions and organizations committed to quality online education. The award recognizes the UMUC MBA program for demonstrating the most outstanding degree program in continuing education. Chosen from a field of national entrants for its online academic quality and array of student services available to students worldwide, the MBA program explores the evolving nature of corporations while teaching students to blend leadership with change management. More information on the MBA program is available on p. 15.

The Master of Science in environmental management was honored by the University of Continuing Education Association (UCEA) as the "Best Developed Program for 2005." The award recognizes new and innovative programs that utilize one or more forms of instruction at a distance. This program was recognized for its ability to meet a specified need or be a significant innovation; meet its designated goals and objectives; and be easily accessible to students. More information about the Master of Science in environmental management is available on p. 27.

- Database systems technologies
- Homeland security management
- Information assurance
- Information resources management
- Software development management

Master of Science in e-commerce

Master of Science in environmental management

- Energy resources management and policy development

Master of Science in information technology

Master of Science in technology management

- Energy resources management and policy development
- Homeland security management
- Project management
- Technology systems management

Master of Science in telecommunications management

Master of Software Engineering

CERTIFICATE PROGRAMS

Applied Computer Systems

Bioinformatics

Biotechnology Management

Database Systems Technologies

Distance Education and Technology

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

Distance Education in Developing Countries
Electronic Commerce
Energy Resources Management and Policy Development
Environmental Management
Foundations of Distance Education
Homeland Security Management
Information Assurance
Information Resources Management
Information Technology
Library Services in Distance Education
Project Management
Software Development Management
Software Engineering
Teaching at a Distance
Technology Systems Management
Telecommunications Management
Training at a Distance

Management, Accounting, and Finance Programs

MASTER'S DEGREE PROGRAMS

Master of Science in accounting and financial management
Master of Science in accounting and information technology
Master of Science in financial management and information systems
Master of Science in health care administration
Master of Science in health administration informatics
Master of Science in management

- Accounting
- Advertising
- Energy resources management and policy development
- Financial management
- Health care administration
- Homeland security management
- Human resource management
- Interdisciplinary studies in management
- Management information systems
- Marketing
- Nonprofit and association management
- Procurement and contract management
- Project management
- Public relations

CERTIFICATE PROGRAMS

Accounting
Accounting and Information Technology
Advertising
Financial Management in Organizations
Foundations for Human Resource Management
Health Care Administration
Integrated Direct Marketing
Integrative Supply Chain Management
Leadership and Management
Nonprofit Financial Management
Procurement and Contract Management
Public Relations
Systems Analysis

Teacher Education Programs

MASTER'S DEGREE PROGRAMS

Master of Arts in Teaching ▼
Master of Education

CERTIFICATION PROGRAM

Resident Teacher Certification Program

Dual Degree Programs

Master of Business Administration/Master of International Management
Master of Science in accounting and financial management/Master of International Management
Master of Science in accounting and financial management/Master of Science in management
Master of Science in accounting and information technology/Master of Science in accounting and financial management
Master of Science in accounting and information technology/Master of Science in management
Master of Science in e-commerce/Master of Business Administration
Master of Science in health care administration/Master of Business Administration
Master of Science in management/Master of Business Administration
Master of Science in technology management/Master of Business Administration

▼ For currently admitted students only; applications are no longer being accepted.

GRADUATE STUDY

As most students know, more is expected at the graduate level than what is normally required on the undergraduate level. During graduate study, more effort is required on an academic level, and 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*. Master's degree students culminate their studies in a number of ways. A practicum experience is required for the Master of Arts in Teaching and for the Master of Science in management with a specialization in public relations. For most other students, an integrative end-of-program course is required. Students are asked to complete a management project (described on this page) or two elective courses in lieu of the project.

Students should refer to the catalog of the year in which they began graduate study for the specific requirements related to their program of study. See information about end-of-program options at the end of this page.

All graduate students must maintain a cumulative GPA of 3.0.

All Graduate School of Management and Technology on-site courses use WebTycho, UMUC's Web-based course management system, as an enhancement to provide on-site students with online educational opportunities. Faculty members may elect to use some or all of WebTycho's online features in conjunction with face-to-face classroom activity. More information about WebTycho is available in the Online Study section on p. 122.

On-site students who do not have access to the Internet may make use of computer labs at various UMUC locations to connect to WebTycho. More information about the availability of these labs can be found in the Computer Facilities and Services section on p. 125.

Other administrative and general academic requirements (e.g., time limits, academic progress) for the doctoral and master's degrees are described on pp. 119–21.

REQUIRED COURSE: UCSP 611 INTRODUCTION TO GRADUATE LIBRARY RESEARCH SKILLS

UCSP 611 Introduction to Graduate Library Research Skills is designed to familiarize students with online library and information resources—material that is critical for 21st-century managers.

This noncredit course is required for all new graduate students and all inactive students who reapply for admission. The grading method is pass/fail. UCSP 611 must be completed within the first six credits of graduate study. The full course description appears on p. 108.

ELECTIVE COURSE: COMM 600

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 in their first semester. COMM 600 Academic Writing for Graduate Students is a 3-credit graduate-level writing course specially designed to reinforce and strengthen the writing skills necessary for success in UMUC's graduate degree programs. The full course description appears on p. 74. (See individual program descriptions for specifics regarding inclusion of COMM 600 into each degree plan.)

NONCREDIT COURSES

The Graduate School of Management and Technology offers a complement of online noncredit courses designed to provide students with the skills and knowledge they need to complete their academic programs successfully. Noncredit courses last eight weeks, except UCSP 611, which lasts five 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.

Noncredit courses are designated UCSP and listed in the course descriptions (pp. 69–112). Current information about fees and scheduling for noncredit courses is available at www.umuc.edu/grad/noncred.html.

Note: No refunds are given for noncredit courses. Financial aid, the Golden ID program, and USM remission of fees may not be applied to noncredit courses.

MASTER'S DEGREE END-OF-PROGRAM OPTIONS

For students in the Master of International Management program, the Graduate School of Management and Technology has developed the following end-of-program options:

Option 1—Management Project

Students may choose to demonstrate their ability to structure and complete a major project that identifies and resolves an important management or organizational issue by completing a management project. Students who are able to arrange a meaningful assignment with their employers are encouraged to undertake this option. Since the management project is often an added value to the employer, students who are receiving tuition assistance may want to complete their degree programs with this beneficial assignment. For those who do, it is important to note that completion of the management project in one

semester demands careful planning, dedication, discipline, and considerable support from the sponsoring organization. In the event that circumstances do not allow the project to be completed within one semester, one more 1-credit enrollment will be permitted. If the management project is not completed within the allotted two semesters, the student must switch to the two-course option.

Students who present their project and receive either an incomplete (I) or a failing grade (F) must successfully complete the management project option within the time allowed by policy. Students in this situation may not switch to the two-course option.

Those students who choose option 1 must develop and gain approval of a problem statement and prospectus, carry out the project, and present a final report. Students report the results of their efforts in written and oral form. The project may be developed in cooperation with a current employer or with some other organization of the student's choice, provided there is no conflict of interest. The project must be conducted under the direction of a faculty advisor in cooperation with an on-site project supervisor.

All students entering the management project phase of their program must meet with their faculty advisors. The time limit for completing all degree requirements (detailed on p. 119) is strictly enforced.

Most management project courses for the individual disciplines are designated 690. (When taken for a second semester, the course is designated 690M.) Students with questions concerning enrollment in IMAN 690 should contact their departmental advisors at 800-888-UMUC, ext. 7200, or by e-mail (addresses are listed for each program on the following pages). Successful management project reports for all programs are available for review. Students should call 800-888-UMUC, ext. 7209, for library hours.

Option 2—Two-Course Option

Students may choose to expand their knowledge in their chosen fields by enrolling in two additional courses that complement their degree or career objectives. Course selections are identified according to program; however, students should nonetheless obtain prior approval of the two-course selection from the program director.

CERTIFICATE PROGRAMS

UMUC offers more than 40 graduate certificate programs, including two certificates offered in an accelerated executive format. Each certificate requires from 12 to 24 credits of coursework. The certificates are the ideal credential for individuals who do not wish to pursue a master's degree or for those who already have one or more advanced degrees and wish to add to their credentials in their field. All of the courses in each certificate program earn graduate credits that can be applied toward the parallel master's degree program. Students have three years to complete any certificate that requires up to 18 credits and five years to complete any certificate that requires more than 18 credits. Students must also apply for the completed certificate within these time limits.

Admission requirements for certificate students are the same as those for degree-seeking students. It is strongly recommended that certificate students seek the advice of the appropriate program advisor before registering to help ensure readiness for selected courses. All graduate students must successfully complete UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

DOCTORAL PROGRAM

DOCTORAL PROGRAM DEPARTMENT STAFF

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DOCTOR OF MANAGEMENT

The Doctor of Management (DM) degree program was developed in recognition of the critical importance of an interdisciplinary and global perspective for leaders and managers. It prepares individuals to lead projects, programs, teams, or organizations across sectors, fields, and national boundaries. The curriculum and research requirements ready graduates to contribute to such critical activities as organizational productivity and performance assessment; strategy formulation; operational planning; technology acquisition, planning, and integration; and human performance assessment and development. Committed to building knowledge across functional areas and contributing disciplines, the degree allows for increased specialization in one of five areas:

- **Information Technology Management**
Focuses on the management of information technology as the key to efficiency and effectiveness in an organization.
- **International Operations Management**
Provides students with the opportunity to overlay any management topic with the complexity of operating in an international or global environment.
- **Organizational Processes Management**
Focuses on the way that organizations are designed and structured and how individuals function within them.
- **Security Management**
Focuses on the management of organizational and homeland security as applied within an organization.
- **Technological Systems Management**
Focuses on management of public and private activities in a competitive environment with a clear understanding that technological innovation is the driving force for economic growth and productivity.

This program is dedicated to helping individuals who want to continue learning and expanding their knowledge, skills, and abilities beyond the master's degree.

Overview

Designed for individuals in the workforce, students complete their doctoral degree online while participating in mandatory residencies or course meetings at UMUC headquarters in Adelphi, Maryland. The program is based on a three phase cycle and consists of a minimum of 48 credits of coursework beyond the master's degree. Each student is assigned to a cohort of students (depending on semester/year of acceptance) that continue together and take 6 credits, or two doctoral-level courses, each semester of the academic year except for the third year. Time to degree may vary depending on individual progress and circumstances. Candidates who do not graduate in three years must take 1 credit of continuing registration each semester until the dissertation research is completed.

All degree requirements must be completed within seven years from the start of the first course.

Program Requirements

Applicants to the doctoral program must have the following:

- A master's degree from a regionally accredited college or university with an overall grade-point average (GPA) of 3.2 on a 4.0 scale. If the GPA for the master's degree is below 3.5, the applicant must also submit scores for the Graduate Management Admission Test (GMAT). The scores must be less than five years old.
- At least seven years of professional experience.

Applicants whose master's degree GPA is between 3.2 and 3.49 must have scores submitted for the GMAT. Those who have a graduate GPA of 3.5 or higher need only take the writing assessment portion of the Graduate Record Examination (GRE) general test* and need not submit scores for the GMAT. If using the GMAT writing assessment portion for submission, the GMAT must have been taken after October 2002.

Admission to the program is competitive; meeting the eligibility requirements does not guarantee admission. Admission to the program is based on a combination of all requirements, not any single item by itself. A complete list of the documents required to complete an application may be found in the DM application package and on the DM application form. Interested parties may download the application package from the UMUC Web site at www.umuc.edu/grad/dm/dm_adminreq.html. Students must apply and be accepted into the program in order to enroll in courses at the doctoral level.

* Please contact the doctoral program for further information concerning the GRE general test Analytical Writing section.

Course descriptions are found on pp. 69–112.

Formats/Locations

The DM program is available online, with mandatory residencies or course meetings at UMUC headquarters in Adelphi, Maryland, throughout the program.

Curriculum

The requirements for successfully completing the DM degree are divided into two complementary parts.

The first part is made up of coursework that supports the general area of the student's research concentration. The objective of this predissertation stage is to provide students with the theoretical foundations and practices of the core, breadth, and specialization fields of study and with a command of the relevant methods of research analysis. Upon successful completion of all coursework, students must pass a comprehensive examination.

The second part of the program consists of original research and the presentation of findings in a written dissertation. The objective of the dissertation stage is to have the student apply theoretical and practical knowledge and analytical methods to the resolution of a practical research problem. The research work should be original and is expected to result in a contribution to the existing body of knowledge.

Requirements

Students must complete the following courses:

- DMGT 700 Management: Theory, History, Philosophy, and Practice (3)
- DMGT 705 Systems Thinking and Systems Dynamics (3)
- DMGT 710 Economic Factors of Competition (3)
- DMGT 715 Technological Factors in Organizations (3)
- DMGT 720 Integrated Research Management (3)
- DMGT 725 Problem Solving and Practical Research Design (3)
- DMGT 730 Research Design and Specialization Framework (3)
- DMGT 740 Managing in the Global Environment (3)
- DMGT 745 Technological Innovation Management (3)
- DMGT 750 Advanced Readings in Management (3)
- DMGT 760 Literature Review Management (3)

COMPREHENSIVE EXAMINATION

Upon successful completion of all core, breadth, and specialization coursework, a student must demonstrate mastery by passing a comprehensive examination that focuses on all coursework up to that point. After successfully completing the examination, a student advances to candidacy.

In addition to taking a comprehensive exam, students must complete the following courses:

- DMGT 791 Dissertation Research: Proposal (3)
- DMGT 792 Dissertation Research: Stakeholder Paper (3)
- DMGT 793 Dissertation Research (3 or 6)

Dissertation Research

The dissertation is the culmination of the DM program. It is a synthesis of the knowledge gained in the coursework phase of the program and provides an opportunity to apply the knowledge to a real-world situation in the candidate's area of specialization. The dissertation involves a proposal, a stakeholder paper, and the final dissertation. The dissertation is designed so that candidates also solicit and receive timely feedback on the stakeholder paper and validation from professionals in the field. This is a presentation to top management of an organization or a special interest or stakeholders' group. In the final phases, candidates produce an applied research project. To accomplish this task, some committees may require candidates to present at a conference for additional feedback or prepare and submit a paper to a journal before finalizing the dissertation. Upon approval of the dissertation by the dissertation committee, candidates present their research at a colloquium involving the committee and members of the academic community.

Residencies

Specific dates for the residency periods can be found online at www.umuc.edu/grad/dm/dm_curriculum.html. There are a minimum of two residencies, held on Friday and Saturday.

Students may meet with an on-site advisor whenever necessary. On-site meetings depend on individual student and faculty needs and the date scheduled for the comprehensive examination and the candidate's colloquium. Depending on personal circumstances and the availability of courses, some students may take longer to complete coursework.

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MASTER'S DEGREE PROGRAMS

GLOBAL MASTER OF BUSINESS ADMINISTRATION

The Global Master of Business Administration (GMBA) is a 42-credit program designed for managers and other professionals whose careers and management responsibilities engage them in transnational and global operations. The program is designed to develop international management skills and competencies as well as business and cultural perspectives on major commercial countries and regions of the world. The curriculum builds on a core of existing international management courses, while providing advanced topics on the management of global enterprises. Students also gain competencies in designing and managing information systems, global supply chains, and cost-effective sourcing networks for global organizations. Moreover, they gain experience in conducting negotiations and structuring operations through courses that imbed project-oriented study trips to two different major commercial countries. In the capstone course, the insights from these projects and other coursework are integrated through a strategic business plan that embraces operations spanning multi-country operations within or across regions of the world.

Overview

The program emphasizes business strategy and strategy implementation in the context of the globalizing business environment, with a heavy emphasis on management application and skill development. Students take nine courses in the Master of International Management (MIM) degree program and conclude with five advanced GMBA courses, which feature two project-oriented courses involving country study tours, and the capstone course. Students may, if they wish, complete an MIM track specialization before proceeding to the GMBA courses. In that case, students are not required to complete the MIM end-of-program option, nor do they need to complete IMAN 650 as part of the track.

New Students

All new students are required to complete the 1-credit prerequisite course GMBA 600 GMBA/IMAN Fundamentals with a grade of B or better. This requirement is waived for students who have taken the GMAT within the last two years and scored 600 or above. Also, students with a master's degree from an accredited university may be eligible to waive GMBA 600. (Information on transfer credit is on p. 123.)

Formats/Locations

IMAN courses are currently offered in both online and classroom-based formats. GMBA courses are offered solely online. GMBA 600 is offered every semester. Students should check the current

Graduate Schedule of Classes to determine when courses will be offered at specific locations. (Note: In spring 2007, the GMBA format will become cohort-based, similar to the MBA program.)

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills in conjunction with GMBA 600.

REQUIRED COURSES (42 CREDITS)

GMBA 600 GMBA/IMAN Fundamentals (1)

After the GMBA 600 requirement has been satisfied, students must complete the following courses:

- IMAN 601 Strategic Management in a Global Environment (3)
- IMAN 605 Intercultural Communication and Leadership (3)
- IMAN 615 International Investment and Partnering (3)
- IMAN 610 Economics for Global Managers (3)
- IMAN 625 International Trade and Trade Policy (3)
- IMAN 631 Financial Management for Global Managers (6)
- IMAN 640 International Marketing Management (3)
- IMAN 645 The International Legal and Tax Environment (3)
- GMBA 653 Information Systems and Technology for Global Operations (3)
- GMBA 655 Managing Global Supply Chain Systems (3)
- GMBA 660 Country/Region Projects (3)
- GMBA 660 Country/Region Projects (3)

Note: Students must complete 6 credits (two separate courses) of GMBA 660, which includes a project-oriented study trip and travel to two different countries/regions. These courses must be completed in different semesters.

Students must take the following capstone course:

GMBA 670 Capstone Course: Managing Global Operations (3)

Course Sequencing

After GMBA 600 has been satisfied, the recommended first courses are IMAN 605, IMAN 610, and IMAN 631, followed by IMAN 601 and IMAN 625. All IMAN courses must be completed before enrolling in any of the required GMBA courses. GMBA 653 is prerequisite for GMBA 655. All other GMBA courses are prerequisite for GMBA 670. Any remaining IMAN or GMBA prerequisite course may be taken concurrently with the course for which it is a prerequisite. Students can complete the degree program in three to three and a half years if they adopt the course sequences set forth above. Courses taken in this sequence are designed so that the due dates for major assignments are staggered to avoid conflicts.

Elective Writing Course

In addition to completing program requirements, those students who require additional support in writing at the graduate level should take COMM 600 Academic Writing for Graduate Students (3) early in their program.

MASTER OF BUSINESS ADMINISTRATION

The Master of Business Administration (MBA) is designed for working professionals from a wide range of academic and organizational backgrounds and can be completed in 32 months without interrupting the student's career. The program is designed to broaden management responsibilities in preparation for senior management positions. The program explores the evolving nature of corporations, measures and leverages an organization's intellectual assets, explores how product development merges with entrepreneurship, and fosters new approaches to measuring the economic performance. Organizational and management processes are discussed in the context of the global business environment. Current management theory and relevant research are combined with the real-world experiences of students and faculty to address the major competitive challenges of the 21st century.

Overview

The 42-credit online MBA program consists of one 1-credit prerequisite course and seven 6-credit seminars. Each student is assigned to a cohort of approximately 25 students that continues together through completion of the MBA program.

Program Requirements

General requirements are listed on p. 8. AMBA 600 is a 1-credit prerequisite for the 42-credit MBA program. This prerequisite requirement may be waived with GMAT scores of 600 or higher or a completed master's degree. Previous graduate coursework will no longer waive this requirement unless a degree has been completed.

Formats/Locations

The MBA is offered entirely through online study and in a combination format that mixes online and classroom study. Students should check the current Graduate Schedule of Classes to determine when courses will be offered at specific locations.

Dual Degrees

Students who first complete the MBA degree program (42 credits) and meet all requirements for graduation will be eligible to earn a dual degree by completing extra semester hours in one of the following programs:

- Master of International Management (p. 61)
- Master of Science in e-commerce (p. 64)

- Master of Science in health care administration (p. 65)
- Master of Science in management (p. 66)

These degree programs are offered either online or in a combination of online and classroom-based study. Students who are interested in pursuing dual degrees must meet the admission requirements of each program.

MBA students may take the first track course for their MIM or MS degree together with AMBA 607A, in lieu of AMBA 607, to complete their MBA degree.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students must complete the following courses:

- AMBA 601/601C The Role of Managers and Organizations in Society (6)
- AMBA 602/602C The Dynamics of Individuals and Groups at Work (6)
- AMBA 603/603C The Marketing of New Ideas (6)
- AMBA 604/604C Technology and Operations Management (6)
- AMBA 605/605C Economics of Management Decisions (6)
- AMBA 606/606C Organizations and the External Environment (6)
- AMBA 607/607C Strategy (6)

Elective Writing Course

In addition to completing program requirements, those students who require additional support in writing at the graduate level should take COMM 600 Academic Writing for Graduate Students (3) early in their program.

MASTER OF INTERNATIONAL MANAGEMENT

The 36-credit Master of International Management (MIM) is an innovative program designed to fill a void in traditional business education. As the business communities of the world become more intertwined, managers are increasingly challenged by cultural differences, fluctuating exchange rates, trade regulations, foreign competition, and the opening of world markets. The program is helps midcareer professionals meet these challenges, successfully pursue careers in international business and commerce, and increase the competitiveness of their organizations.

Overview

In each segment of the degree program, theory and concepts are presented so the student may develop and evaluate administrative skills. Faculty members combine theoretical concepts with the practical application of usable skills.

Area Studies Option

Upon approval of the program director and the dean, students who have language proficiency and experience in a particular region of the world may receive transfer credit for up to two relevant graduate courses taken at another university as substitutes for courses in the MIM curriculum. Three criteria must be met by the student petitioning to enter the Area Studies option: working knowledge of a language relevant to the region or country in question, demonstrated commitment to the region (nationality, work experience, previous coursework, and so forth), and relevance of the transferred courses to the MIM curriculum (regional economics, trade, business, and so forth). Other students interested in area studies should consider GMBA 660.

New Students

GMBA 600 is a 1-credit prerequisite for the 36-credit MIM program. This prerequisite requirement may be waived with GMAT scores of 600 or higher or a completed master's degree. Previous graduate coursework will no longer waive this requirement unless a degree has been completed.

Formats/Locations

Classes in the MIM program are currently offered online and on-site. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations. GMBA 600 is offered every semester.

Students in the MIM degree program may elect instead to earn the Global Master of Business Administration (GMBA) degree by taking nine IMAN courses followed by five GMBA courses. For further information, see the GMBA program on p. 14.

Dual Degrees

Students who first complete the MIM degree program and meet all requirements for graduation will be eligible to earn a dual degree by completing extra semester hours in one of the following programs:

- Master of Business Administration (p. 61)
- Master of Science in management (p. 61)

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

GMBA 600 GMBA/IMAN Fundamentals (1)

After the GMBA 600 requirement has been satisfied, students must complete the following courses:

IMAN 610 Economics for Global Managers (3)
 IMAN 625 International Trade and Trade Policy (3)
 IMAN 605 Intercultural Communication and Leadership (3)
 IMAN 601 Strategic Management in a Global Environment (3)
 IMAN 631 Financial Management for Global Managers (6)
 IMAN 615 International Investment and Partnering (3)
 IMAN 640 International Marketing Management (3)
 IMAN 645 The International Legal and Tax Environment (3)
 IMAN 635 Managing Country Risk (3)

ELECTIVE COURSES

Students must take one of the following courses:

GMBA 653 Information Systems and Technology for Global Operations (3)
or
 GMBA 655 Managing Global Supply Chain Systems (3)
or
 GMBA 660 Country/Region Projects (3)

CAPSTONE COURSE

IMAN 650 Managing Overseas Operations (3)

Elective Writing Course

In addition to completing program requirements, those students who require additional support in writing at the graduate level should take COMM 600 Academic Writing for Graduate Students (3) early in their program.

CERTIFICATE PROGRAMS

Certificates are an ideal credential for individuals who do not wish to pursue a master's degree or for those who already have one or more advanced degrees and wish to add to their credentials in their field. All of the courses in each certificate program earn graduate credits that may be applied toward the parallel master's degree program.

INTERNATIONAL MARKETING

(12 CREDITS)

The certificate in International Marketing explores issues that are encountered when entering foreign markets, such as cultural differences, market access barriers, market research, and market entry strategies. The certificate is intended for U.S. company managers who seek to market goods and services outside the United States.

Students must take the following courses:

IMAN 620 International Marketing Research and Analysis (3)
 IMAN 625 International Trade and Trade Policy (3)
 IMAN 640 International Marketing Management (3)

Students must choose one of the following courses:

IMAN 605 Intercultural Communication and Leadership (3)
 MRKT 602 Consumer Behavior (3)
 (formerly ADMN 687)
 MRKT 606 Integrated Direct Marketing (3)
 (formerly ADMN 689)

Note: The first course taken should be IMAN 640 and the remaining courses may be taken in any order.

INTERNATIONAL TRADE

(12 CREDITS)

The certificate in International Trade prepares managers to identify and take advantage of global business opportunities. Topics such as global business strategies, strategic alliances, the World Trade Organization, and government relations are explored and applied to business situations. The certificate is intended for managers who want to learn the principles and techniques of international business and how to apply them to real business situations.

Students must take the following courses:

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

Students must choose one of the following courses:

IMAN 605 Intercultural Communication and Leadership (3)
 IMAN 635 Managing Country Risk (3)
 IMAN 640 International Marketing Management (3)
 IMAN 645 The International Legal and Tax Environment (3)

Note: The first course taken should be IMAN 601 followed by IMAN 615. The remaining courses may be taken in any order.

EXECUTIVE MASTER'S PROGRAMS

Career paths for many professionals and senior executives are no longer linear: The chief legal counsel may become the VP of Human Resources; the COO may take a turn as CIO; and tenure at more than one leadership position within corporate governance is commonplace. In addition, the increasing pace of technological innovation, the need for more complex strategic planning and leadership initiatives, the simultaneous management of multiple projects and management teams, and ever sharper competition from cyberspace and around the globe means that executives must acquire new tools and techniques to improve their effectiveness.

The content and format of traditional graduate programs may not be sufficient for the seasoned executive that has significant management experience. These executives want to be better at what they already do well and be more effective leaders. These career goals are achievable through Executive master's degree programs.

There are seven distinguishing characteristics of the Executive Programs in the Graduate School of Management and Technology at UMUC.

1. The education is cohort based. Students are surrounded by classmates with five or more years of demonstrated managerial excellence.
2. The faculty is drawn from industry leaders with advanced degrees who understand the realities of day-to-day business, knowing that education has to focus on solutions and not just on theory.
3. The curriculum is organized by career path, including CIO, CTO, COO, and CEO. Students individually define and redefine the education most appropriate to their chosen career path.
4. The programs are accelerated and flexible, allowing rapid completion without sacrificing quality. Coursework is a combination of alternating face-to-face and online instruction.
5. Through our nationally acclaimed National Leadership Institute (NLI), career path objectives are matched to individual leadership assessments to ensure that a student's strengths are aligned with career aspirations.
6. Executive students work and study together across a variety of venues, from a domestic residency to a six-month project and an international trip.
7. Through the Executive in Residence program, students have individual access to a unique level of professional support in the areas of leadership, strategic planning, decision making, financial management, organizational development, and policy-making.

EXECUTIVE PROGRAM FOR THE MASTER OF BUSINESS ADMINISTRATION

The days of succeeding in business without really trying are no more. Everyone is smart and hard working—so how do managers gain and maintain an advantage in a competitive global business environment? Because executives require a new style of management, the serious-minded, experienced middle and senior managers are invited to participate in the Executive MBA program.

The Executive MBA program is structured in groups of 25 executive students forming a tight cohort throughout the course of study, creating lifelong professional and personal relationships among members. Students are organized into five-member teams that work on assignments and present together in a format that closely replicates the business world. UMUC's National Leadership Institute (NLI) utilizes individual and group assessment tools and provides hands-on training to forge existing competencies into expert managerial capabilities.

More information and degree requirements are available online at www.umuc.edu/grad/exec/xmba.

Overview

The program consists of seven seminars. Each seminar includes examinations, papers, and/or presentations. The end-of-program project in XMBA 607 provides participants with a unique opportunity to plan and complete a strategic or operational business plan for a sponsor organization.

Program Requirements

In addition to the general admission requirements, applicants must have a minimum of five years of managerial experience and a current position as a mid- or senior-level manager. Qualified candidates will have a personal interview with the program director. All participants must have access to a computer and the Internet, and a working knowledge of software programs as described on p. 122.

Formats/Locations

Executive Program classes for the MBA are held at a specific UMUC site in the Washington, D.C., metropolitan area throughout the 21-month program. The classes are held every other Saturday from 8:30 a.m. to 5 p.m. and are supplemented with online (Web-based) instruction to provide maximum flexibility and convenience.

Prospective students should check the Executive Program Web page at <http://info.umuc.edu/executiveprograms> for the location of the next seminar.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611E Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Executive students must take the following seminars:

- XMBA 601 The Role of the Manager in Organizations and Society (6)
- XMBA 602 Organizational Leadership, Management of Human Resources, and Business Ethics (6)
- XMBA 603 Marketing, Entrepreneurship, and New Product Development (6)
- XMBA 604 Technology and Operations Management (6)
- XMBA 605 Financial Systems and Management Accounting (6)
- XMBA 606 International Business, Trade, and Business Law (6)
- XMBA 607 Strategy and Capstone Project (6)

EXECUTIVE PROGRAM FOR THE MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

Information Technology today drives an organization's successful business strategy. To maintain global competitive advantage, increasing levels of executive expertise are required to design and evaluate distributed information systems. Managing these skills requires superior skills to work effectively with the different interests of an increasingly diverse group of stakeholders.

Targeting mid- and senior-level executives with at least five years managerial or equivalent experience looking to pursue CIO or similar leadership positions, the Executive MS in Information Technology provides robust tools and techniques to ensure successful management of an IT environment.

Designed for working professionals, the 6-credit, six-seminar, 18-month program is cohort-based, providing each student with networking opportunities and team support. The classroom focuses on applied solutions to IT workplace challenges. This program offers the flexibility of combined on-site and online classes and a multidisciplinary faculty drawn from industry leaders with advanced degrees and demonstrated teaching expertise.

More information and degree requirements are available online at www.umuc.edu/grad/exec/xmit.

Overview

The program consists of six 6-credit seminars. Each seminar includes examinations, papers, and/or presentations.

Program Requirements

In addition to the general admission requirements, applicants must have a minimum of five years of business or management experience and a current position as a mid- or senior-level manager. Qualified candidates will have a personal interview with the program director. All participants must have access to a computer and the Internet and a working knowledge of software programs as described on p. 122.

Formats/Locations

All classes in the Executive Program for the MS in information technology are held at a specific UMUC site in the Washington, D.C., metropolitan area throughout the 18-month program. The classes are held every other Saturday from 8:30 a.m. to 5 p.m. and are supplemented with online (Web-based) instruction to provide maximum flexibility and convenience.

Prospective students should check the Executive Program Web page at info.umuc.edu/executiveprograms for the location of the next seminar.

Technical Requirements

All participants are required to have an Internet-ready laptop computer.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611E Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Executive students must take the following seminars:

- XMIT 601 IT and the Industry and Strategic Management (6)
- XMIT 602 Human Resources, Leadership, and Project/Financial Management (6)
- XMIT 603 Advanced Topics in IT and Systems Security and Risk Management (6)
- XMIT 604 Computing and Software Technology (6)
- XMIT 605 Data Communications and Internet Technologies (6)
- XMIT 606 Systems Engineering and Capstone (6)

BUSINESS AND EXECUTIVE PROGRAMS

EXECUTIVE PROGRAM FOR THE MASTER OF SCIENCE IN TECHNOLOGY MANAGEMENT

In today's technology-driven, globally competitive business environment, there is an immediate demand for skilled and experienced professionals who can effectively leverage technology to improve core business performance. These professionals are needed to lead the development and deployment of technology across a broad spectrum of industries.

The Executive MS in Technology Management targets mid- and senior-level technical professionals who need to enhance their performance as technology managers. This 6-credit, six-seminar, 18-month program equips executives on a CTO or similar career path with advanced strategic and tactical decision-making competencies.

The cohort-based program is designed for working technology professionals with a minimum of five years of managerial or equivalent professional experience. Students discuss current workplace challenges in the classroom, creating opportunities to share insights and solve problems among peers. The program offers the flexibility and convenience of a combination of on-site and online classes.

More information and degree requirements are available online at www.umuc.edu/grad/exec/xtmn.

Overview

The program consists of six 6-credit seminars. Each seminar includes examinations, papers, and/or presentations. The end-of-program project provides participants with a unique opportunity to develop sound approaches to specific technology management issues.

Program Requirements

In addition to the general admission requirements, applicants must have at least five years of business or management experience and a current position as a mid- or senior-level manager. Qualified candidates will have a personal interview with the program director. All participants must have access to a computer and the Internet and a working knowledge of software programs as described on p. 122.

Formats/Locations

All classes in the Executive Program for the MS in technology management are held at a specific UMUC site in the Washington, D.C., metropolitan area throughout the 18-month program. The classes are held every other Saturday from 8:30 a.m. to 5 p.m. and are supplemented with online (Web-based) instruction to provide maximum flexibility and convenience. Instruction includes lectures, case studies, structured discussions, guest speakers, videos, computer exercises, written projects, and oral presentations. Students are encouraged to bring laptop computers to class.

Prospective students should check the Executive Program Web page at <http://info.umuc.edu/executiveprograms> for the location of the next seminar.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611E Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Executive students must take the following seminars:

- XTMN 601 Technology Overview and Financing Technology-Based Ventures (6)
- XTMN 602 Marketing and Strategic Management (6)
- XTMN 603 Program and Operations Management (6)
- XTMN 604 Electronic Commerce (6)
- XTMN 605 Operational Performance and Human Resources (6)
- XTMN 606 Information Security and Global Management—Capstone (6)

EXECUTIVE DUAL DEGREE PROGRAMS

Graduates of the Executive Program for the MBA are eligible for dual degrees in the standard format programs for the MS in e-commerce (described on page 27), the MS in health care administration (described on page 46), or the MS in management (described on page 48).

EXECUTIVE DUAL DEGREE PROGRAM FOR THE MASTER OF SCIENCE IN TECHNOLOGY MANAGEMENT/MASTER OF BUSINESS ADMINISTRATION

Graduates of the executive format for an MS in technology management can also obtain a Master of Business Administration (MBA) through the accelerated format of Executive Programs. These dual degree students may earn two master's degrees for a total of 54 credits, rather than the 79 credits that would be needed if two master's programs were completed separately. Students must complete all degree requirements for the first master's degree program before they can earn an MBA. To obtain the MBA, students must then complete 18 additional credits from the Executive Program for the MBA.

All of the requirements for both degrees must be completed within seven years. All MBA degree coursework must be completed within five years.

Program Requirements

In addition to the general admission requirements, applicants must meet the requirements listed on p. 18 for the Executive Program for the MBA.

Formats/Locations

The Executive Program for the MBA is offered in an accelerated format that combines classroom seminars with online study. The Saturday seminars are offered at a single UMUC site in the Washington, D.C., metropolitan area. Emphasis is placed on speaking and formal presentation skills in the classroom seminars and on writing and analytical skills in the online coursework.

Up-to-date schedules and course locations can be found online at <http://info.umuc.edu/executiveprograms>.

Curriculum Requirements

Graduates of the Executive Program for the MS in technology management must complete the following seminars from the Executive Program for the MBA:

- XMBA 602 Organizational Leadership, Management of Human Resources, and Business Ethics (6)
- XMBA 605 Financial Systems and Management Accounting (6)
- XMBA 606 International Business, Trade, and Business Law (6)

Seminars may also be completed in the AMBA format.

EXECUTIVE CERTIFICATE PROGRAMS

The Executive Program certificate offers a combination of online and classroom-based instruction.

CHIEF INFORMATION OFFICER

(24 CREDITS)

This 12-month executive program is offered in partnership with the General Services Administration's CIO University. Participants—high-performing government and private-sector IT professionals—receive both a federal government and the UMUC CIO certificate. In addition, credits earned in this program may be applied toward a master's degree. The CIO certificate program encompasses all competencies cited in the Information Technology Management and Reform Act (Clinger-Cohen) and identified by the federal CIO Council. These are all areas of management associated with the design, development, acquisition, implementation, planning, and maintenance of an organization's information technology structure.

This program is designed for

- Chief information officers and chief technology officers
- Senior information technology staff members and planners
- Consultants in the field of information technology

Students must take the following courses:

- XMIT 601 IT and the Industry and Strategic Management (6)
- XMIT 602 Human Resources, Leadership, and Project/Financial Management (6)
- XMIT 603 Advanced Topics in IT and Systems Security and Risk Management (6)
- XCIO 693 CIO Processes (6)

STRATEGIC MANAGEMENT OF TECHNOLOGY AND INNOVATION

(12 CREDITS)

This six-month certificate is designed to provide participants with the critical skills needed to craft an integrated technology and business strategy plan for their organizations. Courses are delivered through a combination of classroom-based seminars and online study and develop the principles, implications, and role of technology innovation in organizational development and global competition. Seminars build skills in corporate creativity and innovation, technology planning, capital finance and budgeting, marketing, and strategic management. Important, cutting-edge management techniques for business leaders are covered including activity-based costing, e-commerce, knowledge management, flexible product development, and the balanced scorecard. The certificate is designed for managers in both private- and public-sector organizations who wish to acquire the necessary skills and business expertise to identify ways to strategically improve their organizations' performance and global competitiveness. All 12 credits in this certificate may be applied toward the MS in technology management degree.

This program is designed for

- CEOs, CFOs, directors, and general managers responsible for setting the vision and strategic objectives of their organizations
- Mid- to senior-level executives involved in the identification, development, and deployment of new technologies to gain strategic advantage
- Entrepreneurs and business development professionals interested in private and corporate venturing

Students must take the following courses:

- XTMN 601 Technology Overview and Financing Technology-Based Ventures (6)
- XTMN 602 Marketing and Strategic Management (6)

INFORMATION AND TECHNOLOGY SYSTEMS PROGRAMS

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MASTER'S DEGREE PROGRAMS

MASTER OF DISTANCE EDUCATION

The Master of Distance Education (MDE) is designed for individuals who are capable of managing the distance education and e-learning enterprise within educational, business, government, and nonprofit organizations. In a rapidly expanding field, the graduates of the MDE program will be able to engage in the planning, budgeting, development, delivery, and support of distance education and distance training programs. The MDE program is designed in an online format for working adults who want to complete their degree without interrupting their careers. Students who successfully complete the master's degree will be able to understand and critique the broader policy and social issues that arise from using distance education, e-learning, and technology-based learning; plan and manage distance education and training courses, programs, departments, and organizations; design, develop, and deliver high-quality distance education and training in ways that reflect a variety of different approaches to teaching and learning; select and use technologies on the basis of their differing educational and operational characteristics; evaluate and conduct research on distance education professionals around the world; budget distance education development and delivery systems; and understand, from a learner's perspective, what it means to engage in distance and technology-mediated learning.

Overview

In each segment of the degree program, theory and concepts are presented so the student may develop and evaluate management skills. In each course, faculty members combine theoretical concepts with the practical application of usable skills. This 36-credit degree program consists of seven core courses, four elective courses, and one final required project.

Partnership with Oldenburg University

This 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 on this academic partnership is on p. 7.

New Students

The recommended first course for new students is OMDE 601.

Formats/Locations

Courses in the MDE program are currently available online only.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students must complete the following courses:

- OMDE 601 Foundations of Distance Education (3)
- OMDE 603 Technology in Distance Education (3)
- OMDE 604 The Management of Distance Education 2: Leadership in Distance Education (3)
- OMDE 606 The Management of Distance Education 1: Cost Analysis (3)
- OMDE 607 Instructional Design and Course Development in Distance Education (3)
- OMDE 608 Student Support in Distance Education and Training (3)
- OMDE 609 Distance Education Systems (3)*
(formerly OMDE 602)

* This course should not be taken before 12 credits have been completed.

ELECTIVE COURSES

Students must choose four of the following courses:

- OMDE 611 Distance Education Library Services (3)
- OMDE 614 Intellectual Property and Copyright in Distance Education (3)
- OMDE 620 Learning and Training with Multimedia (3)
- OMDE 621 Training at a Distance (3)
- OMDE 622 The Business of Distance Education (3)
- OMDE 623 Web-Based Learning and Teaching and the Virtual University (3)
- OMDE 625 National and International Policy for Distance Education in Developing Countries (3)
- OMDE 626 Technologies for Distance Education in Developing Countries (3)
- OMDE 631 Advanced Technology in Distance Education 1—Synchronous Learning Systems (3)
- OMDE 632 Advanced Technology in Distance Education 2—Asynchronous Learning Systems (3)

END-OF-PROGRAM COURSE

Students must complete the following course:

- OMDE 690 Distance Education Portfolio and Project (3)

Elective Writing Course

In addition to completing program requirements, those students who require additional support in writing at the graduate level should take COMM 600 Academic Writing for Graduate Students (3) early in their program.

MASTER OF SCIENCE IN BIOTECHNOLOGY STUDIES

The Master of Science (MS) in biotechnology studies program seeks to provide a thorough grounding in management and policy issues unique to the biotechnology industry. Graduates of the program, regardless of their level of prior technical education, will have a greater grasp of the technologies currently in use in the biotechnology industry. They will understand the regulatory role of federal and state governmental agencies as well as international bodies and professional groups. They will also gain a deeper understanding of the “business of biotechnology,” including financial, strategic, and human resource management in the industry. Finally, graduates of the MS in biotechnology studies will have increased knowledge of bioinformatics.

Overview

The program leads to an MS in biotechnology studies. The curriculum requires 36 credits of coursework and is divided into 21 credits of core coursework, 12 credits of electives, and a 3-credit capstone course. A specialty track in bioinformatics practice is available. This track requires 21 credits of core coursework, 12 credits of track courses, and a 3-credit capstone course.

Program Requirements

Some background in biology is recommended.

New Students

The recommended first course for new students is BIOT 640. Students with no background in molecular biology are recommended to take BIOT 601.

Formats/Locations

Classes in the MS in biotechnology studies program are offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

INFORMATION AND TECHNOLOGY SYSTEMS PROGRAMS

CORE COURSES

Students in the biotechnology studies program must complete the courses listed below. Students in the bioinformatics practice track may substitute certain courses (see substitution courses).

BIOT	640	Societal Issues in Biotechnology (3)
BIOT	610	Introduction to Bioinformatics (3)
BIOT	641	Commercializing Biotechnology in Early-Stage Ventures (3)
BIOT	642	Selection and Evaluation of Biotechnology Projects (3)
BIOT	643	Techniques of Biotechnology (3)
BIOT	644	Biotechnology and the Regulatory Environment (3)
BIOT	645	The Business of Biotechnology (3)

ELECTIVE COURSES

Students must choose four of the following courses:

BIOT	601	Molecular Biology for Business Managers (3)
BIOT	681	Bioterrorism and Biosecurity (3)
BIOT	682	Biotechnology Practicum (3)
TMAN	610	Economics and Financial Analysis (3)
TMAN	611	Principles of Technology Management (3)
TMAN	612	Financial Management for Technology Managers (3)
TMAN	613	Marketing Technology-Based Products and Services (3)
TMAN	614	Strategic Management of Technology and Innovation (3)
TMAN	632	Organizational Performance Management (3)
TMAN	633	Managing People in Technology-Based Organizations (3)
TMAN	640	Program and Project Management (3)
TMAN	661	Systems Development and Management (3)
or		
COMM	600	Academic Writing for Graduate Students (3)*

CAPSTONE COURSE

Students must complete the following course:

BIOT	671	Capstone (3)
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BIOINFORMATICS PRACTICE TRACK

The bioinformatics practice track is designed for graduate students with interest in molecular biology and information technology. The track covers a broad range of subjects (e.g., molecular biology, biostatistics, algorithms, bioinformatics, and visualization) at the interface between these two fields. Interested students should contact the program director at 800-888-UMUC, ext. 7824, for more information.

Track Courses

Students in the bioinformatics practice track must complete the following courses:

BIOT	613	Statistical Processes for Biotechnology (3)
BIOT	617	Advanced Bioinformatics (3)
CSMN	614	Data Structures and Algorithms (3)
CSMN	661	Relational Database Systems (3)

Substitution Courses

Only students in the bioinformatics practice track may make the following program core course substitutions:

TMAN	614	may be substituted for BIOT 641
TMAN	613	may be substituted for BIOT 642
BIOT	601, 681, or 682	may be substituted for BIOT 643
TMAN	611	may be substituted for BIOT 645

CAPSTONE COURSE

Students must complete the following course:

BIOT	671	Capstone (3)
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Course Sequencing

Students should take BIOT 640 first and all other courses in ascending numerical order. Students who cannot take courses in the required sequence should contact the program director for approval of an alternate course plan.

MASTER OF SCIENCE IN COMPUTER SYSTEMS MANAGEMENT

The Master of Science (MS) in computer systems management serves the needs of programmers, developers, engineers, and other knowledge workers who aspire to move into technical leadership positions. As organizations become increasingly interdependent and interconnected in the 21st century, the need for trained specialists to develop and streamline a global information infrastructure will grow exponentially. The program provides educational opportunities for such information professionals. The emphasis is on moving technology out of the laboratory and into business development, defining the role of information literacy in decision making, and exploiting information technologies for productivity and competitiveness. The program is rich in real-life assignments and case studies.

Overview

In each segment of this degree program, theory and concepts are presented so the student may develop and evaluate managerial skills. In each course, faculty members combine theoretical con-

* Those students who require additional support in writing at the graduate level should take COMM 600 early in their program. COMM 600 will be accepted toward degree requirements as a 3-credit elective course.

Course descriptions are found on pp. 69–112.

cepts with the practical application of usable skills. This degree program requires 39 credits and consists of five core courses, three to five track courses, and three to five electives.

Students may choose one of six tracks:

- Applied computer systems
- Database systems technologies
- Homeland security management
- Information assurance
- Information resources management
- Software development management

Agreement with National Defense University

More information on UMUC's partnership with National Defense University is on p. 7.

New Students

The recommended first course for new students is CSMN 601.

Technological Requirements

Students pursuing a degree in any of the information technology fields (computer systems management, information technology, telecommunications management, and software engineering) must have access to a computer and modem capable of supporting current software. Such programs may require more than the minimum hardware and software needed for basic online communication and study (listed on p. 122).

In addition, students in the database systems technologies, information resource management, and software development management tracks are also required to have access to a computer with the following features:

- At least 512 MB RAM (1 GB preferred)
- At least 20 GB free disk space
- Windows 2000 or later
- 56 KB modem (broadband recommended)
- Read/write CD drive
- Telnet and FTP service (via their ISP)
- Compression software (e.g., WinZip)
- FTP software
- Multimedia software (e.g., RealOne Player, Flash, QuickTime)
- PowerPoint

Formats/Locations

Classes are currently offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students must complete the following three courses. CSMN 601 is strongly recommended as the first course.

CSMN	601	Issues, Trends, and Strategies for Computer Systems Management (3)
TMAN	640	Program and Project Management (3)
ITSM	670	Information Technology Integration and Application (3)

Students must complete two of the following courses:

CSMN	611	Computer Organization (3)
CSMN	635	Systems Development and Project Control (3)
CSMN	655	Information Risk Assessment and Security Management (3)
CSMN	661	Relational Database Systems (3)
MSWE	645	System and Software Standards and Requirements (3)
TMAN	610	Economics and Financial Analysis (3)
TMAN	614	Strategic Management of Technology and Innovation (3)
TMAN	632	Organizational Performance Management (3)

Students who took any of their track courses as part of these core courses should select other listed track courses to complete the required number of credits for their track.

TRACK COURSES

Applied Computer Systems

Students in this track must complete the following courses:

CSMN	611	Computer Organization (3)
CSMN	612	Operating Systems (3)

Students must also take at least three of the following courses:

CSMN	614	Data Structures and Algorithms (3)
CSMN	616	Parallel and Distributed Systems (3)
CSMN	617	Principles of Programming Languages (3)
CSMN	618	Knowledge-Based Systems (3)
CSMN	661	Relational Database Systems (3)
MSIT	630	Concepts in Software-Intensive Systems (3)

INFORMATION AND TECHNOLOGY SYSTEMS PROGRAMS

Database Systems Technologies

Students who have previous work experience or undergraduate credits in database systems should contact the program director to see if they qualify for advanced standing.

Students who do not have advanced standing must complete the following course:

CSMN 661 Relational Database Systems (3)

All students in this track must complete the following course:

CSMN 662 Advanced Relational/Object-Relational Database Systems (3)

Students who do not have advanced standing must choose three of the following courses; students with advanced standing must choose four.

CSMN 663 Distributed Database Management Systems (3)

CSMN 664 Object-Oriented Database Systems (3)

CSMN 665 Data Warehouse Technologies (3)

CSMN 666 Database Systems Administration (3)

CSMN 667 Data Mining (3)

CSMN 668 Database Security (3)

Note: CSMN 661 or equivalent experience is a prerequisite and CSMN 662 is recommended for all higher-level database courses.

Homeland Security Management

Students in this track must complete the following two courses:

ITSM 620 Concepts in Homeland Security (3)

ITSM 622 Seminar in Homeland Security Management (3)

Students must also complete three of the following courses:

CSMN 655 Information Risk Assessment and Security Management (3)

BIOT 681 Bioterrorism and Biosecurity (3)

ENER 603 Energy Infrastructure Management (3)

ITSM 624 Physical Security (3)

ITSM 626 Business Continuity: Disaster Recovery, Planning, and Response (3)

Information Assurance

Students in this track must complete the following courses:

CSMN 655 Information Risk Assessment and Security Management (3)

CSMN 681 Cryptology and Data Protection (3)

CSMN 683 Intrusion Detection, Incident Response, and Computer Forensics (3)

TLMN 672 Network and Internet Security (3)

Students must also choose one of the following courses:

CSMN 668 Database Security (3)

CSMN 685 Security Policy, Ethics, and the Legal Environment (3)

ITSM 620 Concepts in Homeland Security (3)

Information Resources Management

Students in this track must complete the following courses:

CSMN 635 Systems Development and Project Control (3)

CSMN 636 Telecommunications and Connectivity (3)

ITSM 637 IT Acquisitions Management (3)

Software Development Management

Students in this track must complete the following courses:

MSWE 645 System and Software Standards and Requirements (3)

MSWE 646 Software Design and Implementation (3)

MSWE 647 Software Verification and Validation (3)

MSWE 648 Software Maintenance (3)

ELECTIVE COURSES

Students must choose electives from the following list to complete the required number of credits for the degree program. Students in the database systems technologies, applied computer systems, homeland security management, and information assurance tracks choose three electives; students in the software development management track choose four electives; students in the information resources management track choose five electives.

ADMN 644 Decision Support Systems and Expert Systems (3)

ADMN 645 Information Technology, the CIO, and Organizational Transformation (3)

COMM 600 Academic Writing for Graduate Students (3)*

ECOM 610 Introduction to E-Commerce (3)

ECOM 620 E-Marketing (3)

ECOM 670 Social, Legal, Ethical, and Regulatory Issues (3)

IMAN 601 Strategic Management in a Global Environment (3)

IMAN 625 International Trade and Trade Policy (3)

MGMT 625 Organizational Communication and Group Development (3)
(formerly ADMN 625)

MGMT 635 Organizational Leadership and Decision Making (3)
(formerly ADMN 635)

MGMT 650 Research Methods for Managers (3)
(formerly ADMN 638)

MSWE 645 System and Software Standards and Requirements (3)

MSWE 646 Software Design and Implementation (3)

MSWE 647 Software Verification and Validation (3)

MSWE 648 Software Maintenance (3)

Students may also choose any CSMN, ITSM, TLMN or TMAN courses.

* Those students who require additional support in writing at the graduate level should take COMM 600 early in their program. COMM 600 will be accepted toward degree requirements as a 3-credit elective course.

Course descriptions are found on pp. 69–112.

MASTER OF SCIENCE IN E-COMMERCE

The Master of Science (MS) in e-commerce degree program introduces participants to the critical competencies and skills needed to effectively identify, develop, and implement e-commerce business strategies in various types of organizations. These competencies and skills are developed using several key themes incorporated throughout the program in the core curriculum, which consists of technology-driven change; dynamic innovation and creativity; globalization of commerce; ethics, social responsibility, and cultural sensitivity; and integrative systems thinking and practice. These themes are continually reinforced in the core courses. They form the basis of lectures, readings, exercises and graded assignments, individual and group projects, cases, and discussions.

Overview

This 36-credit degree program leads to the degree of MS in e-commerce. It consists of nine core courses, including a capstone course, and three elective courses. The three elective courses can be selected from existing UMUC graduate courses.

Agreement with Capitol College

Information on UMUC's transfer agreement with Capitol College is on p. 7.

New Students

The recommended first course for new students is ECOM 610.

Formats/Locations

Courses in e-commerce are currently offered online only. Elective courses are available online and may be available at locations in the metropolitan Washington, D.C., area. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Students who first complete the entire MS in e-commerce degree program and meet all requirements for graduation will be eligible to earn an MBA with only an additional 18–24 semester hours of coursework. The MBA is offered online. More information on the dual degree program is on p. 64.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students must complete the following courses:

ECOM 610	Introduction to E-Commerce (3)
ECOM 620	E-Marketing (3)
ECOM 630	Information Risk Assessment and Security Management (3)
ECOM 640	Internet Principles and Applications (3)
ECOM 650	E-Commerce Applications and Operations (3)
ECOM 660	E-Commerce Financial Management and Accounting (3)
ECOM 670	Social, Legal, Ethical, and Regulatory Issues (3)
ECOM 680	E-Commerce Application Software (3)

ELECTIVE COURSES

COMM 600	Academic Writing for Graduate Students (3)*
ECOM 681	Introduction to Electronic Government (3)

Electives may be chosen from existing UMUC graduate courses, excluding HCAD courses. Students should contact the program director at 800-888-UMUC, ext. 7200.

CAPSTONE COURSE

Students must complete the following capstone course:

ECOM 671	E-Commerce Capstone (3)
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MASTER OF SCIENCE IN ENVIRONMENTAL MANAGEMENT

The Master of Science (MS) in environmental management is designed to provide the skills, knowledge, and competencies that students will need to function effectively in multiple environmental management settings. The courses in the program are inter-related and provide a solid conceptual and applied foundation.

Overview

In each segment of the degree program, theory and concepts are presented so the student may develop and evaluate administrative skills. In each course, faculty members combine theoretical concepts with the practical application of usable skills. This degree program requires 36–39 credits and consists of seven core courses and six elective courses. A specialty track in energy resources management and policy development and a concentration in environmental business are available.

* Those students who require additional support in writing at the graduate level should take COMM 600 early in their program. COMM 600 will be accepted toward degree requirements as a 3-credit elective course.

Course descriptions are found on pp. 69–112.

Program Requirements

In addition to the general admission requirements (listed on p. 8), students in this program must have a bachelor's degree with a minimum of 3 credits each in chemistry and biology.

Students who do not have the equivalent of 3 credits in biology and 3 credits in chemistry at the undergraduate level must meet that requirement before advancing beyond the following courses: ENVM 646, ENVM 641, ENVM 643, or TMAN 640.

New Students

The required first course for new students is ENVM 646.

Formats/Locations

Classes in the MS in environmental management are offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students must complete the following courses:

- ENVM 646 Environmental/Energy Law and Policy Development (3)
(also listed as ENER 646)
- TMAN 610 Economics and Financial Analysis (3)
- ENVM 641 Environmental Auditing (3)
- ENVM 643 Environmental Communications and Reporting (3)
- TMAN 640 Program and Project Management (3)
- ENVM 647 Environmental Risk Assessment (3)
- ENVM 670 Seminar in Environmental Management (3)

Students without an undergraduate degree in science or engineering must take the following course:

- ENVM 648 Fundamentals of Environmental Systems (3)

ELECTIVE COURSES

No Track or Concentration

Students who are not pursuing a track or concentration must choose six of the following courses:

- COMM 600 Academic Writing for Graduate Students (3)*
- ENVM 644 New Technologies in Environmental Management (3)

- ENVM 645 Hazardous Materials Transportation (3)
- ENVM 648 Fundamentals of Environmental Systems (3)
- ENVM 649 Principles of Waste Management and Pollution Control (3)
- ENVM 650 Land and Water Resource Management (3)
- ENVM 651 Watershed Planning Management (3)
- ENVM 652 Principles of Air Quality Management (3)
- ENVM 653 Land Use Management (3)

or

One course from the energy resources management and policy development track

Track in Energy Resources Management and Policy Development

Students in the energy resources management and policy development track must complete the following track courses in lieu of four environmental electives:

- ENER 601 Energy Resources (3)
- ENER 602 Energy Economics (3)
- ENER 603 Energy Infrastructure Management (3)
- ENER 604 New Technologies in Energy Management (3)

Students in the energy resources management and policy track must also complete one of the following courses:

- ENVM 644 New Technologies in Environmental Management (3)
- ENVM 651 Watershed Planning Management (3)

Track in Environmental Business Concentration

Students in the environmental business concentration track may take the following courses in lieu of four environmental electives:

- TMAN 613 Marketing Technology-Based Products and Services (3)
- TMAN 614 Strategic Management of Technology and Innovation (3)
- TMAN 632 Organizational Performance Management (3)
- TMAN 633 Managing People in Technology-Based Organizations (3)

Course Sequencing

Students are required to take ENVM 646 as their first course. Permission from the program director is required to take a different first course. ENVM 648, if required, must be among the first three courses.

* Those students who require additional support in writing at the graduate level should take COMM 600 early in their program. COMM 600 will be accepted toward degree requirements as a 3-credit elective course.

Course descriptions are found on pp. 69–112.

MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

The Master of Science (MS) in information technology program seeks to provide students with a technical curriculum covering a wide range of information technology (IT) topics. It is designed for those who are called upon to develop, implement, and operate information systems in a variety of organizations. Graduates of the program will have a broad technical understanding of current and emerging technologies in the IT field, a familiarity with systems engineering concepts, and a solid foundation in the technological basis of the Internet. They will also have a firm grasp of current and future effects of the convergence of computer systems and telecommunications systems technologies.

Overview

This 36-credit degree program leads to an MS in information technology. The curriculum is divided into 18 credits in core courses, 15 credits in electives, and a 3-credit capstone course. The core curriculum consists of six technical courses in basic technology, computing, software, telecommunications, systems engineering, and the Internet. The capstone course covers information technology integration and applications. Students may fulfill the elective component of the curriculum in one of two ways, depending upon individual needs and work situations: they may select 15 credits of coursework from the entire range of existing UMUC information technology courses in order to gain an interdisciplinary perspective, or they may take a sequenced series of courses within one of the groups of electives. Certain management electives are also available for students who may be on the management track in their organizations.

Program Requirements

In addition to the general admission requirements (listed on p. 8), candidates for this program are expected to have earned their bachelor's degree in one of the engineering, computer science, physical science, or mathematical disciplines and have relevant practical experience in information technology.

New Students

The recommended first course for new students is MSIT 610.

Technology Requirements

Students pursuing a degree in any of the information technology fields (computer systems management, information technology, telecommunications management, and software engineering) must have access to a computer and modem capable of supporting current software. Such programs may require more than the minimum hardware and software needed for basic online communication and study (listed on p. 122).

In addition, students are also required to have access to a computer with the following features:

- At least 512 MB RAM (1 GB preferred)
- At least 20 GB free disk space
- Windows 2000 or higher
- 56 KB modem (broadband recommended)
- Read/write CD drive
- Telnet and FTP service (via their ISP)
- Compression software (e.g., WinZip)
- FTP software
- Multimedia software (e.g., RealOne Player, Flash, Quicktime)
- PowerPoint

Formats/Locations

Classes in the MS in information technology program are offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students must complete the following courses:

MSIT	610	Foundations of Information Technology (3)
MSIT	620	Computer Concepts (3)
MSIT	630	Concepts in Software-Intensive Systems (3)
MSIT	640	Data Communications and Networks (3)
MSIT	650	Systems Engineering (3)
MSIT	660	Internet Technologies (3)

ELECTIVE COURSES

Students may select five courses from any of the following subject areas to fulfill the elective requirement. Course selections need not belong to the same area. Information about certificates in any of these subject areas can be found at www.umuc.edu/grad/certificates.

Applied Computer Systems

CSMN	614	Data Structures and Algorithms (3)
CSMN	616	Parallel and Distributed Systems (3)
CSMN	617	Principles of Programming Languages (3)
CSMN	618	Knowledge-Based Systems (3)

INFORMATION AND TECHNOLOGY SYSTEMS PROGRAMS

Database Systems Technologies

- CSMN 661 Relational Database Systems (3)
 CSMN 662 Advanced Relational/Object Relational Database Systems (3)
 CSMN 663 Distributed Database Management Systems (3)
 CSMN 664 Object-Oriented Database Systems (3)
 CSMN 665 Data Warehouse Technologies (3)
 CSMN 666 Database Systems Administration (3)
 CSMN 667 Data Mining (3)
 CSMN 668 Database Security (3)

Electronic Commerce

- ECOM 610 Introduction to E-Commerce (3)
 ECOM 620 E-Marketing (3)
 ECOM 670 Social, Legal, Ethical, and Regulatory Issues (3)

Homeland Security Management

- ITSM 620 Concepts in Homeland Security (3)
 ITSM 622 Seminar in Homeland Security Management (3)
 CSMN 655 Information Risk Assessment and Security Management (3)
 BIOT 681 Bioterrorism and Biosecurity (3)
 ENER 603 Energy Infrastructure Management (3)
 ITSM 624 Physical Security (3)
 ITSM 626 Business Continuity: Disaster Recovery, Planning, and Response (3)

Information Assurance

- CSMN 655 Information Risk Assessment and Security Management (3)
 CSMN 681 Cryptology and Data Protection (3)
 CSMN 683 Intrusion Detection, Incident Response, and Computer Forensics (3)
 CSMN 685 Security Policy, Ethics, and the Legal Environment (3)
 ITSM 620 Concepts in Homeland Security (3)
 TLMN 672 Network and Internet Security (3)

Information Technology Management

- TMAN 610 Economics and Financial Analysis (3)
 TMAN 614 Strategic Management of Technology and Innovation (3)
 TMAN 632 Organizational Performance Management (3)
 TMAN 633 Managing People in Technology-Based Organizations (3)

Project Management

- PMAN 634 Program and Project Management (3)
 (Also listed as TMAN 640)
 PMAN 635 Techniques of Scheduling and Resource Allocation (3)
 PMAN 636 Legal Aspects of Contracting (3)
 (Also listed as PCMS 627)

- PMAN 637 Risk Management: Tools and Techniques (3)
 PMAN 638 Communication, Negotiation, and Conflict Resolution (3)

Software Systems

- MSWE 645 Systems and Software Standards and Requirements (3)
 MSWE 646 Software Design and Implementation (3)
 MSWE 647 Software Verification and Validation (3)
 MSWE 648 Software Maintenance (3)

Special Topics

- COMM 600 Academic Writing for Graduate Students (3)*
 CSMN 639 Multimedia and the Internet (3)
 ITSM 637 IT Acquisitions Management (3)

Telecommunications

- TLMN 620 Local Area Networking Systems (3)
 TLMN 625 Wide Area Networking Systems (3)
 TLMN 630 Satellite Communications Systems (3)
 TLMN 641 Network Management and Design (3)
 TLMN 645 Wireless Telecommunications Systems (3)
 TLMN 665 Wireless Security (3)

CAPSTONE COURSE

Students must take the following course:

- ITSM 670 Information Technology Integration and Applications (3)

MASTER OF SCIENCE IN TECHNOLOGY MANAGEMENT

The Master of Science (MS) in technology management provides a broad-based core of management competency in the central business functions, along with a deep understanding of generic technologies that enable specific business capabilities. Technology management is vitally important for both private- and public-sector organizations, which must manage the fast pace of technological change. Now all businesses and public organizations are managed with and through technology, and understanding the technological bases of management activities is essential for modern management skills. For example, information technology is used in planning and controlling operations and in marketing. Product and production technologies are used in designing and producing products. Service technologies are used in delivering services. Technologies pervade the whole organizational structure and all operations. The program's core courses focus upon a common management competency, while elective courses allow a student to customize depth in technology toward the student's long-term career goals. Technical depth can be provided wholly or partly in several technical areas: biotechnology, environment, e-commerce, systems, information technology, and administration.

Overview

The MS in technology management is a generalist degree, providing a broad coverage of all business functions, such as production, marketing, finance, personnel, and so forth. As a generalist degree, the MS in technology management is unique, in emphasizing the technology tools of these functional areas and the integration of the enterprise through technological tools. This degree provides a broad intellectual base upon which a modern manager can continue to build competencies over the long-term of a career and through the continuing rapid progress in technologies relevant to business and public organizations.

The program has four areas of specialization (tracks) in addition to the general program:

- Energy resources management and policy development
- Homeland security management
- Project management
- Technology systems management

The degree requires 36–39 credits. Distribution of coursework between core, track, and elective courses varies according to track.

New Students

The recommended first course for new students is TMAN 611.

Formats/Locations

Classes in the MS in technology management program are currently offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

Technology Management General Program

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students entering the general program should take the core courses in the following order, followed by the electives:

- | |
|--|
| <p>TMAN 611 Principles of Technology Management (3)</p> <p>TMAN 613 Marketing Technology-Based Products and Services (3)</p> <p>TMAN 633 Managing People in Technology-Based Organizations (3)</p> <p>TMAN 632 Organizational Performance Management (3)</p> |
|--|

- | |
|---|
| <p>TMAN 614 Strategic Management of Technology and Innovation (3)</p> <p>TMAN 612 Financial Management for Technology Managers (3)</p> <p>TMAN 640 Program and Project Management (3)</p> <p>TMAN 671 Seminar in Technology and Innovation Management (3)</p> |
|---|

Students can choose to take the following 6-credit course instead of taking TMAN 611 and TMAN 633:

- | |
|--|
| <p>TMAN 600 Foundations of Management and Technology (6)</p> |
|--|

Note: Students who complete TMAN 600 cannot receive credit for TMAN 611 or TMAN 633.

ELECTIVE COURSES

Students must choose five of the following courses:

- | |
|--|
| <p>BIOT 610 Introduction to Bioinformatics (3)</p> <p>BIOT 640 Societal Issues in Biotechnology (3)</p> <p>BIOT 643 Techniques of Biotechnology (3)</p> <p>COMM 600 Academic Writing for Graduate Students (3)*</p> <p>CSMN 611 Computer Organization (3)</p> <p>CSMN 636 Telecommunications and Connectivity (3)</p> <p>CSMN 661 Relational Database Systems (3)</p> <p>ECOM 610 Introduction to E-Commerce (3)</p> <p>ECOM 620 E-Marketing (3)</p> <p>ECOM 630 Information Risk Assessment and Security Management (3)</p> <p>ECOM 640 Internet Principles and Applications (3)</p> <p>ECOM 650 E-Commerce Applications and Operations (3)</p> <p>ENVM 644 New Technologies in Environmental Management (3)</p> <p>ENVM 649 Principles of Waste Management and Pollution Control (3)</p> <p>ENVM 650 Land and Water Resource Management (3)</p> <p>MGMT 644 Decision Support Systems and Expert Systems (3)</p> <p>PCMS 631 Integrative Supply Chain Management (3)
(formerly ADMN 622)</p> <p>PCMS 628 Contract Pricing and Negotiations (3)
(formerly ADMN 628)</p> <p>PCMS 630 Commercial Transactions in a Technological Environment: Law, Management, and Technology (3)
(formerly ADMN 660)</p> <p>TLMN 645 Wireless Telecommunications Systems (3)</p> <p>TMAN 610 Economics and Financial Analysis (3)</p> <p>TMAN 621 Systems Analysis and Operations Research (3)</p> <p>TMAN 622 Systems Development, Acquisition, and Management (3)</p> <p>TMAN 623 Systems Analysis and Design (3)</p> <p>TMAN 636 Knowledge Management (3)</p> <p>TMAN 661 Systems Development and Management (3)</p> |
|--|

* Those students who require additional support in writing at the graduate level should take COMM 600 early in their program. COMM 600 will be accepted toward degree requirements as a 3-credit elective course.

Course descriptions are found on pp. 69–112.

INFORMATION AND TECHNOLOGY SYSTEMS PROGRAMS

Energy Resources Management and Policy Development Track

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students in the energy resources management and policy development track must take the core courses in the following order:

- TMAN 611 Principles of Technology Management (3)
- TMAN 613 Marketing Technology-Based Products and Services (3)
- TMAN 633 Managing People in Technology-Based Organizations (3)
- TMAN 632 Organizational Performance Management (3)
- TMAN 612 Financial Management for Technology Managers (3)
- TMAN 640 Program and Project Management (3)
- TMAN 671 Seminar in Technology and Innovation Management (3)

Students can choose to take the following 6-credit course instead of taking TMAN 611 and TMAN 633:

- TMAN 600 Foundations of Management and Technology (6)

Note: Students who complete TMAN 600 cannot receive credit for TMAN 611 or TMAN 633.

TRACK COURSES

Students in the energy resources management and policy development track must complete the following track courses:

- ENER 601 Energy Resources (3)
- ENER 602 Energy Economics (3)
- ENER 603 Energy Infrastructure Management (3)
- ENER 604 New Technologies in Energy Management (3)
- ENER 646 Environmental/Energy Law and Policy Development (3)
(also listed as ENVM 646)

ELECTIVE COURSE

Students in the energy resources management and policy track must also choose one TMAN course as an elective.

Homeland Security Management Track

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students in the homeland security track must take the core courses in the following order:

- TMAN 611 Principles of Technology Management (3)

- TMAN 613 Marketing Technology-Based Products and Services (3)
- TMAN 633 Managing People in Technology-Based Organizations (3)
- TMAN 632 Organizational Performance Management (3)
- TMAN 614 Strategic Management of Technology and Innovation (3)
- TMAN 610 Economics and Financial Analysis (3)
- TMAN 640 Program and Project Management (3)
- TMAN 671 Seminar in Technology and Innovation Management (3)

Students can choose to take the following 6-credit course instead of taking TMAN 611 and TMAN 633:

- TMAN 600 Foundations of Management and Technology (6)

Note: Students who complete TMAN 600 cannot receive credit for TMAN 611 or TMAN 633.

TRACK COURSES

Students in the homeland security management track must complete the following two courses:

- ITSM 620 Concepts in Homeland Security (3)
- ITSM 622 Seminar in Homeland Security Management (3)

Students in the homeland security management track must also complete three of the following courses:

- CSMN 655 Information Risk Assessment and Security Management (3)
- BIOT 681 Bioterrorism and Biosecurity (3)
- ENER 603 Energy Infrastructure Management (3)
- ITSM 624 Physical Security (3)
- ITSM 626 Business Continuity: Disaster Recovery, Planning, and Response (3)

Project Management Track

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students in the project management track must take these core courses in the following order:

- TMAN 611 Principles of Technology Management (3)
- TMAN 613 Marketing Technology-Based Products and Services (3)
- TMAN 633 Managing People in Technology-Based Organizations (3)
- TMAN 632 Organizational Performance Management (3)
- TMAN 614 Strategic Management of Technology and Innovation (3)

INFORMATION AND TECHNOLOGY SYSTEMS PROGRAMS

- TMAN 610 Economics and Financial Analysis (3)
TMAN 671 Seminar in Technology and Innovation Management (3)

Students can choose to take the following 6-credit course instead of taking TMAN 611 and TMAN 633:

- TMAN 600 Foundations of Management and Technology (6)

Note: Students who complete TMAN 600 cannot receive credit for TMAN 611 or TMAN 633.

TRACK COURSES

Students entering the project management track should take the track courses in the following order:

- PMAN 634 Program and Project Management (3)
PMAN 638 Communication, Negotiation, and Conflict Resolution (3)
PMAN 636 Legal Aspects of Contracting (3)
PMAN 635 Techniques of Scheduling and Resource Allocation (3)
PMAN 637 Risk Management: Tools and Techniques (3)

Technology Systems Management Track

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students entering the technology systems management track should take the core courses in the following order, followed by the track and elective courses:

- TMAN 611 Principles of Technology Management (3)
TMAN 613 Marketing Technology-Based Products and Services (3)
TMAN 614 Strategic Management of Technology and Innovation (3)
TMAN 612 Financial Management for Technology Managers (3)
TMAN 671 Seminar in Technology and Innovation Management (3)

TRACK COURSES

Students in the technology systems management track must complete the following track courses:

- TMAN 621 Systems Analysis and Operations Research (3)
TMAN 622 Systems Development, Acquisition, and Management (3)
TMAN 623 Systems Analysis and Design (3)
TMAN 640 Program and Project Management (3)

ELECTIVE COURSES

Students must choose two of the following elective courses:

- COMM 600 Academic Writing for Graduate Students (3)*
CSMN 611 Computer Organization (3)
CSMN 636 Telecommunications and Connectivity (3)
CSMN 639 Multimedia and the Internet (3)
CSMN 655 Information Risk Assessment and Security Management (3)
MSIT 640 Data Communications and Network (3)
TLMN 620 Local Area Networking Systems (3)
TLMN 645 Wireless Telecommunications Systems (3)
TMAN 661 Systems Development and Management (3)

Students in the technology systems management track must choose two of the following courses:

Either TMAN 632 or TMAN 633 and one course chosen from HRMD 620, HRMD 640, IMAN 615, PCMS 627, or PCMS 628.

MASTER OF SCIENCE IN TELECOMMUNICATIONS MANAGEMENT

The Master of Science (MS) in telecommunications management is designed to provide the technical knowledge and management skills needed to plan, acquire, operate, and evaluate telecommunication systems. The program emphasizes critical management concepts, such as the structure and environment of the telecommunications industry, strategic planning, financial management, and quality improvement. In addition, the program offers instruction specific to telecommunications in the following areas: data communication systems, local and wide area networking systems, satellite systems, wireless telecommunication systems, network management, the Internet, the complex process of hardware and software acquisition from the standpoint of both the purchaser and the vendor, and the application of these topics to practical issues of telecommunications systems integration and management.

Overview

This degree program requires 39 credits and consists of six core courses, three technical specialization courses, and four electives.

Agreement with National Defense University

More information on UMUC's partnership with National Defense University is on p. 7.

** Those students who require additional support in writing at the graduate level should take COMM 600 early in their program. COMM 600 will be accepted toward degree requirements as a 3-credit elective course.*

Course descriptions are found on pp. 69–112.

New Students

The recommended first course for new students is TLMN 602.

Technology Requirements

Students pursuing a degree in any of the information technology fields (computer systems management, information technology, telecommunications management, and software engineering) must have access to a computer and modem capable of supporting current software. Such programs may require more than the minimum hardware and software needed for basic online communication and study (listed on p. 122).

In addition, students are also required to have access to a computer with the following features:

- At least 516 MB RAM (1 GB preferred)
- At least 20 GB disk space
- Windows 2000 or higher
- 56 KB modem (broadband recommended)
- Read/write CD drive
- Telnet and FTP service (via their ISP)
- Compression software (e.g., WinZip)
- FTP software
- Multimedia software (e.g., RealOne Player, Flash, Quicktime)
- PowerPoint

Formats/Locations

Courses in the MS in telecommunications management program are currently offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

It is recommended that students first take the technological specialization courses and then the core courses. Students must complete the following courses:

TLMN 602 Telecommunications Industry: Structure and Environment (3)

TLMN 641 Network Management and Design (3)
 TLMN 655 Systems Integration for Telecommunications Managers (3)
 TMAN 640 Program and Project Management (3)
 ITSM 637 IT Acquisitions Management (3)
 ITSM 670 Information Technology Integration and Application (3)

TECHNOLOGICAL SPECIALIZATION COURSES

Students must complete three of the following courses:

MSIT 640 Data Communications and Networks (3)
 TLMN 620 Local Area Networking Systems (3)
 TLMN 625 Wide Area Networking Systems (3)
 TLMN 630 Satellite Communication Systems (3)
 TLMN 636 Internet Technologies (3)
 TLMN 645 Wireless Telecommunications Systems (3)
 TLMN 665 Wireless Security (3)
 TLMN 672 Network and Internet Security (3)

ELECTIVES

Students must choose four courses from the following:

COMM 600 Academic Writing for Graduate Students (3)*
 ITSM 620 Concepts in Homeland Security (3)
 TMAN 610 Economics and Financial Analysis (3)
 TMAN 614 Strategic Management of Technology and Innovation (3) (formerly ADMN 603)
 TMAN 632 Organizational Performance Management (3)
 MGMT 625 Organizational Communication and Group Development (3) (formerly ADMN 625)
 MGMT 635 Organizational Leadership and Decision Making (3) (formerly ADMN 635)
 MGMT 650 Research Methods for Managers (3) (formerly ADMN 638)
 ECOM 610 Introduction to E-Commerce (3)
 ECOM 620 E-Marketing (3)
 ECOM 670 Social, Legal, Ethical, and Regulatory Issues (3)
 IMAN 601 Strategic Management in a Global Environment (3)
 IMAN 625 International Trade and Trade Policy (3)
 TMAN 633 Managing People in Technology-Based Organizations (3)

Any CSMN courses

Any TLMN courses not yet taken

* Those students who require additional support in writing at the graduate level should take COMM 600 early in their program. COMM 600 will be accepted toward degree requirements as a 3-credit elective course.

Course descriptions are found on pp. 69–112.

MASTER OF SOFTWARE ENGINEERING

The Master of Software Engineering (MSwE) was developed to provide a foundation in technical concepts and design techniques as well as management and teamwork approaches. The mission of the program is to prepare students to engineer the development of software products and services for industry and government in a cost-effective manner. The emphasis of the program is on implementing software engineering projects within cost and schedule by applying proven and innovative practices that overcome the shortcomings of the current paradigm.

This fall, UMUC will introduce a new specialization in systems engineering designed for students interested in or concerned with the development of systems. The specialization will cover the work performed by and in support of systems engineers to include developing of a statement of needs and formalizing requirements necessary to develop and design systems. For more information on this specialization, consult a UMUC advisor or e-mail mswe@umuc.edu.

Overview

The MSwE requires the completion of 12 courses for a total of 36 credits. This degree program consists of eight core courses, three electives, and one practical software engineering project.

Program Requirements

In addition to the general admission requirements (listed on p. 8), candidates for this program are required to have at least a year of experience in software design or an undergraduate degree in engineering or computer science; have completed a course in discrete math (for example, CMSC 150 Introduction to Discrete Structures or CMIS 160 Discrete Mathematics for Computing); and show competence in using an imperative structured programming language (work experience may be used).

Note: If the transcript from the institution where the student received his or her degree does not reflect the discrete math course, the transcript that does show such coursework must also be submitted.

New Students

The recommended first course for new students is MSWE 601.

Technology Requirements

Students pursuing a degree in any of the information technology fields (computer systems management, information technology, telecommunications management, and software engineering) must have access to a computer and modem capable of supporting current software. Such programs may require more than the minimum hardware and software needed for basic online communication and study (listed on p. 122).

In addition, students are also required to have access to a computer with the following features:

- At least 516 MB RAM (1 GB preferred)
- At least 20 GB disk space
- Windows 2000 or higher
- 56 KB modem (broadband recommended)
- Read/write CD drive
- Telnet and FTP service (via their ISP)
- Compression software (e.g., WinZip)
- FTP software
- Multimedia software (RealOne Player, Flash, Quicktime)
- PowerPoint

Formats/Locations

Classes in the MSwE program are currently offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students must complete the following courses:

MSWE	601	Issues in Software Engineering (3)
MSWE	603	Systems Engineering (3)
MSWE	635	Software Systems Development (3)
MSWE	640	Software Project Management (3)
MSWE	645	System and Software Standards and Requirements (3)
MSWE	646	Software Design and Implementation (3)
MSWE	647	Software Verification and Validation (3)
MSWE	648	Software Maintenance (3)

ELECTIVE COURSES

Students are required to take three electives from the following range of technical and managerial offerings. All prerequisites apply.

TECHNICAL ELECTIVE COURSES

CSMN	611	Computer Organization (3)
CSMN	612	Operating Systems (3)
CSMN	614	Data Structures and Algorithms (3)
CSMN	616	Parallel and Distributed Systems (3)
CSMN	617	Principles of Programming Languages (3)

INFORMATION AND TECHNOLOGY SYSTEMS PROGRAMS

CSMN	618	Knowledge-Based Systems (3)
CSMN	655	Information Risk Assessment and Security Management (3)
CSMN	661	Relational Database Systems (3)
CSMN	662	Advanced Relational/Object-Relational Database Systems (3)
CSMN	663	Distributed Database Management Systems (3)
CSMN	664	Object-Oriented Database Systems (3)
CSMN	665	Data Warehouse Technologies (3)
CSMN	667	Data Mining (3)
CSMN	681	Cryptology and Data Protection (3)
MSWE	697	Independent Research (3)
MSWE	698	Advanced Topics in Systems and Software Engineering (3)
MSWE	699	Advanced Topics in Software Engineering (3)
TLMN	620	Local Area Networking Systems (3)
TLMN	625	Wide Area Networking Systems (3)
TLMN	636	Internet Technologies (3)
TLMN	641	Network Management and Design (3)
TLMN	645	Wireless Telecommunications Systems (3)
TLMN	672	Network and Internet Security (3)

MANAGERIAL ELECTIVE COURSES

COMM	600	Academic Writing for Graduate Students (3)*
ECOM	610	Introduction to E-Commerce (3)
ITSM	637	IT Acquisitions Management (3)
TMAN	610	Economics and Financial Analysis (3)
TMAN	614	Strategic Management of Technology and Innovation (3)
TMAN	633	Managing People in Technology-Based Organizations (3)

CAPSTONE COURSE

Students must complete the following capstone course:

MSWE	617	Software Engineering Project (3)
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CERTIFICATE PROGRAMS

Certificates are an ideal credential for individuals who do not wish to pursue a master's degree or for those who already have one or more advanced degrees. All of the courses in each certificate program earn graduate credits that may be applied toward the parallel master's degree program. More information on admission application requirements is available on p. 113.

APPLIED COMPUTER SYSTEMS

(15 CREDITS)

The certificate in Applied Computer Systems is intended for information technology professionals who desire a background in the underlying computer hardware, operating systems, and languages that are the building blocks of information systems. Familiarity with a high-level programming language is desirable. All courses apply to the MS in computer systems management degree.

Students must take the following courses:

CSMN	611	Computer Organization (3)
CSMN	612	Operating Systems (3)

Students must choose three of the following courses:

CSMN	614	Data Structures and Algorithms (3)
CSMN	616	Parallel and Distributed Systems (3)
CSMN	617	Principles of Programming Languages (3)
CSMN	618	Knowledge-Based Systems (3)
CSMN	661	Relational Database Systems (3)
MSIT	630	Concepts in Software-Intensive Systems (3)

BIOINFORMATICS

(15 CREDITS)

Bioinformatics is a rapidly growing area in the biotechnology industry today. The certificate in Bioinformatics is intended to provide students with a core set of knowledge and skills in bioinformatics.

Students will take the following five courses for the certificate:

BIOT	610	Introduction to Bioinformatics (3)
BIOT	613	Statistical Processes for Biotechnology (3)
BIOT	640	Societal Issues in Biotechnology (3)
CSMN	614	Data Structures and Algorithms (3)
CSMN	661	Relational Database System (3)

BIOTECHNOLOGY MANAGEMENT

(15 CREDITS)

The certificate in Biotechnology Management is designed to provide the student with a solid foundation in the technical, business, and ethical issues facing the industry today.

Students must take the following courses:

- BIOT 640 Societal Issues in Biotechnology (3)
- BIOT 641 Commercializing Biotechnology in Early-Stage Ventures (3)
- BIOT 643 Techniques of Biotechnology (3)
- BIOT 644 Biotechnology and the Regulatory Environment (3)
- BIOT 610 Introduction to Bioinformatics (3)

DATABASE SYSTEMS TECHNOLOGIES

(15 CREDITS)

The certificate in Database Systems Technologies is geared towards those IT workers who wish to upgrade their skills by gaining familiarity with the most popular applications software genre in use, the database management systems and data warehousing systems. All courses apply to the MS in computer systems management degree.

Students who do not have advanced standing must complete the following course:

- CSMN 661 Relational Database Systems (3)

All students must complete the following course:

- CSMN 662 Advanced Relational/Object-Relational Database Systems (3)

Students who do not have advanced standing must choose three of the following courses; students with advanced standing must choose four.

- CSMN 663 Distributed Database Management Systems (3)
- CSMN 664 Object-Oriented Database Systems (3)
- CSMN 665 Data Warehouse Technologies (3)
- CSMN 666 Database Systems Administration (3)
- CSMN 667 Data Mining (3)
- CSMN 668 Database Security (3)

DISTANCE EDUCATION AND TECHNOLOGY

(12 CREDITS)

The certificate in Distance Education and Technology is intended to place the study of contemporary educational technologies in the context of the goals of educational and training organizations and to provide students with some in-depth knowledge and experience with the primary distance education and e-learning technologies in use today.

Students must take the following courses:

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

Students must take two of the following courses:

- OMDE 620 Learning and Training with Multimedia (3)
- OMDE 623 Web-Based Learning and Teaching and the Virtual University (3)
- OMDE 631 Advanced Technology in Distance Education 1—Synchronous Learning Systems (3)
- OMDE 632 Advanced Technology in Distance Education 2—Asynchronous Learning Systems (3)

DISTANCE EDUCATION IN DEVELOPING COUNTRIES

(12 CREDITS)

The certificate in Distance Education in Developing Countries is a certificate program within the Master of Distance Education program offered by UMUC and Oldenberg University in Germany. Consisting of four online courses, it examines the purposes for which distance education has been used and the audiences it has reached and allows the student to explore organizational models for distance education at various educational levels. The roles played by international agencies are analyzed. It enables the student to evaluate the range of educational technologies that assist institutions in reaching various off-campus audiences. Also, it explores the changing role of the private sector, the role of conventional universities in relation to e-learning, and the new international players.

Students must take the following courses:

- OMDE 601 Foundations of Distance Education (3)
- OMDE 606 The Management of Distance Education 1: Cost Analysis (3)
- OMDE 625 National and International Policies for Distance Education in Developing Countries (3)
- OMDE 626 Technologies for Distance Education in Developing Countries (3)

ELECTRONIC COMMERCE

(15 CREDITS)

The certificate in Electronic Commerce introduces participants to the critical competencies and skills needed to effectively identify, develop, and implement e-commerce business strategies in various types of organizations.

Students must take the following courses:

- ECOM 610 Introduction to E-Commerce (3)
- ECOM 620 E-Marketing (3)
- ECOM 630 Information Risk Assessment and Security Management (3)
- ECOM 650 E-Commerce Applications and Operations (3)
- ECOM 660 E-Commerce Financial Management and Accounting (3)

ENERGY RESOURCES MANAGEMENT AND POLICY DEVELOPMENT

(15 CREDITS)

The certificate in Energy Resources Management and Policy Development is intended to strengthen the knowledge of energy-related matters of practicing professionals. The course of study provides a foundation for managing complex issues dealing with the availability and use of energy resources, energy economics, alternate energy resources, energy policy development, and energy conservation.

Students must take the following courses:

- ENER 601 Energy Resources (3)
- ENER 602 Energy Economics (3)
- ENER 603 Energy Infrastructure Management (3)
- ENER 604 New Technologies in Energy Management (3)
- ENER 646 Environmental/Energy Law and Policy Development (3)
(also listed as ENVM 646)

ENVIRONMENTAL MANAGEMENT

(15 CREDITS)

The certificate in Environmental Management is intended for people seeking to improve their abilities in managing environmental projects and programs. It is particularly helpful to relatively new environmental managers who wish to strengthen skills in working with a diverse group of environmental professionals.

Students must take the following courses:

- ENVM 641 Environmental Auditing (3)
- ENVM 643 Environmental Communications and Reporting (3)

- ENVM 644 New Technologies in Environmental Management (3)
- ENVM 646 Environmental/Energy Law and Policy Development (3)
(also listed as ENER 646)
- ENVM 647 Environmental Risk Assessment (3)

FOUNDATIONS OF DISTANCE EDUCATION

(12 CREDITS)

The certificate in Foundations of Distance Education is intended to represent the study of the four basic foundational aspects of the field of distance education: history and theory, media and technology, economics, and support of the student.

Students must take the following courses:

- OMDE 601 Foundations of Distance Education (3)
- OMDE 606 The Management of Distance Education 1: Cost Analysis (3)
- OMDE 608 Student Support in Distance Education and Training (3)
- OMDE 620 Training and Learning with Multimedia (3)

HOMELAND SECURITY MANAGEMENT

(15 CREDITS)

The certificate in Homeland Security Management is designed to provide the technical and management skills necessary for individuals to manage and prepare response systems to a wide range of threats and vulnerabilities at the federal, state, and local level. The certificate requires successful completion of 15 credits as follows.

Students must take the following courses:

- ITSM 620 Concepts in Homeland Security (3)
- ITSM 622 Seminar in Homeland Security Management (3)

Students must choose three of the following courses:

- BIOT 681 Bioterrorism and Biosecurity (3)
- CSMN 655 Information Risk Assessment and Security (3)
- ENER 603 Energy Infrastructure Management (3)
- ITSM 624 Physical Security (3)
- ITSM 626 Business Continuity: Disaster Recovery, Planning, and Response (3)

INFORMATION ASSURANCE

(15 CREDITS)

The certificate in Information Assurance deals with theory and topical issues, both technical and managerial, in the fields of information systems security and overall information security. The certificate provides a thorough knowledge base for managers and technology professionals concerned with the development and operation of secure information systems and the protection of an organization's information assets. The track provides students with a practical understanding of the principles of data protection, network security, and computer forensics. The track also introduces the students to the policy, ethical, and legal issues associated with information security.

Students must take the following courses:

- CSMN 655 Information Risk Assessment and Security Management (3)
- CSMN 681 Cryptology and Data Protection (3)
- CSMN 683 Intrusion Detection, Incident Response, and Computer Forensics (3)
- TLMN 672 Network and Internet Security (3)

Students must choose one of the following two courses:

- CSMN 668 Database Security (3)
- CSMN 685 Security Policy, Ethics, and the Legal Environment (3)
- ITSM 620 Concepts in Homeland Security (3)

INFORMATION RESOURCES MANAGEMENT

(15 CREDITS)

The certificate in Information Resources Management represents the most general certificate in the Information Technology Systems area. Course content includes exposure to the most common challenges faced by the IT generalist in the public or private sector. This certificate is particularly desirable for persons with limited formal study or little work experience in the IT field. All courses apply to the MS in computer systems management degree.

Students must take the following courses:

- CSMN 601 Issues, Trends, and Strategies for Computer Systems Management (3)
- CSMN 635 Systems Development and Project Control (3)
- CSMN 636 Telecommunications and Connectivity (3)
- ITSM 637 IT Acquisitions Management (3)

Students must also choose one elective from CSMN, TLMN, or TMAN courses.

INFORMATION TECHNOLOGY

(15 CREDITS)

The certificate in Information Technology is intended for those students interested in a technical curriculum that covers a broad range of information technology topics. The certificate addresses computer science, telecommunications, and engineering principles. Students entering this certificate program must meet all the requirements for admission to the MS in information technology program. All courses apply to the MS in information technology degree.

Students must take the following course:

- MSIT 610 Foundations of Information Technology (3)

Students must choose four of the following courses:

- MSIT 620 Computer Concepts (3)
- MSIT 630 Concepts in Software-Intensive Systems (3)
- MSIT 640 Data Communications and Networks (3)
- MSIT 650 Systems Engineering (3)
- MSIT 660 Internet Technologies (3)

LIBRARY SERVICES IN DISTANCE EDUCATION

(12 CREDITS)

The certificate in Library Services in Distance Education will provide in-depth information in the history, theory, and organizational structure of distance education and the role of library services within organizations. Emphasis is on the selection and application of appropriate technologies, particularly with reference to library services.

Students must take the following courses:

- OMDE 601 Foundations of Distance Education (3)
- OMDE 603 Technology in Distance Education (3)
- OMDE 611 Distance Education Library Services (3)

Students must also choose one elective from the Master of Distance Education program.

PROJECT MANAGEMENT

(15 CREDITS)

The graduate certificate in Project Management is designed to facilitate the learning and application of skills that are critical in modern project management in both public- and private-sector organizations. The in-depth and practical courses help students to develop the knowledge and skills required for effectively managing different types of projects. In addition, this graduate certificate program helps students prepare for the Project Management Professional certification examination offered by the Project Management Institute.

Students must take the following courses:

- PMAN 634 Program and Project Management (3)
- PMAN 635 Techniques of Scheduling and Resource Allocation (3)
- PMAN 636 Legal Aspects of Contracting (3)
- PMAN 637 Risk Management: Tools and Techniques (3)
- PMAN 638 Communication, Negotiation, and Conflict Resolution (3)

SOFTWARE DEVELOPMENT MANAGEMENT

(15 CREDITS)

The certificate in Software Development Management provides technical managers and computer professionals with the technical foundations and management insights needed to participate in and manage phases of the software/systems life cycle. The emphasis is not on learning to write software programs, but on managing the process of software development. Familiarity with a high-level programming language is desirable. All courses apply to the MS in computer systems management degree.

Students must take the following course:

- CSMN 601 Issues, Trends, and Strategies for Computer Systems Management (3)

Students must choose three of the following courses:

- MSWE 640 Software Project Management (3)

Courses recommended for those working in the front end of the system life cycle:

- MSWE 603 Systems Engineering (3)
- MSWE 635 Software Systems Development (3)
- MSWE 645 System and Software Standards and Requirements (3)

Courses recommended for those working in the back end of the system life cycle:

- MSWE 646 Software Design and Implementation (3)
- MSWE 647 Software Verification and Validation (3)
- MSWE 648 Software Maintenance (3)

Students must also choose one elective from CSMN, TLMN, or TMAN courses.

SOFTWARE ENGINEERING

(15 CREDITS)

Students entering this certificate program must meet all of the requirements for admission to the Master of Software Engineering (MSwE) program. The certificate in Software Engineering is intended for those students interested in the foundation and issues of software engineering. The certificate addresses software development and design issues. All courses apply to the MSwE degree.

Students must take the following course:

- MSWE 601 Issues in Software Engineering (3)

Students must complete three of the following courses.

- MSWE 640 Software Project Management (3)

Courses recommended for those working in the front end of the system life cycle:

- MSWE 603 Systems Engineering (3)
- MSWE 635 Software Systems Development (3)
- MSWE 645 System and Software Standards and Requirements (3)

Courses recommended for those working in the back end of the system life cycle:

- MSWE 646 Software Design and Implementation (3)
- MSWE 647 Software Verification and Validation (3)
- MSWE 648 Software Maintenance (3)

To complete the required 15 credits, students must also choose one course from any of the aforementioned courses not already taken or from the electives for the MSwE degree, listed on p. 45.

TEACHING AT A DISTANCE

(12 CREDITS)

The certificate in Teaching at a Distance is intended for people seeking to teach at a distance in their organizations. It is intended to provide the student with teaching and learning concepts and teaching skills and methods that are appropriate to a distance education and training context.

Students must take the following courses:

- OMDE 601 Foundations of Distance Education (3)
- OMDE 603 Technology in Distance Education (3)
- OMDE 607 Instructional Design and Course Development in Distance Education (3)
- OMDE 623 Web-Based Learning and Teaching and the Virtual University (3)

TECHNOLOGY SYSTEMS MANAGEMENT

(18 CREDITS)

The certificate in Technology Systems Management is available for students who are interested in the management of technology systems, but are not interested in pursuing a degree at the time. The design, development, or acquisition of modern complex systems requires skills and background in both technical and management topics. The certificate program provides a basic approach to systems management.

Students must take the following courses:

- TMAN 611 Principles of Technology Management (3)
- TMAN 612 Financial Management for Technology Managers (3)
- TMAN 614 Strategic Management of Technology and Innovation (3)
- TMAN 621 Systems Analysis and Operations Research (3)
- TMAN 622 Systems Development, Acquisition, and Management (3)
- TMAN 632 Organizational Performance Management (3)

TELECOMMUNICATIONS MANAGEMENT

(15 CREDITS)

The certificate in Telecommunications Management provides the technical manager of IT professionals with the technical and management skills needed to plan, acquire, operate, evaluate, and upgrade telecommunications systems in an environment of IT convergence and constant change. All courses apply to the MS in telecommunications management degree.

Students must take the following courses:

- ITSM 637 IT Acquisitions Management (3)
- TLMN 602 Telecommunications Industry: Structure and Environment (3)
- TLMN 641 Network Management and Design (3)
- TLMN 655 Systems Integration for Telecommunications Managers (3)

Students must choose one of the following courses:

- TLMN 620 Local Area Networking Systems (3)
- TLMN 625 Wide Area Networking Systems (3)
- TLMN 630 Satellite Communication Systems (3)
- TLMN 636 Internet Technologies (3)
- TLMN 645 Wireless Telecommunications Systems (3)
- TLMN 672 Network and Internet Security (3)

TRAINING AT A DISTANCE

(12 CREDITS)

The certificate in Training at a Distance is intended to provide the student with a broad range of knowledge about and skills in the application of distance education and training within business, industry, government, and nonprofit organizations.

Students must take the following courses:

- OMDE 601 Foundations of Distance Education (3)
- OMDE 621 Training at a Distance (3)
- OMDE 622 The Business of Distance Education (3)

Students must also choose one elective from the Master of Distance Education program.

MANAGEMENT, ACCOUNTING, AND FINANCE PROGRAMS

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MASTER'S DEGREE PROGRAMS

MASTER OF SCIENCE IN ACCOUNTING AND FINANCIAL MANAGEMENT

The Master of Science (MS) in accounting and financial management is designed for individuals who want to concentrate their graduate studies in finance and accounting as an alternative to a general management or general business-related degree. There is substantial demand in the workforce for professionals and managers who possess specialized skills, knowledge, and abilities in both the accounting and financial management disciplines. The program emphasizes an understanding of the financial reporting process and its effect on financial markets, as well as the use and analysis of financial information to prepare students to assume positions of increasing responsibility within the financial operations of an organization.

The program curriculum provides academic depth in both fields and incorporates coursework in areas such as financial accounting, management accounting, taxation, fraud detection, ethics, accounting information systems, financial management of current operations, short-term financial management, financial institutions and capital markets, long-term financial management, investments, and multinational finance.

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 or to practice as a CPA 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.

Overview

This 36-credit program is composed of five accounting courses, six financial management courses, and an integrative end-of-program course.

Program Requirements

In addition to the general admission requirements (listed on p. 113), candidates for this program are required to have successfully completed 15 credits of accounting (with a grade of C or better) at the undergraduate level prior to enrolling in the graduate-level accounting courses. Students who have not met this requirement prior to beginning the program should consult an advisor regarding their options for starting limited graduate coursework while they concurrently complete the undergraduate accounting course requirement.

UMUC Undergraduate Accounting Students and Alumni

The Graduate School of Management and Technology and the School of Undergraduate Studies have agreed that the UMUC BS in accounting and the MS in management with a specialization in accounting, the MS in Accounting and Financial Management, and the MS in Accounting and Information Technology will “share” 6 credits of coursework and have selected certain courses that each program will accept from the other’s curriculum. This may enable UMUC undergraduate accounting majors (both current students and alumni) to waive up to 6 credits of coursework in completing both degrees. UMUC undergraduates and alumni are eligible to complete both degrees for a total of 150 credits. The shared credits are restricted to the following substitutions:

- The Graduate School will accept either ACCT 426 Advanced Cost Accounting in lieu of ACCT 611 Management Accounting or ACCT 427 Advanced Auditing Theory and Practice in lieu of ACCT 612 Auditing Process.
- The School of Undergraduate Studies will accept either ACCT 612 Auditing Process in lieu of ACCT 427 Advanced Auditing Theory and Practice or ACCT 614 Accounting Information Systems in lieu of ACCT 326 Accounting Information Systems.

The total number of credits shared between the programs cannot exceed 6 credits, and the substitutions listed above are the only substitutions possible. Credits eligible for sharing must have been completed no earlier than 5 years prior to the beginning of graduate studies and no later than 1 year after the beginning of graduate studies.

New Students

The first course for this degree program must be either FIN 610 or ACCT 610 (these courses may be taken simultaneously). FIN 610 is a prerequisite for all other financial management courses. ACCT 610 is a prerequisite for all other accounting courses.

Formats/Locations

Courses in accounting are offered online only. Financial management courses are offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations throughout the Washington, D.C., metropolitan area.

Students who first complete the entire MS in accounting and financial management degree program and meet all requirements for graduation will be eligible to earn either an MIM, MS in accounting and information technology, or an MS in management with only an additional 18 semester hours of coursework. More information on the dual degree programs is on pp. 61–63.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

ACCOUNTING COURSES

Students must complete the following course before enrolling in any other accounting course. ACCT 610 is prerequisite for all other accounting courses.

ACCT 610 Financial Accounting (3)

Students must complete the following courses:

ACCT 608 Fraud Detection and Accounting Ethics (3)

ACCT 614 Accounting Information Systems (3)

Students must complete two of the following elective courses:

ACCT 611 Management Accounting (3)

ACCT 612 Auditing Process (3)

ACCT 613 Federal Income Taxation (3)

ACCT 620 Government and Nonprofit Accounting (3)

FINANCIAL MANAGEMENT COURSES

Students must complete the following elective courses:

FIN 610 Financial Management in Organizations (3)
(formerly ADMN 631)

FIN 615 Financial Management of Current Operations (3)
(formerly ADMN 632)

FIN 620 Capital Markets, Institutions, and Long-Term Financing (3)
(formerly ADMN 633)

FIN 630 Investment Valuation (3)
(formerly ADMN 634)

FIN 640 Multinational Financial Management (3)
(formerly ADMN 639)

FIN 670 Strategic Financial Management (3)
(formerly ADMN 655)

Note: FIN 610, 620, and 630 are prerequisite to FIN 670.

CAPSTONE COURSE

Students must complete the following course:

MSAF 670 Accounting and Financial Management Capstone (3)
(formerly ADMN 619)

Note: Students must complete all courses, except for FIN 640 or one elective accounting course, before enrolling in the capstone.

MASTER OF SCIENCE IN ACCOUNTING AND INFORMATION TECHNOLOGY

The Master of Science (MS) in accounting and information technology is designed for individuals who want to concentrate their graduate studies in accounting with an information technology emphasis. The program emphasizes business processes and a broad business outlook, and provides students integrated knowledge of accounting and information technology.

The degree develops accounting and information technology competencies needed to respond to the evolving demands being placed on accountants in modern organizations. Accountants are increasingly called upon to work closely with those in information technology on the design and development of systems specifications, selection and implementation of enterprise systems, and their applications (electronic commerce, activity-based costing modules, data warehouses, standard financial modules). Curriculum consists of a series of accounting courses in areas such as financial accounting concepts and applications, fraud detection, ethics, management accounting methodology, and accounting information systems. Supporting technology courses offer both depth and breadth in relevant topic areas such as computer systems, information resource management, electronic commerce, information technology, and technology management.

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

Overview

The 36-credit MS in accounting and information technology is composed of five accounting courses, six information technology courses, and a program capstone.

Program Requirements

In addition to the general admission requirements (listed on p. 8), candidates for this program are required to have successfully completed 15 credits of accounting (with a grade of C or better) at the undergraduate level prior to enrolling in the graduate-level accounting courses. Students who have not met this requirement prior to beginning the program should consult an advisor regarding their options for starting limited graduate coursework while they concurrently complete the undergraduate accounting course requirement.

New Students

The required first course for new students admitted to degree status is ACCT 610.

Formats/Locations

Courses in accounting are offered online only. Management information systems and computer systems management courses are offered in both online and on-site formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations throughout the Washington, D.C., metropolitan area.

Students who first complete the entire MS in accounting and information technology degree program and meet all requirements for graduation will be eligible to earn an MS in either accounting and financial management or management with only an additional 18 semester hours of coursework. More information on the dual degree programs is on pp. 63–64.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

ACCOUNTING COURSES

Before taking other accounting courses, students must complete ACCT 610, the prerequisite for all other accounting courses.

ACCT 610 Financial Accounting (3)

Students must complete the following courses:

ACCT 608 Fraud Detection and Accounting Ethics (3)

ACCT 614 Accounting Information Systems (3)

Students must complete two of the following courses:

ACCT 611 Management Accounting (3)

ACCT 612 Auditing Process (3)

ACCT 613 Federal Income Taxation (3)

ACCT 620 Government and Nonprofit Accounting (3)

INFORMATION TECHNOLOGY COURSES

Students must complete the following courses:

ADMN 641 Information Systems Management and Integration (3)

ADMN 643 Systems Analysis and Design (3)

ADMN 645 Information Technology, the CIO, and Organizational Transformation (3)

Students must choose two of the following elective courses:

- CSMN 635 Systems Development and Project Control (3)
- CSMN 636 Telecommunications and Connectivity (3)
- CSMN 661 Relational Database Systems (3)
- ITSM 637 IT Acquisitions Management (3)

CAPSTONE COURSE

Students must complete the following course:

- MSAT 670 Accounting and Information Technology Capstone (3)
(formerly ADMN 618)

Note: Students must complete all other program requirements with the exception of one elective technology course before enrolling in the capstone course.

MASTER OF SCIENCE IN FINANCIAL MANAGEMENT AND INFORMATION SYSTEMS

The Master of Science (MS) in financial management and information systems is designed for midcareer professionals who seek a graduate degree that integrates a financial management curriculum with information systems studies. Financial managers are often required to have specific knowledge of and skills in information systems. The program prepares financial managers to play a leading advisory role in information systems to create value within corporations. The curriculum also benefits those in the information systems field looking to learn about financial management.

Participants develop specialized analytical skills necessary to assess financial and technological benefits of new information systems. Students learn how to work in teams within an organization to design and implement information systems that affect financial management processes and data management activities. Valuation, cost management, and other finance issues are covered, combined with information systems and database designs, with an emphasis on acquisition, project management, integration with telephony, and risk and security management.

In addition to fundamental financial theory, competency in valuation techniques and cost management are covered. Finance topics are combined with studies in information systems and database design, with emphasis on acquisition, project management, integration with telephony, and risk and security management.

Overview

This 36-credit program is composed of five financial management courses, six technology courses, and an integrative capstone course with a required research paper or project.

New Students

The recommended first course for new students admitted to degree status is FIN 610, followed by (or taken simultaneously with) ADMN 641.

Formats/Locations

Courses are offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations throughout the Washington, D.C., metropolitan area.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

FINANCIAL MANAGEMENT COURSES

Students must complete the following courses:

- FIN 610 Financial Management in Organizations (3)
(formerly ADMN 631)
- FIN 615 Financial Management of Current Operations (3)
(formerly ADMN 632)
- FIN 620 Capital Markets, Institutions, and Long-Term Financing (3)
(formerly ADMN 633)
- FIN 630 Investment Valuation (3)
(formerly ADMN 634)
- FIN 650 Cost Management (3)
(formerly ADMN 636)

MANAGEMENT INFORMATION SYSTEMS COURSES

Students must complete the following courses:

- ADMN 641 Information Systems Management and Integration (3)
- ADMN 645 Information Technology, the CIO, and Organizational Transformation (3)

Students must choose two of the following elective courses:

- CSMN 635 Systems Development and Project Control (3)
- CSMN 636 Telecommunications and Connectivity (3)
- CSMN 661 Relational Database Systems (3)
- ITSM 637 IT Acquisitions Management (3)

CAPSTONE COURSE

Students must complete the following course:

- MSFS 670 Financial Management and Information Systems Capstone (3)

Note: Students must complete all other courses, except for one elective technology course, before enrolling in the capstone.

Elective Writing Course

In addition to completing program requirements, new students are encouraged to enroll in COMM 600 Academic Writing for Graduate Students, a 3-credit elective graduate writing course.

MASTER OF SCIENCE IN HEALTH CARE ADMINISTRATION

The Master of Science (MS) in health care administration offers a specialized and focused degree in health care administration. Applicants will be able to increase their depth of knowledge in the administration of health care services and programs through a variety of general management and health care administration courses. Successful completion of the MS in health care administration degree should assist graduates who have relevant professional work experience in the health care industry to attain mid-level management positions in a variety of health care settings.

The MS in health care administration is designed for students with educational and/or work experience in the health care field. Students who do not have an undergraduate degree in health care administration or a health care-related degree or who do not have professional health care industry work experience should choose the MS in management with the health care administration track.

Overview

In each segment of this 36-credit degree program, theory and concepts are presented so the student may develop and evaluate management skills. In each course, faculty members combine theoretical concepts with the practical application of usable skills. This degree program consists of four core courses, six required courses, one elective course, and a capstone course.

New Students

The first course for new students is HCAD 600.

Formats/Locations

Classes in the MS in health care administration are offered online and in classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations throughout the Washington, D.C., metropolitan area.

Students who first complete the entire MS in health care administration degree program and meet all requirements for graduation will be eligible to earn an MBA with only an additional 18 semester hours of coursework. More information on the dual degree program is on p. 65.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students must complete the following courses:

- MGMT 625 Organizational Communication and Group Development (3)
(formerly ADMN 625)
- MGMT 635 Organizational Leadership and Decision Making (3)
(formerly ADMN 635)
- MGMT 650 Research Methods for Managers (3)
(formerly ADMN 638)

Students can choose to take the following 6-credit course instead of taking MGMT 625 and MGMT 635:

- MGMT 620 Leadership, Communication, and Organizational Behavior (6)
(Formerly listed as ADMN 620 and ADMN 625C/ADMN 635C)

Note: Students who complete MGMT 620 cannot receive credit for any of the following: ADMN 620, ADMN 625, ADMN 635, ADMN 625C, ADMN 635C, MGMT 625 or MGMT 635.

Students must complete one of the following courses:

- MGMT 640 Financial Decision Making for Managers (3)
(formerly ADMN 630)
- FIN 610 Financial Management in Organizations (3)
(formerly ADMN 631)

REQUIRED COURSES

Students must complete the following 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 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)

ELECTIVE COURSE

Students must take one of the following courses:

- HCAD 630 Public Health Administration (3)
- HCAD 670 Long-Term Care Administration (3)
- HCAD 680 Special Topics in Health Care Administration (3)

MANAGEMENT, ACCOUNTING, AND FINANCE PROGRAMS

CAPSTONE COURSE

Students must take the following course:

HCAD 690 Capstone Course for Health Care Administration (3)

Note: HCAD courses are only available to students enrolled in a health care administration track, degree, or certificate program.

Course Sequencing

Students must complete HCAD 600, MGMT 625, and MGMT 635, (formerly ADMN 625 and ADMN 635) as their first three courses in the program. HCAD 600 must be completed prior to enrollment in any other HCAD course. MGMT 640 (formerly ADMN 630) or FIN 610 (formerly ADMN 631) are prerequisite for HCAD 640 and HCAD 680. HCAD 650 is also prerequisite for HCAD 680. MGMT 625 and MGMT 635 are prerequisites for HCAD 660. Students must complete 30 credits before enrolling in HCAD 690.

Elective Writing Course

In addition to completing program requirements, new students are encouraged to enroll in COMM 600 Academic Writing for Graduate Students, a 3-credit elective graduate writing course.

MASTER OF SCIENCE IN HEALTH ADMINISTRATION INFORMATICS

The Master of Science in Health Administration Informatics degree has a dual emphasis: health care administration and informatics (information science) applied to the health care industry. It is geared toward health care professionals as well as information technology professionals who work in health care settings.

This degree will enable students to develop management and technical competencies that are critical for overseeing the complex coordination and planning necessary to meet health administration informatics needs. This degree also will enable students to work in consultative, vendor and insurance provider positions in acute health care facilities, primary care settings, integrated delivery systems, long term care and other health care settings. Students will learn strategic planning, implementation and evaluation of information systems, as well as legal, ethical and quality management aspects of information technology for the health care setting.

Overview

The 36 credit degree consists of twelve three-credit graduate courses. Students will complete a total of at least five graduate courses directly related to health care administration, such as courses on the U.S. health care system and on the legal aspects of health care administration. Students also will complete five

graduate courses directly related to informatics, for example, issues, trends and strategies for computer systems and management and risk assessment and security management.

Program Requirements

In addition to the general admission requirements, candidates for this program are required to have at least three years of professional work experience in a health care setting or three years of professional work experience in information technology in a health care setting.

Prior to enrolling in HCAD 640, students pursuing this program must have successfully completed (minimum grade of B or better at the graduate level or C or better at the undergraduate level) one 3-credit course in financial decision making.

New Students

The first course for new students is HCAD 600.

Formats/Locations

Classes in the MS in management program are offered online and in classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations throughout the Washington, D.C., metropolitan area.

Curriculum Requirements

NONCREDIT COURSE

All degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

REQUIRED COURSES

Students must complete the following courses in the order below:

- HCAD 600 Introduction to Health Care Administration (3)
- CSMN 601 Issues, Trends, and Strategies for Computer Systems Management (3)
- ADMN 638 Research Methods for Managers (3)
- HCAD 620 The U.S. Health Care System (3)
- CSMN 655 Information Risk Assessment and Security Management (3)
- HCAD 640 Financial Management for Health Care Organizations (3)
- HCAD 650 Legal Aspects of Health Care Administration (3)
- HAIN 661 Health Administration Informatics (3)
- CSMN 635 Systems Development and Project Control (3)

Note: Students must complete three credit hours of financial decision making and three credit hours of research methods prior to enrolling in HCAD 640.

MANAGEMENT, ACCOUNTING, AND FINANCE PROGRAMS

TECHNOLOGY ELECTIVES

Students must complete two of the following courses:

- CSMN 636 Telecommunications and Connectivity (3)
- CSMN 661 Relational Database Systems (3)
- CSMN 663 Distributed Database Management Systems (3)
(Prerequisite: CSMN 661)
- ITSM 637 IT Acquisitions Management (3)

CAPSTONE COURSE

Students must complete the following course:

- HAIN 671 Health Administration Informatics Capstone (3)

Note: Prior to enrolling in HAIN 671, students must have successfully completed all of the above courses, including individual course prerequisites, with the exception of one of the two 3-credit elective courses.

MASTER OF SCIENCE IN MANAGEMENT

The Master of Science (MS) in management is designed for professionals who are assuming increasing management responsibility within their organizations. The program emphasizes the leading-edge management skills and technical expertise that are the basis for success in modern organizations. Important topics covered in the required courses include methods and conduct of organizational assessments, the organization/environment relationship, strategic planning, organizational communication, budgeting and resource allocation, leadership, and organizational decision making. Throughout the curriculum, major emphasis is placed on the effects of rapid technological change on organizations and administrative processes and the consequent ethical and moral responsibilities of managers to society at large.

Overview

In each segment of this degree program, theory and concepts are presented so the student may develop and evaluate management skills. In each course, faculty members combine theoretical concepts with the practical application of usable skills. This degree program requires 36 credits and consists of six core courses and six track courses.

The program has 14 areas of specialization:

- Accounting
- Advertising
- Energy resources management policy development
- Financial management
- Health care administration
- Homeland security management
- Human resource management

- Interdisciplinary studies in management
- Management information systems
- Marketing
- Nonprofit management
- Procurement and contract management
- Project management
- Public relations

Accounting Track Requirements

Students pursuing the MS in management accounting track must have successfully completed 15 credits of accounting at the undergraduate level prior to enrolling in the graduate-level accounting courses. Students who have not met this requirement prior to beginning the program should consult an advisor regarding their options for satisfying this requirement while fulfilling other program requirements.

Educational requirements to sit for the Certified Public Accountant (CPA) exam or to practice as a CPA vary among states. Students are responsible for staying abreast of the current requirements of the state in which they will sit for the exam and practice professionally.

New Students

The recommended first course for new students is MGMT 610 or MGMT 625.

Formats/Locations

Classes in the MS in management program are offered online and in classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations throughout the Washington, D.C., metropolitan area.

Students who first complete the entire MS in management degree program and meet all requirements for graduation will be eligible to earn an MBA with only an additional 18–24 semester hours of coursework. More information on the dual degree program is on p. 66.

Agreements with Military Institutions

More information on UMUC's partnerships with various military institutions are on p. 7.

Curriculum Requirements

NONCREDIT COURSES

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study; it is recommended that students enroll in UCSP 611 and MGMT 610 simultaneously. Students without recent coursework in accounting or economics are strongly advised to complete UCSP 620 Financial Accounting and UCSP 621 Economics. Students with little experience in statistics are advised to complete UCSP 630 Introduction to Research Methods.

CORE COURSES

Students must complete the following courses:

- MGMT 610 The Manager in a Technological Society (3)
(formerly ADMN 601)
- MGMT 625 Organizational Communication and Group Development (3)
(formerly ADMN 625)
- MGMT 635 Organizational Leadership and Decision Making (3)
(formerly ADMN 635)
- MGMT 650 Research Methods for Managers (3)
(formerly ADMN 638)
- MGMT 670 Strategic Management Capstone (3)
(formerly ADMN 651)

Students in the financial management track must complete the following course (accounting students have the option of completing MGMT 640 or FIN 610):

- FIN 610 Financial Management in Organizations (3)
(formerly ADMN 631)

Students in all other tracks must complete the following course:

- MGMT 640 Financial Decision Making for Managers (3)
(formerly ADMN 630)

Students can choose to take the following 6-credit course instead of taking MGMT 625 and MGMT 635:

- MGMT 620 Leadership, Communication, and Organizational Behavior (6)
(Formerly listed as ADMN 620 and ADMN 625C/ADMN 635C)

Note: Students who complete MGMT 620 cannot receive credit for any of the following: ADMN 620, ADMN 625, ADMN 635, ADMN 625C, ADMN 635C, MGMT 625, or MGMT 635.

TRACK COURSES

In addition to the core courses, students in the MS in management program must select courses from one of the following specialty tracks to concentrate their study of management.

Accounting

Before taking other accounting courses students must complete ACCT 610, the prerequisite for all other accounting courses.

- ACCT 610 Financial Accounting (3)

Students must complete the following courses:

- ACCT 608 Fraud Detection and Accounting Ethics (3)
- ACCT 614 Accounting Information Systems (3)

Students in the accounting track must complete two of the following courses:

- ACCT 611 Management Accounting (3)
- ACCT 612 Auditing Process (3)
- ACCT 613 Federal Income Taxation (3)
- ACCT 620 Government and Nonprofit Accounting (3)

Students in the accounting track must complete the following course as the capstone requirement:

- ACCT 670 Accounting Capstone (3)

Note: Students must complete all other program requirements, with the exception of MGMT 670 (formerly ADMN 651), before enrolling in ACCT 670.

Advertising

Students in the advertising track must complete the following courses in the order listed below (students must first complete MRKT 600 and MRKT 601, or MRKT 620):

- MRKT 600 Marketing Management (3)
(formerly ADMN 686)
- MRKT 601 Legal and Ethical Issues in Global Communications (3)
(formerly PRPA 604)
- ADVT 601 Mass Media and Society (3)
- ADVT 602 Creative Strategy (3)
- ADVT 603 Advertising Media Planning and Buying (3)

Students can choose to take the following 6-credit seminar instead of taking MRKT 600 and MRKT 601:

- MRKT 620 Marketing Principles, Regulation, and Ethical Issues (6)

Note: Students who complete MRKT 620 cannot receive credit for any of the following: ADMN 686, MRKT 600, MRKT 601, or PRPA 604.

MANAGEMENT, ACCOUNTING, AND FINANCE PROGRAMS

Students in the advertising track must complete the following course as their end-of-program requirement:

ADVT 670 Advertising Capstone (3)

Energy Resources Management and Policy Development

Students in the energy resources management and policy development track must complete the following courses:

ENER 601 Energy Resources (3)

ENER 602 Energy Economics (3)

ENER 603 Energy Infrastructure Management (3)

ENER 604 New Technologies in Energy Management (3)

ENVM 646 Environmental/Energy Law and Policy Development (3)
(also listed as ENER 646)

ELECTIVE COURSE

Students in the energy resources management and policy development track must select one elective course, except HCAD courses, approved by the department's advisor.

Financial Management

Students in the financial management track must complete the following courses:

FIN 615 Financial Management of Current Operations (3)
(formerly ADMN 632)

FIN 620 Capital Markets, Institutions, and Long-Term Financing (3)
(formerly ADMN 633)

FIN 630 Investment Valuation (3)
(formerly ADMN 634)

FIN 640 Multinational Financial Management (3)
(formerly ADMN 639)

FIN 650 Cost Management
(formerly ADMN 636)

FIN 670 Strategic Financial Management (3)
(formerly ADMN 655)

Note: FIN 610, FIN 620, and FIN 630 are prerequisite to FIN 670.

Health Care Administration

Students in the health care administration track must complete the following courses:

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

HCAD 650 Legal Aspects of Health Care Administration (3)

HCAD 660 Health Care Institutional Organization and Management (3)

Students in the health care administration track must choose three of the following elective courses:

HCAD 610 Information Technology for Health Care Administration (3)

HCAD 630 Public Health Administration (3)

HCAD 640 Financial Management for Health Care Organizations (3)

HCAD 670 Long-Term Care Administration (3)

HCAD 680 Special Topics in Health Care Administration (3)

Note: HCAD courses are only available to students enrolled in a health care administration track, degree, or certificate program. HCAD 640 is required for students who begin this program in fall 2005 or later and plan to pursue the MBA as part of the dual MS in management/MBA dual degree program. MGMT 640 (formerly ADMN 630) or FIN 610 is prerequisites for HCAD 640 and HCAD 680. MGMT 625 and MGMT 635 (formerly ADMN 625 and ADMN 635) are prerequisite for HCAD 660. HCAD 650 is also prerequisite for HCAD 680. Students in the health care administration track may not take HCAD 600 or HCAD 690.

Homeland Security Management

Students in the homeland security management track must complete the following two courses:

ITSM 620 Concepts in Homeland Security (3)

ITSM 622 Seminar in Homeland Security Management (3)

Students in the homeland security management track must also complete four of the following courses:

CSMN 655 Information Risk Assessment and Security Management (3)

BIOT 681 Bioterrorism and Biosecurity (3)

ENER 603 Energy Infrastructure Management (3)

ITSM 624 Physical Security (3)

ITSM 626 Business Continuity: Disaster Recovery, Planning, and Response (3)

Human Resource Management

Students in the human resource management track must complete the following course. It is strongly recommended that students take this course before taking other track courses:

HRMD 610 Issues and Practices in Human Resource Management (3)
(formerly ADMN 662)

Students in the human resource management track must choose five of the following courses:

HRMD 620 Employee Relations (3)
(formerly ADMN 661)

HRMD 621 Employee Health and Safety (3)
(formerly HRMD 609)

MANAGEMENT, ACCOUNTING, AND FINANCE PROGRAMS

HRMD 630	Recruitment and Selection (3) (formerly ADMN 666)
HRMD 640	Job Analysis, Assessment, and Compensation (3) (formerly ADMN 663)
HRMD 641	Employee Benefits (3) (available spring 2007 or later)
HRMD 650	Organizational Development and Change (3) (formerly ADMN 664)
HRMD 651	Current Perspectives in Training and Development (3) (formerly ADMN 665)
HRMD 652	Managing Global Teams (3) (formerly ADMN 667)
HRMD 660	Human Resource Technologies (3) (formerly ADMN 668)
HRMD 671	Human Resource Management: System and Governance (6) (available spring 2007 or later)
HRMD 673	Talent Management (6) (available spring 2007 or later)

Students can choose to take the following 6-credit seminar instead of taking HRMD 650 and HRMD 651:

HRMD 672	Organizational Learning and Development (6)
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Note: Students who complete HRMD 672 cannot receive credit for HRMD 650, HRMD 651, ADMN 664 or ADMN 665.

Interdisciplinary Studies in Management

Students must complete one course from each of the following clusters:

INTERNATIONAL TECHNOLOGY CLUSTER

IMAN 601	Strategic Management in a Global Environment (3)
TMAN 632	Organizational Performance Management (3)
TMAN 640	Program and Project Management (3)

HUMAN RESOURCES MANAGEMENT CLUSTER

HRMD 610	Issues and Practices in Human Resource Management (3) (formerly ADMN 662)
HRMD 640	Job Analysis, Assessment, and Compensation (3) (formerly ADMN 663)
HRMD 650	Organizational Development and Change (formerly ADMN 664)
HRMD 651	Current Perspectives in Training and Development (3) (formerly ADMN 665)
HRMD 630	Recruitment and Selection (3) (formerly ADMN 666)

LEGAL ISSUES CLUSTER

MGMT 645	Legal Aspects of Management (3) (formerly ADMN 637) <i>or</i>
HRMD 620	Employee Relations (3) (formerly ADMN 661)
PCMS 627	Legal Aspects of Contracting (3) (formerly ADMN 627)
PCMS 630	Commercial Transactions in a Technological Environment: Law, Management, and Technology (3) (formerly ADMN 660)

Note: Students cannot receive credit for both HRMD 620 (formerly ADMN 661) and MGMT 645 (formerly ADMN 637).

MANAGEMENT INFORMATION SYSTEMS CLUSTER

ADMN 640	Information Systems for Managers (3)
ADMN 641	Information Systems Management and Integration (3)
ADMN 643	Systems Analysis and Design (3)
ADMN 644	Decision Support Systems and Expert Systems (3)
ADMN 645	Information Technology, the CIO, and Organizational Transformation (3)

MARKETING CLUSTER

ECOM 620	E-Marketing (3)
MRKT 600	Marketing Management (3) (formerly ADMN 686) <i>or</i>
IMAN 640	International Marketing Management (3)
MRKT 602	Consumer Behavior (3) (formerly ADMN 687)
MRKT 603	Brand Management (3) (formerly ADMN 685)
MRKT 604	Marketing Intelligence and Research Systems (3) (formerly ADMN 688) <i>or</i>
IMAN 620	International Marketing Research and Analysis (3)
MRKT 606	Integrated Direct Marketing (3) (formerly ADMN 689)
NPMN 640	Marketing, Development, and Public Relations in Nonprofit Organizations (3) (formerly ADMN 658)
PRPA 601	Public Relations Theory and Practice (3)
PRPA 610	Crisis Management Seminar (3)

MANAGEMENT, ACCOUNTING, AND FINANCE PROGRAMS

ELECTIVE COURSE

Students in the interdisciplinary studies in management track must take one elective course (for which prerequisites have been met) from any MS in management specialization, except health care administration (HCAD), with the approval of the department advisor. Students who plan to pursue the MBA as part of the dual degree program must select a marketing course to satisfy the elective requirement.

Management Information Systems

Students in the management information systems track must complete the following courses:

- ADMN 641 Information Systems Management and Integration (3)
- ADMN 643 Systems Analysis and Design (3)
- ADMN 644 Decision Support Systems and Expert Systems (3)
- ADMN 645 Information Technology, the CIO, and Organizational Transformation (3)

Students in the management information systems track must complete two of the following courses.

- ADMN 640 Information Systems for Managers (3)
- Any CSMN course
- Any TLMN course
- Any course (except HCAD courses) approved by the program director.

Note: Students with little background in management information systems should take ADMN 640 as their first track course.

Marketing

Students in the marketing track must complete the following courses in the order listed below (students must complete MRKT 600 and MRKT 601 or MRKT 620 as the first courses in the program):

- MRKT 600 Marketing Management (3)
(formerly ADMN 686)
- MRKT 601 Legal and Ethical Issues in Global Communications (3)
(formerly PRPA 604)
- MRKT 603 Brand Management (3)
(formerly ADMN 685)

Students can choose to take the following 6-credit seminar instead of taking MRKT 600 and MRKT 601:

- MRKT 620 Marketing Principles, Regulation, and Ethical Issues (6)

Note: Students who complete MRKT 620 cannot receive credit for any of the following: ADMN 686, MRKT 600, MRKT 601, and PRPA 604.

Students in the marketing track must complete three of the following courses:

- CSMN 639 Multimedia and the Internet (3)
- ECOM 620 E-Marketing (3)
- MRKT 602 Consumer Behavior (3)
(formerly ADMN 687)
- MRKT 604 Marketing Intelligence and Research Systems (3)
(formerly ADMN 688)
(also listed as IMAN 620)
- MRKT 606 Integrated Direct Marketing (3)
(formerly ADMN 689)
- PRPA 601 Public Relations Theory and Practice (3)
- PRPA 610 Crisis Management Seminar (3)

Students can choose to take the following 6-credit seminar instead of taking MRKT 606 and ECOM 620:

- MRKT 625 Traditional and Electronic Integrated Direct Marketing (6)
(Formerly listed as ADMN 689C/ECOM 620C)

Note: Students who complete MRKT 625 cannot receive credit for any of the following: ADMN 689, MRKT 606, or ECOM 620.

Nonprofit and Association Management

Students in the nonprofit management track must complete the following courses:

- NPMN 600 Nonprofit and Association Organizations and Issues (3)
(formerly ADMN 656)
- NPMN 610 Nonprofit and Association Law and Governance (3)
(formerly ADMN 657)
- NPMN 620 Nonprofit and Association Financial Management (3)
(formerly ADMN 654)
- NPMN 640 Marketing, Development, and Public Relations in Nonprofit Organizations and Associations (3)
(formerly ADMN 658)
- NPMN 670 Strategic Management in Nonprofit Organizations and Associations (3)
(formerly ADMN 659)

Students can choose to take the following 6-credit seminar instead of taking NPMN 610 and NPMN 620:

- NPMN 630 Nonprofit and Association Governance and Financial Management (6)

Note: Students who complete NPMN 630 cannot receive credit for any of the following: ADMN 654, ADMN 657, NPMN 610, or NPMN 620.

ELECTIVE COURSE

Students in the nonprofit management track must select one elective course (for which prerequisites have been met) from any MS in management specialization, except Health Care Administration (HCAD), with the approval of the program director.

Procurement and Contract Management

Students in the procurement and contract management track must complete the following courses:

PCMS	626	Purchasing and Materials Management (3) (formerly ADMN 626)
PCMS	627	Legal Aspects of Contracting (3) (formerly ADMN 627)
PCMS	628	Contract Pricing and Negotiations (3) (formerly ADMN 628)
PCMS	629	Strategic Purchasing and Logistics (3) (formerly ADMN 629)
PCMS	630	Commercial Transactions in a Technological Environment: Law, Management, and Technology (3) (formerly ADMN 660)

Students can choose to take the following 6-credit course instead of taking PCMS 627 and PCMS 630:

PCMS	650	Legal Aspects of Contracting and Commercial Transactions (6)
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Note: Students who complete PCMS 650 cannot receive credit for any of the following: ADMN 627, ADMN 630, PCMS 627, or PCMS 630.

ELECTIVE COURSE

Students in the procurement and contract management must select PCMS 631 (formerly ADMN 622) or PCMS 632 (formerly ADMN 623).

Project Management

Students in the project management track must complete the following courses in the order listed:

PMAN	634	Program and Project Management (3)
PMAN	638	Communication, Negotiation, and Conflict Resolution (3)
PMAN	636	Legal Aspects of Contracting (3) (Also listed as PCMS 627)
PMAN	628	Contract Pricing and Negotiation (3) (Also listed as PCMS 628, formerly ADMN 628)
PMAN	635	Techniques of Scheduling and Resource Allocation (3)
PMAN	637	Risk Management: Tools and Techniques (3)

Public Relations

Students in the public relations track must complete the following specialization courses and must complete MRKT 600 and MRKT 601 (or MRKT 620) as their first two courses.

MRKT	600	Marketing Management (3) (formerly ADMN 686)
MRKT	601	Legal and Ethical Issues in Global Communications (3) (formerly PRPA 604)
PRPA	601	Public Relations Theory and Practice (3)
PRPA	602	Public Relations Techniques (3)
PRPA	610	Crisis Management Seminar (3)

Students can choose to take the following 6-credit seminar instead of taking MRKT 600 and MRKT 601:

MRKT	620	Marketing Principles, Regulation, and Ethical Issues (6)
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Note: Students who complete MRKT 620 cannot receive credit for any of the following courses: ADMN 686, MRKT 600, MRKT 601, or PRPA 604.

Students in the public relations track must complete one of the following courses as their end-of-program requirement:

PRPA	670	Public Relations Capstone (3)
PRPA	671	Practicum/Internship (3)

Note: MRKT 600 and MRKT 601 must be taken as the first courses in the program; PRPA 601 should be completed next. PRPA 601 is a prerequisite for PRPA 602 and cannot be taken simultaneously. All required core and track courses are prerequisites to PRPA 670/671.

CERTIFICATE PROGRAMS

Certificates are an ideal credential for individuals who do not wish to pursue a master's degree or for those who already have one or more advanced degrees. All of the courses in each certificate program earn graduate credits that may be applied toward the parallel master's degree program. More information on admission application requirements is available on p. 113.

ACCOUNTING

(12 CREDITS)

The certificate in Accounting is designed to broaden and deepen the accounting knowledge of practicing professionals. As accountants become cost consultants and systems design partners in an information technology- and e-commerce-based environment, participants will be prepared to respond to the changing role of accountants in modern organizations. Students entering this certificate program must meet all requirements for admission to the MS in accounting and financial management program.

Students must take the following courses:

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

Note: ACCT 610 is prerequisite for all other accounting courses and must be completed before students enroll in any other accounting course.

ACCOUNTING AND INFORMATION TECHNOLOGY

(12 CREDITS)

This certificate emphasizes an understanding of how the World Wide Web and information systems affect accounting. Focus is on the development of systems and managing the risk and security related to systems. Students entering this certificate program must meet all requirements for admission to the MS in accounting and information technology program.

Students must take the following courses:

- ACCT 610 Financial Accounting (3)
- ACCT 614 Accounting Information Systems (3)
- CSMN 635 Systems Development and Project Control (3)
- CSMN 655 Information Risk Assessment and Security Management (3)

ADVERTISING

(15 CREDITS)

This certificate provides students with a solid foundation in advertising and its applications in the context of overall marketing strategies. Students will become familiar with advertising theory; techniques of creative design and copy; media buying in print, broadcast, and the Internet; as well as legal regulation and ethics.

Students must take the following courses in the order listed below:

- MRKT 600 Marketing Management (3)
(formerly ADMN 686)
- MRKT 601 Legal and Ethical Issues in Global Communications (3)
(formerly PRPA 604)
- ADVT 601 Mass Media and Society (3)
- ADVT 602 Creative Strategy (3)
- ADVT 603 Advertising Media Planning and Buying (3)

Students can choose to take the following 6-credit seminar instead of taking MRKT 600 and MRKT 601:

- MRKT 620 Marketing Principles, Regulation, and Ethical Issues (6)

Note: Students who complete MRKT 620 cannot receive credit for any of the following: ADMN 686, MRKT 600, MRKT 601, or PRPA 604.

FINANCIAL MANAGEMENT IN ORGANIZATIONS

(15 CREDITS)

The certificate in Financial Management in Organizations is intended for people seeking to exercise managerial responsibilities over the financial functions of their organizations. It is also helpful to general managers who wish to strengthen their knowledge of and skills in the financial management of their organizations.

Students must take the following four courses in the order indicated:

- FIN 610 Financial Management in Organizations (3)
(formerly ADMN 631)
- FIN 620 Capital Markets, Institutions, and Long-Term Financing (3)
(formerly ADMN 633)
- FIN 630 Investment Valuation (3)
(formerly ADMN 634)
- FIN 670 Strategic Financial Management (3)
(formerly ADMN 655)

Students must choose one of the following courses:

- FIN 615 Financial Management of Current Operations (3)
(formerly ADMN 632)
- FIN 640 Multinational Financial Management (3)
(formerly ADMN 639)

Note: Students without recent coursework in accounting or economics are strongly advised to complete UCSP 620 and UCSP 621 before enrolling in FIN 610. FIN 610 is prerequisite for all other courses in financial management. FIN 610, FIN 620, and FIN 630 are prerequisite for FIN 670.

FOUNDATIONS FOR HUMAN RESOURCE MANAGEMENT

(12 CREDITS)

The certificate in Foundations for Human Resource Management is designed to serve as an introduction for managers who want a better understanding of the human resource management function. It reviews fundamental principles of organizational behavior, the scope of human resource management issues, and basic legal frameworks involved in managing people. Line managers, as well as those interested in pursuing a career in human resource management, will find the information practical.

Students must take the following courses:

- MGMT 625 Organizational Communication and Group Development (3)
(formerly ADMN 625)
- HRMD 610 Issues and Practices in Human Resource Management (3)
(formerly ADMN 662)
- HRMD 620 Employee Relations (3)
(formerly ADMN 661)
- HRMD 650 Organizational Development and Change (3)
(formerly ADMN 664)

Note: MGMT 625 is recommended as the first course for this certificate.

HEALTH CARE ADMINISTRATION

(18 CREDITS)

The certificate in Health Care Administration is geared toward those professionals who want a specialization in health care administration but who do not desire to complete either the MS in management or MS in health care administration degree. The six courses selected by the certificate student represent the full spectrum of updated health care administration.

Students must take the following courses:

- HCAD 620 The U.S. Health Care System (3)
- HCAD 650 Legal Aspects of Health Care Administration (3)
- HCAD 660 Health Care Institutional Organization and Management (3)

Students must choose three of the following courses:

- HCAD 610 Information Technology for Health Care Administration (3)
- HCAD 630 Public Health Administration (3)
- HCAD 640 Financial Management for Health Care Organizations (3)
- HCAD 670 Long-Term Care Administration (3)
- HCAD 680 Special Topics in Health Care Administration (3)

Note: HCAD courses are only available to students enrolled in a health care administration track, degree, or certificate program. The certificate may require more than 18 credits if the following prerequisites have not been met: Students must take MGMT 625 and MGMT 635 (formerly ADMN 625 and ADMN 635) before enrolling in HCAD 660. Students must take MGMT 640 (formerly ADMN 630) or FIN 610 before taking HCAD 640 and 680. HCAD 650 is also prerequisite for HCAD 680.

INTEGRATED DIRECT MARKETING

(12 CREDITS)

The certificate in Integrated Direct Marketing prepares students to design, develop, test, implement, and measure the deployment of multiple media and sales channels (for example, publicity and public relations, advertising, direct mail, interactive marketing, telemarketing, and field sales).

Students must take the following courses:

MGMT 650	Research Methods for Managers (3) (formerly ADMN 638)
MRKT 600	Marketing Management (3) (formerly ADMN 686)
MRKT 604	Marketing Intelligence and Research Systems (3) (formerly ADMN 688)
MRKT 606	Integrated Direct Marketing (3) (formerly ADMN 689)

Note: Students are recommended to take MRKT 600 first and take MGMT 650 (formerly ADMN 638) before enrolling in MRKT 604 and 606.

INTEGRATIVE SUPPLY CHAIN MANAGEMENT

(12 CREDITS)

The certificate in Integrative Supply Chain Management is designed to familiarize participants with in-depth strategies and procedures related to integrative supply chain management. Major topics include aspects of e-commerce, logistics, supply and distribution chains, pricing, negotiations, and statistical manipulation of databases for more efficient procurements.

Students must take the following courses:

MGMT 650	Research Methods for Managers (3) (formerly ADMN 638)
PCMS 631	Integrative Supply Chain Management (3) (formerly ADMN 622)
PCMS 632	Contemporary Logistics (3) (formerly ADMN 623)
PCMS 628	Contract Pricing and Negotiations (3) (formerly ADMN 628)

LEADERSHIP AND MANAGEMENT

(15 CREDITS)

The Leadership and Management certificate provides students with an overview of leadership and group development theory and research. The curriculum focuses on decision making, conflict and change management, communication, and approaches to leadership. Additionally, the curriculum allows students the opportunity to explore related topics in e-commerce, human resources, nonprofit management, or financial management in technology.

Students must take the following courses:

MGMT 625	Organizational Communication and Group Development (3) (formerly ADMN 625)
MGMT 635	Organizational Leadership and Decision Making (3) (formerly ADMN 635)

Students must choose one of the following courses:

HRMD 610	Issues and Practices in Human Resource Management (3) (formerly ADMN 662)
HRMD 650	Organizational Development and Change (3) (formerly ADMN 664)

Students must choose two of the following courses:

MGMT 610	The Manager in a Technological Society (3) (formerly ADMN 601)
HRMD 610	Issues and Practices in Human Resource Management (3) (formerly ADMN 662)
HRMD 650	Organizational Development and Change (3) (formerly ADMN 664)
ECOM 610	Introduction to E-Commerce (3)
NPMN 670	Strategic Management in Nonprofit Organizations (3) (formerly ADMN 659)
TMAN 612	Financial Management for Technology Managers (3)

NONPROFIT AND ASSOCIATION FINANCIAL MANAGEMENT

(12 CREDITS)

The certificate in Nonprofit Management provides nonprofit managers and professionals with the fundamentals of financial management, including the theory and practice of financial management with application to nonprofit management. The certificate also provides a framework for financial management within the context of overall nonprofit strategic management.

Students must take the following courses:

FIN	610	Financial Management in Organizations (3) (formerly ADMN 631)
FIN	620	Capital Markets, Institutions, and Long-Term Financing (3) (formerly ADMN 633)
NPMN	620	Nonprofit and Association Financial Management (3) (formerly ADMN 654)
NPMN	670	Strategic Management in Nonprofit Organizations and Associations (3) (formerly ADMN 659)

Note: Students without recent coursework in accounting or economics are strongly advised to complete UCSP 620 and UCSP 621 before enrolling in FIN 610. FIN 610 is prerequisite for FIN 620. Students are encouraged to take NPMN 670 as the last course in the program.

PROCUREMENT AND CONTRACT MANAGEMENT

(15 CREDITS)

The certificate in Procurement and Contract Management is designed to familiarize participants with the broad concepts and strategies of procurement and contract management. Major topics include the foundations of pricing and negotiations, basic aspects of contracting, procurement of services and products, aspects of commercial transactions, logistics, and materials management.

Students must take the following courses:

PCMS	626	Purchasing and Materials Management (3) (formerly ADMN 626)
PCMS	627	Legal Aspects of Contracting (3) (formerly ADMN 627)
PCMS	628	Contract Pricing and Negotiations (3) (formerly ADMN 628)
PCMS	629	Strategic Purchasing and Logistics (3) (formerly ADMN 629)
PCMS	630	Commercial Transactions in a Technological Environment: Law, Management, and Technology (3) (formerly ADMN 660)

PUBLIC RELATIONS

(15 CREDITS)

The certificate in Public Relations provides students with solid grounding in public relations theory, legal and ethical issues confronted by practitioners, and the analytic and creative skills necessary to excel in the profession. Each of the courses addresses the impact of the explosion of Internet-enabled, networked communications that is forcing change in the manner in which corporations communicate with their varied publics.

Students must take the following courses:

MRKT	600	Marketing Management (3) (formerly ADMN 686)
MRKT	601	Legal and Ethical Issues in Global Communications (3) (formerly PRPA 604)
PRPA	601	Public Relations Theory and Practice (3)
PRPA	602	Media Communications Techniques (3)
PRPA	610	Crisis Management Seminar (3)

Note: Students must complete PRPA 601 and 602 as their first two courses.

SYSTEMS ANALYSIS

(12 CREDITS)

In the development of an information system, early attention must be given to tasks such as problem definition, systems analysis, requirements definition, and logical design. The certificate in Systems Analysis is designed to prepare students to undertake these early tasks. In addition to providing a technical foundation, the certificate program provides education on managerial uses of information systems, the software development life cycle, and systems analysis and design.

Students must take the following courses:

ADMN	641	Information Systems Management and Integration (3)
ADMN	643	Systems Analysis and Design (3)
ADMN	644	Decision Support Systems and Expert Systems (3)

Students must choose one of the following:

ADMN	640	Information Systems for Managers (3)
Any CSMN course		
Any TLMN course		

Note: ADMN 640 is recommended for students with little knowledge of management information systems. Students with some knowledge of management information systems are encouraged to choose a CSMN or TLMN course.

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TEACHER EDUCATION PROGRAMS DEPARTMENT STAFF

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Phone: 800-888-UMUC,
ext. 7056

Candidates must also pass the state of Maryland's requirements on the Praxis I exam with the following minimum scores on either the Pre-Professional Skills Test (PPST) or the Computer Pre-Professional Skills Test (CPPST): 177 in reading, 173 in writing, 177 in mathematics, or 527 total. Candidates who took the computer-based test before January 2002 must have scored 325 in reading, 319 in writing, 322 in mathematics, or 966 total. Information on Praxis I is available at www.msde.state.md.us/certification/testinfo.html. An explanation of the Praxis exam can be found at www.msde.state.us/Fact%20Sheets/fact44.html. Praxis registration can be found at www.ets.org/praxis.

Formats/Locations

All MAT classes, with the exception of the internship, are available online only.

MASTER'S DEGREE PROGRAMS

MASTER OF ARTS IN TEACHING

The Master of Arts in Teaching (MAT) is designed for students who hold a bachelor's degree or higher from an accredited institution of higher learning and wish to earn teaching certification. Successful completion of the program entitles a candidate to recommendation for Maryland teaching certification in a specific subject area. Certification options are available in the following subject areas: biology, chemistry, computer science, earth/space science, English, history, mathematics, physical science, physics, and social studies.

Note: The Master of Arts in Teaching (MAT) is no longer enrolling new students.

Overview

The MAT program is a 36-credit program that includes a minimum 100-day internship in an approved school setting in the selected content area. The internship must be completed over two consecutive semesters. Other options for the completion of the internship may be available with the approval of the department chair. Updated information on the MAT program is available online at www.umuc.edu/grad/omat.

Program Requirements

In addition to the general requirements (listed on p. 113), candidates must have a bachelor's degree (or higher) from an accredited institution and have completed 36 credit hours of coursework in the subject area of desired certification. Candidates must also have a 3.0 GPA overall and in the subject area. An official transcript analysis of previous coursework is required for all applicants. Additional undergraduate coursework in the teaching field may be required to meet certification standards.

Course Sequencing

It is recommended that students take OMAT 601 or OMAT 602 as their first course. OMAT 601 and OMAT 602 are prerequisites for OMAT 603; OMAT 603, OMAT 610, and OMAT 605 are prerequisites for OMAT 604; OMAT 601 is prerequisite for OMAT 605; OMAT 603 or a valid teaching certificate is prerequisite for OMAT 607; OMAT 607 or a Maryland State Department of Education–approved equivalent to OMAT 607 is prerequisite for OMAT 608; and OMAT 603 is prerequisite for OMAT 610. Students must complete all other courses in the MAT program and successfully complete Praxis II before enrolling in OMAT 606. Students take OMAT 612 during the second semester of the Professional Internship (OMAT 606).

Higher Education Act Title II Information

The Master of Arts in Teaching program awards the MAT degree. For academic year 2004–2005, 59 students were enrolled in the MAT program. The program requires 100 days of supervised practice teaching (7.5 hours per day/five days a week for 20 weeks). The student-to-faculty ratio in supervised practice teaching is 3:1. For the Praxis I exam, the Maryland State Department of Education required minimum composite score is 527. Nine MAT students took the Praxis I in academic year 2004–2005, and the pass rate was 88 percent. For the Praxis II exam, the Maryland State Department of Education required minimum scores are 141 for mathematics, 301 for biology (composite), and 152 for earth science. Three MAT students took the Praxis II in academic year 2004–2005, and the pass rate was 100 percent for all three areas.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students must complete the following courses:

- OMAT 601 The Contemporary School (3)
- OMAT 602 Adolescent Growth and Development (3)
- OMAT 603 Curriculum and Instruction (3)
- OMAT 604 Subject Area Methods (3)
- OMAT 605 The Exceptional Learner (3)
- OMAT 606 Professional Internship and Seminar (9)
- OMAT 607 Secondary Reading I (3)
- OMAT 608 Secondary Reading II (3)
- OMAT 610 Testing, Measurement, and Evaluation (3)
- OMAT 612 Teacher Action Research (3)

Reading Requirements in Elementary Education

For students seeking reading courses approved by the Maryland State Department of Education for elementary education certification, UMUC offers the following:

- OMAT 620 Processes and Acquisitions of Reading (3)
- OMAT 621 Instruction of Reading (3)
- OMAT 622 Assessment for Reading Instruction (3)
- OMAT 623 Materials for Reading (3)

Reading Requirements in Secondary Education

For students seeking reading courses approved by the Maryland State Department of Education for secondary education certification, UMUC offers the following:

- OMAT 607 Secondary Reading I (3)
- OMAT 608 Secondary Reading II (3)

Elective Writing Course

In addition to completing program requirements, new students are encouraged to enroll in COMM 600 Academic Writing for Graduate Students, a 3-credit elective graduate writing course.

MASTER OF EDUCATION

The Master of Education (MEd) with a specialization in instructional technology is designed for professionally certified pre K-12 teachers, administrators, and other professional educators who seek an advanced degree.* This degree program provides the knowledge and skills needed to integrate technology effectively into pre K-12 curricula, instruction, and assessment; develop expertise in current and emerging instructional technologies; gain a broad understanding of the role of technology

in the contemporary school; and lead change efforts at the classroom, school, and district levels. Three program areas are associated with this 33-credit degree:

- Instructional application
- Technological application
- Leadership and management application

Updated information on the MEd program is available online at www.umuc.edu/grad/omed.html.

Note: Students seeking an initial state license to teach should refer to the Resident Teacher Certification Program (p. 60).

Overview

The MEd is a 33-credit degree program and consists of eight core courses, two electives, and an end-of-program capstone course.

Program Requirements

Students should refer to admission requirements on p. 113.

New Students

The required first MEd course for new students is OMED 600. If students wish to take two MEd courses during the first semester, they may take OMED 600 and OMED 610 concurrently.

Formats/Locations

Courses in the MEd program are currently available online only.

Curriculum Requirements

NONCREDIT COURSE

All new degree-seeking students are required to complete the noncredit course UCSP 611 Introduction to Graduate Library Research Skills within their first 6 credits of study.

CORE COURSES

Students must complete the following courses:

- OMED 600 Foundations of Technology in Teaching and Learning (3)
- OMED 610 Digital Information Literacy for K-12 Educators (3)
- OMED 620 Web-Based Learning and Teaching: Design and Pedagogy (3)
- OMED 630 Technology in K-12 Education: Synchronous, Asynchronous, and Multimedia Technologies (3)
- OMED 640 Using Technology for Instructional Improvement (3)
- OMED 650 Hardware and Software in Instructional Development (3)
- OMED 660 Administration of Technology Initiatives: Planning, Budgeting, and Evaluation (3)
- OMED 670 Technology Change Management in Schools (3)

* Students seeking initial state licensure to teach should refer to the Master of Arts in Teaching (p. 58) or the Resident Teacher Certification Program (p. 60).

TEACHER EDUCATION PROGRAMS

ELECTIVE COURSES

Students must choose two courses from the following:

OMED 690 Special Topics in Instructional Technology (3)

Courses in the Master of Arts in Teaching; Master of Distance Education; Master of Science in computer systems management, information technology, or telecommunications management; or Master of Software Engineering programs

The MEd program director must approve elective course selections except for OMED 690. Courses from additional program areas may be approved on a case-by-case basis. A description of the current OMED 690 topic can be found at www.umuc.edu/grad/omedcat.

END-OF-PROGRAM CAPSTONE COURSE

Students must complete the following course:

OMED 680 Integrative Capstone Project (3)

Course Sequencing

OMED 600 and 610 are required as the first two courses for MEd students. OMED 600 is prerequisite or corequisite for OMED 610. Students are required to complete a minimum of 15 credits prior to enrolling in OMED 660 or OMED 670. Students must complete a minimum of 27 credits prior to enrolling in OMED 680, the capstone course.

Elective Writing Course

In addition to completing program requirements, new students are encouraged to enroll in COMM 600 Academic Writing for Graduate Students, a 3-credit elective graduate writing course.

CERTIFICATION PROGRAM

RESIDENT TEACHER CERTIFICATION PROGRAM

UMUC offers an accelerated alternative route to teacher certification in Maryland for career changers with bachelor's degrees, in conjunction with Prince George's County Public Schools, through MARCO (Maryland's Alternative Route to Certification Options). Students from other regions who are interested in Resident Teacher Certification should contact the program director.

The Resident Teacher Certification program includes 9 credits of coursework, which are completed through online study during a 14-week semester, a residential experience in a local school system, and one year of paid teaching at a UMUC-approved school site. Credits may be applied to the Master of Education program at UMUC.

While participants complete their first year of teaching, they must also complete the state required reading courses and pass

Praxis II (Pedagogy). All candidates are assigned a mentor and also receive extensive support through membership in an electronic learning community. At the end of the first year, teachers who receive satisfactory evaluations may be eligible for the Maryland Standard Professional Certificate I.

Certification is available in content areas dependent upon school district need. These certification areas may include: biology, chemistry, computer science, earth/space science, elementary education, English, history, mathematics, physics, social studies, and specific foreign languages.

Program Requirements

Admission to the program requires at least a 2.7 GPA in all cumulative and content area coursework, qualifying scores on the Praxis I and Praxis II (content knowledge) examinations, and an interview. Prospective candidates should refer to the Maryland State Department of Education Web site at certification.msde.state.md.us for specific requirements and information regarding Praxis examinations.

Formats/Locations

Classes in the Resident Teacher Certification program are currently offered online. The practicum experience must take place in a UMUC-approved school.

Grant Funding

Grant funding for candidates interested in teaching in Prince George's County Public Schools is currently available through MARCO (Maryland's Alternative Route to Certification Options), a UMUC partnership with the Maryland State Department of Education and Prince George's County Public Schools. Candidates interested in applying directly to MARCO should visit the county's Resident Teacher Certification Web site at www.residentteacherprogram.org.

Curriculum Requirements

CORE COURSES

RTCP 615 Resident Teacher Certification Program (6)

Students seeking elementary education certification should register for the following course:

OMAT 620 Processes and Acquisitions of Reading (3)

All other RTC students should register for the course below:

OMAT 607 Secondary Reading I (3)

PRACTICUM

A residential teaching practicum and one year of satisfactory teaching in a UMUC-approved school are required.

Course descriptions are found on pp. 69–112.

MASTER OF BUSINESS ADMINISTRATION/MASTER OF INTERNATIONAL MANAGEMENT

The purpose of the dual Master of Business Administration (MBA) and Master of International Management (MIM) is to enable students to extend the breadth and depth of their management study. Based upon the shared curricula of both programs, dual degree students may earn both the MBA and MIM degrees for substantially fewer credits than if each program were completed separately. Thus, the joint MBA/MIM may be completed with 57 credits rather than 81 credits.

Program Requirements

Students who are interested in pursuing dual degrees must meet the admission requirements of each program. Information on the MIM may be found on p. 16; the MBA is described on p. 15.

Formats/Locations

For students pursuing the MBA first, classes are offered online or in a format that combines online and classroom study. MBA classes for students who pursue the MBA second, as part of a dual degree program, are offered online only. Classes in the MIM program are currently offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

Students who complete the requirements for the MBA degree may earn the Master of International Management (MIM) by completing 15 credits from the MIM curriculum as specified below.

All students must take the following courses:

- IMAN 601 Strategic Management in a Global Environment (3)
- IMAN 615 International Investment and Partnering (3)
- IMAN 635 Managing Country Risk (3)
- IMAN 645 The International Legal and Tax Environment (3)

Students must take one additional course from the following:

- IMAN 640 International Marketing Management (3)
- FIN 640 Multinational Financial Management (3)
(formerly ADMN 639)

MASTER OF SCIENCE IN ACCOUNTING AND FINANCIAL MANAGEMENT/MASTER OF INTERNATIONAL MANAGEMENT

The purpose of the dual Master of Science (MS) in accounting and financial management/Master of International Management (MIM) is to enable students to extend the breadth and depth of their graduate studies beyond the specialties of accounting and financial management. Based on the shared curricula of the programs, the dual degrees may be earned for substantially fewer credits than if each program were completed separately. Students can choose to complete the MS in accounting and financial management and take an additional 24–27 credits to earn the MIM (financial management track).

Program Requirements

Students who are interested in pursuing dual degrees must meet the admission requirements of each program. Information on the MS in accounting and financial management may be found on p. 42; the MIM is described on p. 16.

Formats/Locations

Courses in accounting are offered online only; financial management courses are offered in both online and classroom formats. Classes in the MIM program are offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

Students in the dual MS in accounting and financial management/MIM program must complete the MS in accounting and financial management first. Requirements for that degree are listed on p. 42.

For the MIM, students must take the following courses:

- IMAN 601 Strategic Management in a Global Environment (3)
- IMAN 605 Intercultural Communication and Leadership (3)
- IMAN 615 International Investment and Partnering (3)
- IMAN 625 International Trade and Trade Policy (3)
- IMAN 645 The International Legal and Tax Environment (3)

Students must also complete an end-of-program option (described on p. 10).

DUAL DEGREE PROGRAMS

MASTER OF SCIENCE IN ACCOUNTING AND FINANCIAL MANAGEMENT/ MASTER OF SCIENCE IN MANAGEMENT

The purpose of the dual Master of Science (MS) in accounting and financial management/Master of Science (MS) in management is to enable students to extend the breadth and depth of their graduate studies beyond the specialties of accounting and financial management. Based on the shared curricula of the programs, the dual degrees may be earned for substantially fewer credits than if each program were completed separately. Students can choose to complete the MS in accounting and financial management and take an additional 15–21 credits to earn the MS in management with a specialization in either accounting or financial management.

Program Requirements

Students who are interested in pursuing dual degrees must meet the admission requirements of each program. Information on the MS in accounting and financial management may be found on p. 42; the MS in management is described on p. 48.

Formats/Locations

Courses in accounting are offered online only; financial management courses are offered in both online and classroom formats. Classes in the MS in management program are also offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

MS IN ACCOUNTING AND FINANCIAL MANAGEMENT/ MS IN MANAGEMENT (FINANCIAL MANAGEMENT)

Students who complete the MS in accounting and financial management may complete the MS in management with a specialization in financial management by taking the following courses:

- MGMT 610 The Manager in a Technological Society (3)
(formerly ADMN 601)
- MGMT 625 Organizational Communication and Group Development (3)
(formerly ADMN 625)
- MGMT 635 Organizational Leadership and Decision Making (3)
(formerly ADMN 635)
- MGMT 650 Research Methods for Managers (3)
(formerly ADMN 638)
- MGMT 670 Strategic Management Capstone (3)
(formerly ADMN 651)

Students who have not completed ACCT 611 as part of the MS in accounting and financial management must take the following course:

- FIN 650 Cost Management (3)
(formerly ADMN 636)

MS IN ACCOUNTING AND FINANCIAL MANAGEMENT/ MS IN MANAGEMENT (ACCOUNTING)

Students who complete the MS in accounting and financial management may complete the MS in management with a specialization in accounting by taking the following courses:

- MGMT 610 The Manager in a Technological Society (3)
(formerly ADMN 601)
- MGMT 625 Organizational Communication and Group Development (3)
(formerly ADMN 625)
- MGMT 635 Organizational Leadership and Decision Making (3)
(formerly ADMN 635)
- MGMT 650 Research Methods for Managers (3)
(formerly ADMN 638)
- MGMT 670 Strategic Management Capstone (3)
(formerly ADMN 651)
- ACCT 670 Accounting Capstone (3)

MS IN MANAGEMENT (FINANCIAL MANAGEMENT)/ MS IN ACCOUNTING AND FINANCIAL MANAGEMENT

Students who first complete the requirements for the MS in management with a specialization in financial management may then earn the MS in accounting and financial management.

Students must take the following accounting courses (ACCT 610 must be taken as the first accounting course and is prerequisite to all other accounting courses):

- ACCT 608 Fraud Detection and Accounting Ethics (3)
- ACCT 610 Financial Accounting (3)
- ACCT 614 Accounting Information Systems (3)

Students must take two of the following accounting courses:

- ACCT 612 The Auditing Process (3)
- ACCT 613 Federal Income Taxation (3)
- ACCT 620 Government and Nonprofit Accounting (3)

Students must take the following capstone course:

- MSAF 670 Accounting and Financial Management Capstone (3)
(formerly ADMN 619)

Note: Students who have completed the MS in management with a specialization in financial management and are pursuing the MS in accounting and financial management cannot enroll in ACCT 611.

MS IN MANAGEMENT (ACCOUNTING)/ MS IN ACCOUNTING AND FINANCIAL MANAGEMENT

Students who first complete the requirements for the MS in management with a specialization in accounting may then earn the MS in accounting and financial management by taking the following courses:

FIN	610	Financial Management in Organizations (3) (formerly ADMN 631)
FIN	615	Financial Management of Current Operations (3) (formerly ADMN 632)
FIN	620	Capital Markets, Institutions, and Long-Term Financing (3) (formerly ADMN 633)
FIN	630	Investment Valuation (3) (formerly ADMN 634)
FIN	640	Multinational Financial Management (3) (formerly ADMN 639)
FIN	670	Strategic Financial Management (3) (formerly ADMN 655)
MSAF	670	Accounting and Financial Management Capstone (3) (formerly ADMN 619)

MASTER OF SCIENCE IN ACCOUNTING AND INFORMATION TECHNOLOGY/ MASTER OF SCIENCE IN ACCOUNTING AND FINANCIAL MANAGEMENT

The purpose of the dual Master of Science (MS) in accounting and information technology/Master of Science (MS) in accounting and financial management is to enable students to extend the breadth and depth of their graduate studies beyond the specialties of accounting and information technology. Based on the shared curricula of both programs, the dual degrees may be earned in 57 credits, which is substantially fewer credits than if each program were completed separately.

Program Requirements

Students who are interested in pursuing dual degrees must meet the admission requirements of each program. Information on the MS in accounting and information technology may be found on p. 44; the MS in accounting and financial management is described on p. 42.

Formats/Locations

Courses in accounting are offered online only; financial management, management information systems, and computer systems management courses are offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

MS IN ACCOUNTING AND INFORMATION TECHNOLOGY/MS IN ACCOUNTING AND FINANCIAL MANAGEMENT

Students who complete the MS in accounting and information technology may complete the MS in accounting and financial management by taking the following courses:

FIN	610	Financial Management in Organizations (3) (formerly ADMN 631)
FIN	615	Financial Management of Current Operations (3) (formerly ADMN 632)
FIN	620	Capital Markets, Institutions, and Long-Term Financing (3) (formerly ADMN 633)
FIN	630	Investment Valuation (3) (formerly ADMN 634)
FIN	640	Multinational Financial Management (3) (formerly ADMN 639)
FIN	670	Strategic Financial Management (3) (formerly ADMN 655)
MSAF	670	Accounting and Financial Management Capstone (3) (formerly ADMN 619)

MS IN ACCOUNTING AND FINANCIAL MANAGEMENT/ MS IN ACCOUNTING AND INFORMATION TECHNOLOGY

Students who first complete the requirements for the MS in accounting and financial management may then earn the MS in accounting and information technology by taking the following courses:

ADMN	641	Information Systems Management and Integration (3)
ADMN	643	Systems Analysis and Design (3)
ADMN	645	Information Technology, the CIO, and Organizational Transformation (3)
CSMN	655	Information Risk Assessment and Security Management (3)

Students must also take two of the following courses:

CSMN	635	Systems Development and Project Control (3)
CSMN	636	Telecommunications and Connectivity (3)
CSMN	661	Relational Database Systems (3)
ITSM	637	IT Acquisitions Management (3)

Students must also take the following capstone course:

MSAT	670	Accounting and Information Technology Capstone (3) (formerly ADMN 618)
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DUAL DEGREE PROGRAMS

MASTER OF SCIENCE IN ACCOUNTING AND INFORMATION TECHNOLOGY/ MASTER OF SCIENCE IN MANAGEMENT

The purpose of the dual Master of Science (MS) in accounting and information technology/Master of Science (MS) in management (accounting track) is to enable students to extend the breadth and depth of their graduate studies beyond the specialties of accounting and information technology. Based on the shared curricula of both programs, the dual degrees may be earned in 57 credits, which is substantially fewer credits than if each program were completed separately.

Program Requirements

Students who are interested in pursuing dual degrees must meet the admission requirements of each program. Information on the MS in accounting and information technology may be found on p. 44; the MS in management is described on p. 48.

Formats/Locations

Courses in accounting are offered online only; management information systems and computer systems management courses are offered in both online and classroom formats. Classes in the MS in management program are also offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

MS IN ACCOUNTING AND INFORMATION TECHNOLOGY/MS IN MANAGEMENT (ACCOUNTING)

Students who first complete the the MS in accounting and information technology may complete the MS in management (accounting track) by taking the following courses:

- MGMT 610 The Manager in a Technological Society (3)
(formerly ADMN 601)
- MGMT 625 Organizational Communication and Group Development (3)
(formerly ADMN 625)
- FIN 610 Financial Management in Organizations (3)
(formerly ADMN 631)
- MGMT 635 Organizational Leadership and Decision Making (3)
(formerly ADMN 635)
- MGMT 650 Research Methods for Managers (3)
(formerly ADMN 638)
- MGMT 670 Strategic Management Capstone (3)
(formerly ADMN 651)

Students must also complete the following capstone course:

- ACCT 670 Accounting Capstone (3)

MS IN MANAGEMENT (ACCOUNTING)/MS IN ACCOUNTING AND INFORMATION TECHNOLOGY

Students who first complete the requirements for the MS in management with a specialization in accounting may then earn the MS in accounting and information technology by taking the following courses:

- ADMN 641 Information Systems Management and Integration (3)
- ADMN 643 Systems Analysis and Design (3)
- ADMN 645 Information Technology, the CIO, and Organizational Transformation (3)
- CSMN 655 Information Risk Assessment and Security Management (3)

Students must also take two of the following courses:

- CSMN 635 Systems Development and Project Control (3)
- CSMN 636 Telecommunications and Connectivity (3)
- CSMN 661 Relational Database Systems (3)
- ITSM 637 IT Acquisitions Management (3)

Students must also take the following capstone course:

- MSAT 670 Accounting and Information Technology Capstone (3)
(formerly ADMN 618)

MASTER OF SCIENCE IN E-COMMERCE/ MASTER OF BUSINESS ADMINISTRATION

The purpose of the dual Master of Science (MS) in e-commerce and the Master of Business Administration (MBA) is to enable students to extend the breadth and depth of their management study. Based upon the shared curricula of both programs, dual degree students may earn both the MS in e-commerce and MBA degrees for substantially fewer credits than if each program were completed separately.

Program Requirements

Students who are interested in pursuing dual degrees must meet the admission requirements of each program. Information on the MS in e-commerce may be found on p. 27; the MBA is described on p. 15.

Formats/Locations

For students pursuing the MBA first, classes are offered online or in a format that combines online and classroom study. MBA classes for students who pursue the MBA second, as part of a dual degree program, are offered online only. Courses in e-commerce are currently offered online only. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered.

Curriculum Requirements

MS IN E-COMMERCE/MBA

Students who first complete the MS in e-commerce and meet all the requirements for graduation for that program may then earn the MBA by completing 24 credits of MBA coursework, for a total of 60 credits for both degrees.

Students must take the following MBA courses in the order they are listed below:

- AMBA 602D The Dynamics of Individuals and Groups at Work (6)
- AMBA 604D Technology and Operations Management (6)
- AMBA 605D Economics of Management Decisions (6)
- AMBA 606D Organizations and the External Environment (6)

MBA/MS IN E-COMMERCE

Students who first complete all the requirements for the MBA may pursue the dual degree option by taking 18 credits from the MS in e-commerce core curriculum for a total of 61 credits for both degrees.

Students must complete six of the following e-commerce courses:

- ECOM 620 E-Marketing (3)
- ECOM 630 Information Risk Assessment and Security Management (3)
- ECOM 640 Internet Principles and Applications (3)
- ECOM 650 E-Commerce Applications and Operations (3)
- ECOM 660 E-Commerce Financial Management and Accounting (3)
- ECOM 670 Social, Legal, Ethical, and Regulatory Issues (3)
- ECOM 680 E-Commerce Application Software (3)

MASTER OF SCIENCE IN HEALTH CARE ADMINISTRATION/MASTER OF BUSINESS ADMINISTRATION

The purpose of the dual Master of Science (MS) in health care administration/Master of Business Administration (MBA) is to combine the specialized and focused knowledge of health care administration in the MS with the business expertise of the MBA. Dual degree students may increase their depth of knowledge in the administration of health care services and programs through a variety of general management and health care administration courses and then expand their knowledge of more general management issues through three MBA seminars.

Program Requirements

Students who are interested in pursuing dual degrees must meet the admission requirements of each program. Information on the MS in health care administration may be found on p. 46; the MBA is described on p. 15.

Formats/Locations

For students pursuing the MBA first, classes are offered online or in a format that combines online and classroom study. MBA classes for students who pursue the MBA second, as part of a dual degree program, are offered online only. Classes in the MS in health care administration are offered in both online and classroom formats. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

MS IN HEALTH CARE ADMINISTRATION/MBA

Students who first complete the requirements for the MS in health care administration (detailed on p. 46) must then take the following seminars to complete the MBA in the order they are listed below:

- AMBA 603D The Marketing of New Ideas (6)
- AMBA 604D Technology and Operations Management (6)
- AMBA 606D Organizations and the External Environment (6)

MBA/MS IN HEALTH CARE ADMINISTRATION

Students who first complete all requirements for the MBA may earn the MS in health care administration by taking the following courses.

Student must complete the following courses in the order listed below:

- HCAD 600 Introduction to Health Care Administration (3)
- HCAD 620 The U.S. Health Care System (3)
- HCAD 650 Legal Aspects of Health Care Administration (3)

Students should then take one of the following courses:

- HCAD 610 Information Technology for Health Care Administration (3)
- HCAD 630 Public Health Administration (3)
- HCAD 640 Financial Management for Health Care Organizations (3)
- HCAD 660 Health Care Institutional Organization and Management (3)
- HCAD 670 Long-Term Care Administration (3)
- HCAD 680 Special Topics in Health Care Administration (3)

Students should take the following course last:

- HCAD 690 Capstone Course for Health Care Administration (3)

Note: Students must complete HCAD 600 prior to enrollment in any other HCAD course.

MASTER OF SCIENCE IN MANAGEMENT/MASTER OF BUSINESS ADMINISTRATION

The purpose of the dual Master of Science (MS) in management and the Master of Business Administration (MBA) is to provide students with a path to pursue both breadth and depth of study and to achieve two academic master's degrees from UMUC for 54 to 60 credits. There is shared curriculum content between the core of the MS in management and the MBA (24 credits).

Program Requirements

Students who are interested in pursuing dual degrees must meet the admission requirements of each program. Information on the MS in management may be found on p. 48; the MBA is described on p. 15.

Formats/Locations

For students pursuing the MBA first, classes are offered online or in a format that combines online and classroom study. MBA classes for students who pursue the MBA second, as part of a dual degree program, are offered both online and in on-site classroom formats. Classes in the MS in management program are offered in both online and classroom formats. Specialty track courses may require attendance at selected sites because of enrollment requirements established by UMUC. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

MS IN MANAGEMENT (ACCOUNTING, FINANCIAL MANAGEMENT, NONPROFIT MANAGEMENT, AND PROCUREMENT AND CONTRACT MANAGEMENT)/MBA

Students who earned the MS in management with tracks in accounting, financial management, nonprofit management, and procurement and contract management must take the following seminars in the order listed below (18 credits):

- AMBA 603D The Marketing of New Ideas (6)
- AMBA 604D Technology and Operations Management (6)
- AMBA 606D Organizations and the External Environment (6)

MS IN MANAGEMENT (ADVERTISING, MARKETING, AND PUBLIC RELATIONS)/MBA

Students who earned the MS in management with tracks in marketing and public relations must take the following seminars in the order listed below (18 credits):

- AMBA 604D Technology and Operations Management (6)
- AMBA 605D Economics of Management Decisions (6)
- AMBA 606D Organizations and the External Environment (6)

MS IN MANAGEMENT (ENERGY RESOURCES MANAGEMENT, HUMAN RESOURCE MANAGEMENT, HOMELAND SECURITY MANAGEMENT, MANAGEMENT INFORMATION SYSTEMS, AND PROJECT MANAGEMENT)/MBA

Students who earned the MS in management with tracks in energy resources management, human resource management, management information systems, and project management must take the following seminars in the order listed below (24 credits):

- AMBA 603D The Marketing of New Ideas (6)
- AMBA 604D Technology and Operations Management (6)
- AMBA 605D Economics of Management Decisions (6)
- AMBA 606D Organizations and the External Environment (6)

MS IN MANAGEMENT (HEALTH CARE ADMINISTRATION)/MBA

Students who earned the MS in management with a track in health care administration must complete HCAD 640 as part of their MS in management program and must take the following MBA seminars in the order listed below (18 credits):

- AMBA 603D The Marketing of New Ideas (6)
- AMBA 604D Technology and Operations Management (6)
- AMBA 606D Organizations and the External Environment (6)

MS IN MANAGEMENT (INTERDISCIPLINARY STUDIES IN MANAGEMENT)/MBA

Students who earned the MS in management with a track in interdisciplinary studies in management must complete a second marketing course for the elective requirement of the MS in management and must take the following seminars in the order listed below (18 credits):

- AMBA 604D Technology and Operations Management (6)
- AMBA 605D Economics of Management Decisions (6)
- AMBA 606D Organizations and the External Environment (6)

MBA/MS IN MANAGEMENT

For those who pursue the MBA first, the dual degree can be accomplished with the completion of 15–18 credits (18 credits for a specialty track in accounting or project management) from any MS in management specialty track except interdisciplinary studies in management. For specific information on the courses required for the MS in management portion of the dual MBA/MS in management visit www.umuc.edu/grad/mbamsm.

MASTER OF SCIENCE IN TECHNOLOGY MANAGEMENT/MASTER OF BUSINESS ADMINISTRATION

This dual degree program provides the student with both the intellectual depth of managing technological change associated with the Master of Science (MS) in technology management and the intellectual breadth of general business knowledge associated with the Master of Business Administration (MBA). The dual degree program requires 60 semester hours of coursework, at the completion of which both degrees are awarded.

Program Requirements

Students who are interested in pursuing dual degrees must meet the admission requirements of each program. Information on the MS in technology management may be found on p. 30; the MBA is described on p. 15.

Formats/Locations

Classes in the MS in technology management program are offered in both online and classroom formats. MBA classes for students in the dual degree program are offered online only. Students should check the current *Graduate Schedule of Classes* to determine when courses will be offered at specific locations.

Curriculum Requirements

Students in the dual MS in technology management/MBA program must first complete the MS in technology management. The program has three areas of specialization, in addition to the general program:

- Energy resources management and policy development
- Project management
- Technology systems management

Please note that the requirements for the MS in technology management are somewhat different when earned as part of the dual degree program.

MS in Technology Management (General Program)/MBA

Students pursuing the MS in technology management (general program)/MBA must complete the following core courses (24 credits), in the order listed below, followed by the elective courses (12 credits).

CORE COURSES

- TMAN 611 Principles of Technology Management (3)
- TMAN 613 Marketing Technology-Based Products and Services (3)
- TMAN 633 Managing People in Technology-Based Organizations (3)
- TMAN 632 Organizational Performance Management (3)
- TMAN 614 Strategic Management of Technology and Innovation (3)

- TMAN 612 Financial Management for Technology Managers (3)
- TMAN 640 Program and Project Management (3)
- TMAN 671 Seminar in Technology and Innovation Management (3)

REQUIRED ELECTIVES

- ECOM 610 Introduction to E-Commerce (3)
- TMAN 621 Systems Analysis and Operations Research (3)
- TMAN 623 Systems Analysis and Design (3)

OTHER ELECTIVES

Students should choose one course from the following:

- TMAN 622 Systems Development, Acquisition, and Management (3)
- TMAN 636 Knowledge Management (3)

MBA COURSES

For the MBA, students in the MS in technology management (general program)/MBA dual degree program must then take the following courses in the order listed below to earn the dual degrees.

- AMBA 603D The Marketing of New Ideas (6)
- AMBA 605D Economics of Management Decisions (6)
- AMBA 606D Organizations and the External Environment (6)

MS in Technology Management (Energy Resources Management and Policy Track)/MBA

Students pursuing the MS in technology management (energy resources management and policy track)/MBA must complete the following core courses (21 credits), in the order listed below, followed by the track courses (15 credits).

CORE COURSES

- TMAN 611 Principles of Technology Management (3)
- TMAN 613 Marketing Technology-Based Products and Services (3)
- TMAN 633 Managing People in Technology-Based Organizations (3)
- TMAN 632 Organizational Performance Management (3)
- TMAN 612 Financial Management for Technology Managers (3)
- TMAN 640 Program and Project Management (3)
- TMAN 671 Seminar in Technology and Innovation Management (3)

TRACK COURSES

- ENER 601 Energy Resources (3)
- ENER 602 Energy Economics (3)
- ENER 603 Energy Infrastructure Management (3)
- ENER 604 New Technologies in Energy Management (3)
- ENER 646 Environmental/Energy Law and Policy Development (3)
(also listed as ENVM 646)

DUAL DEGREE PROGRAMS

MBA COURSES

For the MBA, students in the dual degree program must then take the following courses in the order listed below to earn the dual degrees.

- AMBA 603D The Marketing of New Ideas (6)
- AMBA 604D Technology and Operations Management (6)
- AMBA 605D Economics of Management Decisions (6)
- AMBA 606D Organizations and the External Environment (6)

MS in Technology Management (Project Management Track)/MBA

Students pursuing the MS in technology management (project management track)/MBA dual degree program must complete the core courses (21 credits) in the order they are listed below, followed by the track courses (15 credits):

CORE COURSES

- TMAN 611 Principles of Technology Management (3)
- TMAN 613 Marketing Technology-Based Products and Services (3)
- TMAN 633 Managing People in Technology-Based Organizations (3)
- TMAN 632 Organizational Performance Management (3)
- TMAN 614 Strategic Management of Technology and Innovation (3)
- TMAN 610 Economics and Financial Analysis (3)
- TMAN 671 Seminar in Technology and Innovation Management (3)

TRACK COURSES

- PMAN 634 Program and Project Management (3)
(also listed as TMAN 640)
- PMAN 638 Communication, Negotiation, and Conflict Resolution (3)
- PMAN 636 Legal Aspects of Contracting (3)
(also listed as PCMS 627)
- PMAN 635 Techniques of Scheduling and Resource Allocation (3)
- PMAN 637 Risk Management: Tools and Techniques (3)

MBA COURSES

For the MBA, students in the dual degree program must then take the following MBA courses in the order listed below:

- AMBA 603D The Marketing of New Ideas (6)
- AMBA 604D Technology and Operations Management (6)
- AMBA 605D Economics of Management Decisions (6)
- AMBA 606D Organizations and the External Environment (6)

MS in Technology Management (Technology Systems Management Track)/MBA

Students pursuing the MS in technology management (technology systems management track)/MBA dual degree program must complete the core courses (15 credits) in the order they are listed below, followed by the track courses (12 credits) and three electives (9 credits):

CORE COURSES

- TMAN 611 Principles of Technology Management (3)
- TMAN 613 Marketing Technology-Based Products and Services (3)
- TMAN 614 Strategic Management of Technology and Innovation (3)
- TMAN 612 Financial Management for Technology Managers (3)
- TMAN 671 Seminar in Technology and Innovation Management (3)

TRACK COURSES

- TMAN 621 Systems Analysis and Operations Research (3)
- TMAN 622 Systems Development, Acquisition, and Management (3)
- TMAN 623 Systems Analysis and Design (3)
- TMAN 640 Program and Project Management (3)

OTHER ELECTIVES

Students should choose three courses from the following:

- CSMN 655 Information Risk Assessment and Security Management (3)
- MSIT 640 Data Communications and Networks(3)
- TMAN 632 Organizational Performance Management (3)
- TMAN 633 Managing People in Technology-Based Organizations (3)
- TMAN 636 Knowledge Management (3)

MBA COURSES

For the MBA, students in the dual degree program must then take the following MBA courses in the order listed below:

- AMBA 602D The Dynamics of Individuals and Groups at Work (6)
- AMBA 603D The Marketing of New Ideas (6)
- AMBA 605D Economics of Management Decisions (6)
- AMBA 606D Organizations and the External Environment (6)

ACCT 608 Fraud Detection and Accounting Ethics (3)

Prerequisite: ACCT 610. A study of the nature of fraud, elements of fraud, fraud prevention, fraud detection, fraud investigation, use of controls to prevent fraud, and methods of fraud resolution. A critical competency for the 21st-century accountant is the ability to evaluate and analyze the various aspects of fraud prevention and detection in a strategic context. Emphasis is on the employment of forensic accounting techniques to analyze what is behind the data being generated by the accounting system, to detect internal control weaknesses, and to map out a fraud investigation program. The role of accounting ethics is explored in detail and considered in the context of laws, regulations, and the organization's culture.

ACCT 610 Financial Accounting (3)

An overview of relevant theory, building upon undergraduate accounting studies, provides a foundation for other track courses. Critical thinking and the application of accounting concepts and principles are developed in the areas of: the preparation and interpretation of corporate financial statements in accordance with 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. Current special interest topics include the impact of information technology on financial accounting and the valuation of and accounting for intellectual property.

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. Among the methodologies used are break-even analysis, regression analysis, the balanced scorecard, activity-based costing/management, value chain analysis, total quality management, and performance evaluation/assessment. The topics covered range from ethical issues to product costing. All the quantitative methods explained are used to help model business problems in a manner intended to provide the required insights for managers to make successful choices.

ACCT 612 Auditing Process (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 as well as 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 reg-

THE UNIT OF CREDIT

The unit of credit is the semester hour. One semester hour 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 in which prerequisites have not been met.

ulatory 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. Only students enrolled in the accounting track may take this course.

ACCT 613 Federal Income Taxation (3)

Prerequisite: ACCT 610. A case-study-based, problem-oriented examination of fundamental federal income tax concepts. Tax issues and controversies are explored in-depth. The primary focus is on applying tax laws, as opposed to learning individual tax rules. For example, while an undergraduate tax course would teach that gifts are not included in the donee's gross income, this course examines in detail the applicable criteria that determine when an item constitutes a gift. 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. Prime cases and tax issues that concern gross income, identification of the proper taxpayer, deductions, timing, income and deduction characterization, and deferral and capital gains and losses are examined. The textbook includes many classic court cases, explanatory materials, and problems that examine the application of the federal tax laws to various taxpayer situations.

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

COURSE DESCRIPTIONS

system to support business processes and cycles. Among the topics covered are: the components of a contemporary accounting information system (AIS); security and internal controls, particularly within Internet and e-commerce environments; traditional flowcharting and data-flow diagrams; computer networks; theory and application of relational databases; and relational database management systems (RDBMS). Assignments include designing an AIS using a commercial database software package.

ACCT 620 Government and Nonprofit Accounting (3)

Prerequisite: ACCT 610. This course will cover financial accounting standards applicable to public sector and nonprofit organizations in the United States. Emphasis will be on the similarities and differences of accounting rules for different types of organizations, and on the rationale and concepts underlying the standards. Topics to be covered include: accounting and financial reporting for governmental, quasi-governmental, and nonprofit entities; budgetary accounting; accounting for governmental operating activities, capital projects, debt service, and business-like activities; accounting for fiduciaries; and auditing and analysis of the financial performance of public sector and nonprofit entities. The influences of for-profit accounting and government budgeting also will be analyzed.

ACCT 670 Accounting Capstone (3)

(Formerly ACCT 615.) Prerequisite: Completion of five accounting track courses and all core courses except MGMT 670. A systematic review of components of the CPA examination as preparation for those who will take the exam. As preparation for work in the accounting field, earlier work is synthesized in the form of an end-of-track capstone project.

ADMN 640 Information Systems for Managers (3)

Prerequisite: Basic microcomputer skills. An investigation of different types of hardware and software and their application in organizations from a systems perspective, designed for managers without a technical background in computers and information systems. Case studies are used to reveal technical and organizational issues, along with operational considerations. The theme of determining managers' needs for information, and procuring and using appropriate computer systems is emphasized throughout the course.

ADMN 641 Information Systems Management and Integration (3)

A study of the life-cycle perspective of the information system, from inception, through systems development and integration, to system operation and maintenance. An overriding concern is 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.

ADMN 643 Systems Analysis and Design (3)

A combination of the areas of management science, computer technology, systems analysis and design and software development, integration and implementation to study 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.

ADMN 644 Decision Support Systems and Expert Systems (3)

An investigation of computer applications for management support. In addition to the technologies of decision-support systems and expert systems, the organizational factors leading to the success or failure of such systems are introduced. Other topics addressed include group decision support systems, integration and implementation issues, and related advanced technologies such as neural networks.

ADMN 645 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 information technology effectively.

ADVT 601 Mass Media and Society (3)

Examination of the literature of mass communication theory and discussion of theoretical approaches and models. Significant contemporary issues in mass communication, including a study of the history of the development of mass communication media, are also explored.

ADVT 602 Creative Strategy (3)

Prerequisite: ADVT 601. An examination of the creative process in advertising with an emphasis on developing effective copy and layout. Attention is given to effective advertising design in an applications environment in various media. Special emphasis on creative execution in new media, including direct marketing, interactive media, and the Internet.

ADVT 603 Advertising Media Planning and Buying (3)

Prerequisites: ADVT 601, MGMT 640 and MGMT 650 or ADMN 630 and ADMN 638. A study of advertising theory and practice and a review of the application of theory to advertising, promotion, and media selection strategies. The development of an advertising plan, media selection rationales, evaluation of selected campaigns, and the use of advertising media research techniques are required.

ADVT 670 Advertising Capstone Course (3)

Prerequisites: 30 credit hours including all advertising track courses. An opportunity to participate in the production and assessment of an advertising campaign for a specific client.

AMBA 600 MBA Fundamentals (1)

An overview of fundamental management concepts across a broad spectrum of subject areas. Topics covered include the online environment and technologies used in the MBA program; research, writing, and analytical skills; and basic management concepts. Assignments focus on statistics, financial accounting, and the theory of constraints. Exercises improve skills in the areas of research, writing, critical thinking, and teamwork. Special emphasis is placed on plagiarism issues and the utilization of the UMUC Web databases. The Web-based technologies used throughout the MBA program are also explored. Topics covered include both the academic requirements and the technical skills necessary to succeed in the MBA program.

AMBA 601 The Role of Managers and Organizations in Society (6)

An overview of the essential concepts and theories that provide a foundation for the study of business administration. Five major themes that reflect key characteristics of managers and organizations and span the curricula of the MBA program are introduced. These themes are leadership, ethics and legal concepts, technology, globalization, and innovation. Ten important competencies required of high performing managers that are emphasized throughout the MBA program are also introduced. These competencies are information literacy/research skills, technology fluency, diversity and cross-cultural perspectives, communications skills, team building skills, systems thinking, critical thinking, problem solving, leading change, and ethical leadership. Finally, assignments include the construction of an electronic portfolio for use in achieving their personal and professional goals. The electronic portfolio is used to document learning throughout the MBA program.

AMBA 602 The Dynamics of Individuals and Groups at Work (6)

An investigation of the interplay of the nature, meaning, and value of work with individual, group, organizational, and societal outcomes. Strategies and methods for aligning individual interests and organizational needs to reach organizational goals are explored. The philosophical, legal, psychological, and structural decisions that managers and leaders must make in managing the dynamic human element at work are analyzed through readings, case analyses, exercises, presentations, and discussions. Topics covered include interpersonal skill development, with an emphasis on effective communication processes, to increase competence in successfully working with people.

AMBA 603 The Marketing of New Ideas (6)

A study of the processes of strategic marketing and the development of new products from the perspective of understanding customers and cultivating and nurturing customer relationships. Such increased understanding is achieved through the effective flow of knowledge resources within and external to the organization, with an emphasis on the importance of market research, customer relationship management, data mining, demand forecasting, and market planning. As a managerial process, marketing is the way in which organizations determine their best opportunities and avoid major threats in a constantly changing marketplace. The managerial philosophy of marketing puts central emphasis on the customer, but does not lose sight of the competition and the environment in which it operates. Accelerated technological change, major ethical business decisions, and increased globalization exert substantial pressure on organizations to develop and transform their goods, services, and marketing programs. Stable product design and long production runs are no longer the norm. Topics covered include the increasing importance of electronic commerce as it relates to the distribution, promotion, and pricing of consumer and business products. Marketing applications and the effectiveness of various e-commerce strategies in an emerging new economy are explored. In addition, the important topics of ethics and social responsibility are investigated within the context of strategic marketing management and the current business climate.

AMBA 604 Technology and Operations Management (6)

This seminar considers three key areas of modern business functional management: project management, operations management, and information technology management. Effective managers need to understand the principles and techniques of management in these areas. For instance, the fast pace of product innovation and decreasing product life cycles today mandate that managers possess effective project management skills. Further, managers continually restructure business processes in order to maintain or improve operational efficiency and effectiveness, which is the heart of sound operations management. In support of this purpose and many others, managers should also be able to quickly but critically acquire, analyze, and deploy business information, which requires their ability to manage information technology, that is, automated information systems and information security.

AMBA 605 Economics of Management Decisions (6)

A study of the concept of economic decision making in a wide variety of managerial situations, including financial statement analysis, asset valuation, cost management and organizational performance. Critical thinking is applied to make connections among concepts from the disciplines of microeconomics, finance, and managerial and financial accounting. Current legal and ethical issues surrounding financial accounting along with the valuation of both financial and business assets in a domestic

and international context are addressed. Because cost management is crucial to a company's continued competitiveness, activity-based costing is discussed. Increasingly, managers are supplementing financial information with nonfinancial information to best analyze the economic performance of their organizations. Toward this end, several performance measurement techniques are covered, including economic value added, throughput accounting, and balanced scorecard.

AMBA 606 Organizations and the External Environment (6)

An overview, global in scope, of various types of business organizations and environments that shape organizational decisions. Approached from an opportunities and risk perspective, emphasis is placed 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. Major theoretical approaches and issues guiding the seminar include critical thinking, international ethics, business sustainability, social responsibility, and the impact of economics and technology. The course functions as a term-long team project comprised of group, subgroup, individual, and conference activities enhanced by Web- and media-based resources and some teleconferences. A significant shift is required in conceptual development from local and national focus to international and local thinking, and from an emphasis on individual performance to an emphasis on effective teamwork.

AMBA 607 Strategy (6)

An investigation of strategy, value creation, and value capture in different business contexts. The business environment of the 21st century is undergoing radical change. Companies now compete concurrently in domestic, global, and electronic markets. Such markets are often characterized by accelerating technological change, rising customer expectations, intense competition, and transitory competitive advantage. Added to that are demands for corporate transparency and responsibility that have lately become even more emphatic. Focus is on developing frameworks and models for understanding the rules of the game and 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 covered in previous seminars. A top management perspective is also adopted because strategic thinking requires a good understanding of the interrelationships that exist within a firm and between the firm and its external environment. The seminar is divided broadly into three parts. The first deals with value creation in different contexts—namely domestic, global, and e-business. The second part explores issues related to value capture through various organizational and strategic processes. The final part provides a synthesis of the foregoing themes as an opportunity to apply these concepts, tools, and techniques in a real-life project.

AMBA 607A Strategic Management (3)

An investigation of strategy, value creation, and value capture in different business contexts. The business environment of the 21st century is undergoing radical change. Companies now compete concurrently in domestic, global, and electronic markets. Such markets are often characterized by accelerating technological change, rising customer expectations, intense competition, and transitory competitive advantage. Added to that are demands for corporate transparency and responsibility that have lately become even more emphatic. Focus is on developing frameworks and models for understanding the rules of the game and 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 covered in previous seminars. A top management perspective is also adopted because strategic thinking requires a good understanding of the interrelationships that exist within a firm and between the firm and its external environment.

BIOT 601 Molecular Biology for Business Managers (3)

A thorough grounding in the fundamentals of biology, offering a broad review of the life sciences with emphasis on molecular biology. The basic concepts and processes in cell biology, molecular biology, and immunology are covered in a comprehensive manner. The components of a cell and the processes occurring in a single cell to the functioning of a multicellular organism are explained. The use of model organisms to understand basic and applied biology is discussed.

BIOT 610 Introduction to Bioinformatics (3)

(Formerly BIOT 646/BTMN 646.) An introduction to bioinformatics. Efficient experimental techniques have led to an exponential growth of data in biotechnology. Today the emphasis is switching from the accumulation of data to their analysis and interpretation. Computational tools for classifying sequences, large databases of biological information, computationally intensive methods, new algorithms, and machine learning unite to extract new concepts. This is the domain of bioinformatics. Specifically, bioinformatics includes new, sophisticated DNA, RNA, and protein sequence analyses and pattern recognition and DNA computing, but also more traditional mathematical modeling, Bayesian probability and basic algorithms, machine learning and neural networks, and Markov models and dynamic programming. Bioinformatics covers many subjects, among the most important of which are the analysis of macromolecular sequences, the analysis of tri-dimensional structures, the analysis of phylogenetic relationships, and the analysis of genomic and proteomic data.

BIOT 613 Statistical Processes for Biotechnology (3)

Prerequisite: Knowledge of basic statistics (binomial distribution and normal distribution), and BIOT 610. An examination of Bayesian statistics, Bayesian Networks, Markov processes, and information theory indices. These statistical tools can be used to analyze sequence homology, the presence of motifs in sequences, gene expression and gene regulation. In addition to the main course material, a number of additional concepts are introduced, including information content, linguistic methods, phylogenetic methods, random forests, and recursive partitioning. Hands-on use of software tools is a component of this course.

BIOT 617 Advanced Bioinformatics (3)

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.

BIOT 640 Societal Issues in Biotechnology (3)

(Formerly BTMN 640.) An overview of the early history, modern developments, and bioethical issues of biotechnology. Managerial views of the commercialization of technology, legal issues, biohazards, and the evolution of biotechnology as a function of human interventions are presented. Stress is on the need for public scrutiny and the role of governmental regulatory agencies in researching, developing, and commercializing biotechnology.

BIOT 641 Commercializing Biotechnology in Early-Stage Ventures (3)

(Formerly BTMN 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. Approaches to marketing technology and developing joint ventures are emphasized. Advantages and disadvantages of forming international ventures are weighed. The importance of maintaining relations with external constituents is discussed, as is the need for managing public awareness.

BIOT 642 Selection and Evaluation of Biotechnology Projects (3)

(Formerly BTMN 642.) A study of the applications of the 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. Managing the safety aspects of biotechnology is stressed.

BIOT 643 Techniques of Biotechnology (3)

(Formerly BTMN 643.) A comprehensive review of the current techniques in biotechnology research and applications. The development and use of some of the techniques are placed in historical context. The techniques that are used in the fields of genomics, transcriptomics, and proteomics, and the applications of these techniques are extensively discussed. Plant and animal transformation methods currently being used are explained. High throughput technologies including sequencing, real time RT-PCR, SAGE, and microarrays are also discussed. Topics include therapeutic applications of biotechnology such as gene therapy, stem cell technology, and RNA interference. Emerging technologies in this field are introduced.

BIOT 644 Biotechnology and the Regulatory Environment (3)

(Formerly BTMN 644.) A comprehensive review of the role of regulation in biotechnology products and services development and commercialization. The roles of the federal government, state government agencies, international bodies, and professional groups are emphasized. Specifically, the regulatory roles of the U.S. Environmental Protection Agency (EPA), the U.S. Department of Agriculture Animal and Plant Health Inspection Service (APHIS), and the Food and Drug Administration (FDA) are emphasized. Human subject protection, good laboratory practices, and good manufacturing practices are discussed.

BIOT 645 The Business of Biotechnology (3)

(Formerly BTMN 645.) An introduction to the range of businesses associated with biotechnology. These businesses include medical procedures, self-testing procedures, pharmaceuticals, reagents, agricultural, environmental bioremediation, energy production, material and mineral recovery, veterinary medicine and sensors. A variety of alliances and funding sources, as well as global and international issues, are covered.

BIOT 671 Capstone (3)

(Formerly BTMN 671.) Prerequisites: Completion of 27 semester hours, including 21 semester hours of core courses in the MS in biotechnology studies program. An opportunity to conduct in-depth analyses of cross-cutting business and technical issues such as bioterrorism, bioethics, nanotechnology, entrepreneurship, sources of capital, and marketing. Trends in biotechnology, the elements of ethical management, and the sociological aspects of biotechnology are addressed. Prior core content areas are integrated through case analysis and the development of a start-up design for a new biotechnology venture.

BIOT 681 Bioterrorism and Biosecurity (3)

A review of bioterrorism, biosecurity, and government biodefense strategy. A review of the history and science of biological agents in agriculture and society is presented, followed by an in-depth examination of surveillance, public health preparedness, response, and recovery at the community, state, and federal government levels. Various aspects of the law are introduced, including the Posse Comitatus Act and federal and state quarantine powers. The mental health consequences of bioterrorism are also discussed. A case study of a hypothetical biological attack is analyzed in detail.

BIOT 682 Biotechnology Practicum (3)

A Web-enhanced course, providing hands-on experience in some of the basic, current molecular biology, genetic engineering, and immunology procedures that form either the basis of any experiment in biotechnology or are used in the biotechnology industry. The experiments conducted in the laboratory are augmented with site visits to real labs in the industry/academia for a demonstration of some of the techniques.

BIOT 683 Advanced Topics in Biosecurity and Bioterrorism (3)

Prerequisite: BIOT 681. A thorough examination of special and advanced topics in bioterrorism and biosecurity issues. Topics include, but are not limited to, 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. In addition, students choose their own special topics during the semester for further in-depth analysis and class discussion. Future challenges in biosecurity are also discussed, case studies of hypothetical threats are analyzed and a comprehensive bioterrorism exercise is completed at the end of the course.

COMM 600 Academic Writing for Graduate Students (3)

A course designed to help graduate students acquire and strengthen the writing and critical thinking skills needed for effective academic writing. Emphasis is on developing well-organized, well-supported, and clear arguments; demonstrating the appropriate use of sources; and refining grammar and mechanics. The writing process presented begins with planning, continues through drafting and revision, and culminates in completion of a final project that demonstrates advanced writing and critical thinking skills.

CSMN 601 Issues, Trends, and Strategies for Computer Systems Management (3)

A study of the technological advances in computer systems and in the many environments affected by advancing technology. Problems relating to ethics, security, the proliferation of databases, risk analysis, telecommunications, artificial intelligence, and human-machine interaction are examined. The rapid development of computer-based information systems in response to management needs, as well as trends and developments in the field, are discussed.

CSMN 611 Computer Organization (3)

An overview of the fundamental concepts for the design of computers and their subsystems, including topics such as digital logic, basic computer organization, instruction set architectures, basic memory concepts, input/output, storage devices, performance issues, and alternative architectures. Also addressed are the trends in computer manufacturing, including state-of-the-art strategies for high-performance processors. The basics for understanding how programs are executed in general-purpose computers are provided.

CSMN 612 Operating Systems (3)

An overview of the fundamental concepts in operating systems technology and design, including processes and threads, system-calls, design issues, memory and I/O management, applications and services. Also addressed are operating systems topics for advanced computer architectures, performance issues and key features of current industry operating systems, such as Linux, Windows, as case studies.

CSMN 614 Data Structures and Algorithms (3)

An introduction to the definitions, implementations, and applications of the most basic data structures used in computer science, including the concept of abstract data types. Also introduced are the basic formalism and concepts used in the analysis of algorithms and in algorithm design. The relative efficiency of the algorithms studied is estimated by informal application of these ideas. The algorithms and data structures discussed include those for sorting, searching, graph problems, dynamic programming, combinatorial search, and others.

CSMN 616 Parallel and Distributed Systems (3)

An overview of the fundamental topics and current trends in the design and operations of parallel and distributed systems, including networking, concurrency control, client-server computing, resource sharing, Internet technologies foundations, parallel architectures, synchronization, and performance.

CSMN 617 Principles of Programming Languages (3)

An exploration of the theory and implementation of modern programming languages. Topics include the attributes of a good language, programming environments (for example, batch, interactive, real-time, network, and embedded systems), language syntax, various grammar types, data types, object-oriented structures, sequence control, subprogram control, and parallel programming. The properties of programming languages are illustrated using examples from current languages such as Fortran, Cobol, C, C++, Pascal, Ada, Prolog, and Java.

CSMN 618 Knowledge-Based Systems (3)

An applied approach to the identification, creation, and use of knowledge-based systems. Several topics in the fields of knowledge management, artificial intelligence, decision-support systems and intelligent systems are discussed, researched, and integrated, including applications and development tools, rule-based systems, machine learning, expert systems, data mining, and intelligent agents.

CSMN 635 Systems Development and Project Control (3)

A thorough study of the systems development life cycle as it applies to large hardware and software systems. Various approaches to system development are discussed, including the traditional waterfall model (system analysis, system design, system implementation, and system use and evaluation), spiral model, and prototyping. Computer-aided software engineering is also examined. An important aspect is the integration of the principles of project management (time, money, and quality) with the discussion of the system development life cycle.

CSMN 636 Telecommunications and Connectivity (3)

An overview of the fundamentals of data communication systems and technologies. Students explore these technologies from the perspective of the current and future public-switched networks, wide area networks, and local area networks. Also addressed are network architectures, networking standards, digital and analog signals, and the various transmission media. Future trends in data communication concepts, equipment, applications, and services, including the open systems interconnection (OSI) model, T-1/T-3 multiplexers, fiber optics, integrated voice/data equipment, "intelligent networks," and the Integrated Services Digital Network (ISDN) are also discussed.

CSMN 639 Multimedia and the Internet (3)

(Cannot be completed using UMUC computer laboratory facilities; requires a current multimedia PC with ample hard disk capacity and Internet connectivity.) Prerequisite: CSMN 601 or TLMN 602. Recommended: CSMN 636, TLMN 610, or TLMN 620. A study of multimedia presentations, which are regarded as essential, strategic components of an organization's

competitive advantage via its World Wide Web presence. Established principles of software development life cycles, aesthetics of typography and layout, benchmarking, and human factors research are applied to analyzing and critiquing Web sites as well as writing successful Web site development plans. Site management issues and consumer research methods are surveyed. The technical component emphasizes information theory, basic Web page design techniques, standards for representing common media formats in data files, compression algorithms, file format translation tools, transmission protocols, hardware requirements and standards, and system constraints. Java, CGI scripts, virtual reality, and other ancillary methods are touched upon, but no programming is required.

CSMN 655 Information Risk Assessment and Security Management (3)

An examination of the proliferation of corporate databases and the development of telecommunication network technology as gateways or invitations to intrusion. Ways of investigating the management of the risk and security of data and data systems are presented as a function of design through recovery and protection. Issues of risk and security, as they relate to specific industries and government, are major topics. Examples are presented of how major technological advances in computer and operating systems have placed data, as tangible corporate assets, at risk. Quantitative sampling techniques for risk assessment and for qualitative decision making under uncertainty are explored.

CSMN 661 Relational Database Systems (3)

An introduction to the fundamental concepts necessary for the design, use, and implementation of relational database systems, one of today's most pervasive technologies. 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.

CSMN 662 Advanced Relational/Object-Relational Database Systems (3)

Prerequisite: CSMN 661 or equivalent. A continuation of the foundation established in CSMN 661, exploring advanced concepts. Advanced knowledge in logical design, physical design, performance, architecture, data distribution, and data sharing in relational databases is provided. The concepts of object-relational design and implementation are introduced and developed. There is a remote access laboratory component for this course.

CSMN 663 Distributed Database Management Systems (3)

Prerequisite: CSMN 661 or equivalent. An introduction to the development of distributed database management, focusing on concepts and technical issues. Knowledge and awareness of current trends and emerging technologies in distributed data management is quintessential to 21st-century database management. The fundamentals of database systems that manage distributed data are built upon. A survey of various topics in distributed database management systems includes architecture, distributed database design, query processing and optimization, distributed transaction management and concurrency control, distributed and heterogeneous object management systems, and database inoperability.

CSMN 664 Object-Oriented Database Systems (3)

Prerequisite: CSMN 661 or equivalent. An overview of both the theory and applications of object-oriented database systems. The Object-Oriented approach has had a major impact on database technology. Conceptual frameworks for data abstraction, encapsulation, inheritance, polymorphism, extensibility, generic programming, information hiding, code reusability, modularity, and exception handling are studied. An overview of both existing object-oriented databases is provided, including examples of their use and comparison of their strengths and weaknesses, and emerging object-oriented database concepts and systems. After a survey of object-oriented databases, three representative ones are selected for closer scrutiny. Topics include the impact of the object-oriented approach on relational technology and the emergence of object-relational databases.

CSMN 665 Data Warehouse Technologies (3)

Prerequisite: CSMN 661 or equivalent. An introduction to the concepts needed for successfully designing and implementing a data warehouse. Topics include the technological knowledge base for data model approaches such as the star schema and denormalization, issues such as loading the warehouse, performance challenges, and other concepts unique to the warehouse environment. The course includes a remote access laboratory component.

CSMN 666 Database Systems Administration (3)

Prerequisite: CSMN 661 or equivalent. 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 included.

CSMN 667 Data Mining (3)

Prerequisite: CSMN 661 or equivalent. An overview of the data mining component of the knowledge discovery process. As the amount of data has grown, so has the difficulty in analyzing it. Data mining is the search for hidden, meaningful patterns in large databases. Identifying these patterns and rules can provide significant competitive advantage to businesses. Data mining applications are introduced and algorithms and techniques useful for solving different problems are identified. Many of the techniques 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. Topics include researching data mining applications and learning how to integrate data mining with data warehouses.

CSMN 668 Database Security (3)

Prerequisite: CSMN 661 or equivalent. An overview of both the theory of and applications for providing effective security in database management systems. Information stored in databases is a valuable asset that needs to be protected from damage. 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 are studied. Models for multilevel secure databases for both relational and object-relational databases are analyzed. Practical applications of database security concepts are applied in the remote access laboratory component of this course.

CSMN 681 Cryptology and Data Protection (3)

Prerequisite: CSMN 655. A study of the historical development of cryptographic methods and cryptanalysis tools. The theory of encryption using symmetric and asymmetric keys is presented. Current protocols for exchanging secure data, including the Data Encryption Standard and the Advanced Encryption Standard, are discussed. Secure communications techniques are also reviewed. 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 also explored.

CSMN 683 Intrusion Detection, Incident Response, and Computer Forensics (3)

Prerequisite: TLMN 672. An overview of the theory, skills, and tools needed in intrusion detection and computer forensics. Techniques for identifying vulnerable target systems and types of malicious code, for mitigating security risks, and for recognizing attack patterns are discussed. Also presented are the conceptual and operational tools necessary for analysis and resolution of problems with respect to effective filters and firewalls, attack tracing, system recovery, continuity of operation, evidence collection, evidence analysis, and prosecution.

CSMN 685 Security Policy, Ethics, and the Legal Environment (3)

An assessment of the information security environment within which organizations function today. At the national level, policy continually evolves through administration initiative and legislative debate. Information security responsibilities of major domestic and international agencies, such as the Federal Bureau of Investigation, the National Security Agency, and the National Institute of Standards and Technology are reviewed. Issues involving information security management within the enterprise are covered, including suitable organizational policy, plans, and implementation strategies. Ethical issues, such as monitoring employee computer use and proper limitations on the use of customer data are also discussed.

DMGT 700 Management: Theory, History, Philosophy, and Practice (3)

An overview of the history and development of management theory and practice in the United States. The comprehensive grounding in the history of management and the study of organizations is critical at the doctoral level. The focus of course readings, projects, and discussions are on the following: organizational theory, history and development of management theory and practice in the United States, general theories of decision making and organizational leadership, organizational culture, contemporary management thinkers, major schools of organizational thought, social responsibility, and management considerations for a postindustrial society. The theories, concepts, ideas, and practices that inform the study and practice of management are critically analyzed. Analytical, problem solving, application, and evaluation skills are honed by examining current management and organizational issues, challenges, and opportunities. Emphasis is on the ability to critically assess the ideas of others and defend one's own ideas through the application of material covered in the course.

DMGT 705 Systems Thinking and Systems Dynamics (3)

An introduction to a new way of understanding and managing operational and strategic issues in public and private organizations. Organizations are faced with accelerating social, economic, and technological changes that create increasing complexity and uncertainty. The traditional tools and approaches of management are becoming increasingly inadequate in dealing with these issues and too often create unanticipated side effects. Applying the systems thinking approach develops the capability to see the world and organizations in terms of complexity and interdependences. Systems dynamics tools and models are used to simulate and experience the short-term and long-term impacts and side effects of decisions and understand the ways in which the performance of an organization is tied to its internal structure and operating policies, as well as those of its customers, competitors, and suppliers.

DMGT 710 Economic Factors of Competition (3)

A study of the economic and financial forces affecting the organization in its internal and external environment. Financial and economic decision making are considered as appropriate responses to these forces in a global context. Topics covered include global economic issues, interest rates and the economy, value-based management, enterprise risk management, reshaping the organization, outsourcing, capital investments, intellectual capital, mergers and acquisitions, performance management, transparency in financial reporting, and corporate governance.

DMGT 715 Technological Factors in Organizations (3)

An exploration of the origin, nature, and role of technology in business, with special emphasis on the management of technology. Examined is how to integrate technological factors into business planning with emphasis on the impact of "change" as new technologies are introduced. Topics covered include the nature of technology, the nature of innovation, research and development, technology and society, and the future of technology. As illustration of technology factors, the course focuses upon several areas of rapid development, including information technology, biotechnology, and new material technology.

DMGT 720 Research Methods for Management Decision Making (3)

Prerequisite: A graduate course in statistical methods or demonstrated competency in statistical methods to the satisfaction of the department. A grounding in applied research for managers, serving as an introduction to critical thinking; the nature of knowledge; and active, participatory, and interactive research as important managerial skills. The process and logic of inquiry are presented for examining research issues and problems as a key for understanding management theory, organizational behavior, and managerial decision making. Topics covered include an introduction to epistemology, which includes an understanding of the philosophy of science through the presentation of topics such as empiricism, falsification, and paradigms and paradigm shifts. Theory construction and concept identification are also discussed. Quantitative, qualitative, and "mixed" methods of data gathering and the interpretation of results, such as surveys, field studies, case studies, and quasi-experimental designs, are introduced. A major emphasis is placed on measurement and error, incorporating a discussion of validity and reliability. Emphasis is placed on the articulation of research questions to appropriate methodological approaches. This includes demonstrating information literacy and technological fluency in the assessment of data sources and evaluation of methodological decisions. Students are assessed through case studies, research papers, and the application and appraisal of different research tasks.

DMGT 725 Problem Solving and Practical Research Design (3)

A foundation in fundamental quantitative methods and modeling within an applied management framework. A link is provided between the quantitative topic of probability/statistics and management science. A variety of topics are covered, with the aim of using practical quantitative analysis for making management decisions. This course has several purposes. The first is to acquaint students with the various quantitative methods that are available to perform management research. The second purpose is to help students improve their ability to perform advanced statistical analysis, modeling, simulations, and optimization techniques. These quantitative procedures are performed using EXCEL and other simulation/optimization program add-ins, along with interpreting the results. The third is to improve their critical thinking, writing, and research skills surrounding management science concepts.

DMGT 730 Research Design and Specialization Framework (3)

An opportunity to develop, present, and critique topic papers that may lead to doctoral dissertation projects. Participants: 1) identify and describe an appropriate topic area; 2) clarify the purpose and importance of their proposed research; 3) identify and critically review relevant literature; 4) review theories, concepts, ideas, and practices related to the effective design of applied research; 5) develop an appropriate methodological framework for their study; and 6) articulate how their proposed research will contribute to the current knowledge base and practice.

DMGT 740 Managing in the Global Environment (3)

An overview of four perspectives on strategic management within an international and global context. One perspective focuses on strategy and the competencies that are required for managers to function effectively. A second perspective concerns trade and financial issues, while a third perspective considers the political and legal context of decision making when many nation states are in play. The role of stakeholder and corporate social responsibility also are examined. The fourth perspective covers issues arising from differing country cultures and how they affect the management of firms operating transnationally. The forces and values shaping these perspectives are considered in terms of a 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 745 Technological Innovation Management (3)

A comprehensive study of the role of technology and the application of technological innovations for competitive advantage. Technology is a major force affecting all aspects of an organization's operation. Topics include the opportunities and threats in the external environment, and the strengths and weaknesses within the organizations to prepare to take a technology-based, productivity-driven, innovative path to global competition. Operational models that ensure that technology and socioeconomic systems are mutually supporting are developed and applied. Policy issues related to research and development, international technology transfer, technological appropriateness for sustainable economic growth, and intellectual property rights are explored.

DMGT 750 Advanced Readings in Management (3)

Students will identify readings and identify more precisely the dissertation's focus, which began in DMGT 730. This course will focus on developing research questions, identifying data sources, expanding the resource base and knowledge of the topic and related areas, and related issues identified by the student's advisor, so that the students have a strong view of the field under study.

DMGT 760 Organizational Security and Enterprise Resilience (3)

An exploration of security as an integral, essential, and dynamic characteristic of all organizations—governmental, economic, academic, and social—that serves to identify and define the organization, establish its boundaries, enable it to function effectively both internally and externally, and adapt efficiently to change, even sudden and catastrophic change. Discussion focuses on security as an inherent and indispensable hallmark of all stable, enduring, and productive organizations and their constituent elements, providing the strength needed to adjust readily to changes (within and without the organization) and respond promptly and positively to disruptions and disasters at both the macro and micro levels. Security in an ideal construct is shown as a clear and intentional element of an organization from its origin. Remedial security measures are also carefully examined in the context of present security requirements at the local, national, and international level. The goal is to provide an awareness and understanding of the formative and salient power of management in the design and effective operation of all organizations.

DMGT 770 Integrated Research Management (3)

The work of the advanced readings (DMGT 750) and literature review (DMGT 760) courses are integrated and a link between the literature and the proposed methodology for the dissertation is developed. A strong framework for the actual research work of the dissertation is developed. As in DMGT 750 and DMGT 760, students and faculty will provide feedback to each other's work during the semester.

DMGT 791 Dissertation Research: Proposal (3)

The proposal is a brief document (15–25 pages) that focuses the ideas, reading, and research of the previous courses (especially DMGT 730, 750, 760, and 770) and leads to the direction that the student will take in completing the dissertation. The document identifies the major areas for study; the research questions, hypotheses, methods, and the resources that will be used; the reasons for this direction; the value to the field; and applicability. Since this is an applied program, it is important that the proposal reflect this approach. If the project involves work with “human subjects,” approval from UMUC is required at this point, and a copy of the approval document must be attached to the proposal.

DMGT 792 Dissertation Research: Stakeholder Paper (3)

The student will be required to work closely with his/her dissertation chair to facilitate the vetting and discussion of his or her proposal with experts in the field. Students will be expected to present their proposals to experts external to the university who can provide feedback on the validity of the proposal as a Doctor of Management project and its potential contribution to the professional practice of management. The student’s chair/committee, the Doctor of Management program, and/or other contacts may suggest these stakeholder persons or organizations.

The responsibility for identifying and confirming the stakeholder(s) lies with the student and must be approved by the dissertation committee chair. The student must provide a written report to the committee on the feedback from the stakeholders. This report must include any changes to the proposal that will be made as a result of the feedback.

Note: Successful completion of DMGT 792 and the concept/stakeholder paper is required before registration in DMGT 793. Students must register for the 1-credit course DMGT 799 if the work is not completed to assure continual registration and doctoral supervision (see DMGT 799 below).

DMGT 793 Dissertation Research (3-6)

During this 6-credit final phase of the research, the student will work with his/her committee to complete his or her dissertation research project and produce a document that meets the standards of a publishable paper and makes an innovative contribution to the field of management. To accomplish this task, some committees may require that the student present the paper at various venues, such as a conference or management meeting, for feedback before finalizing the dissertation. The committee may also require that the paper be submitted for publication and suggest venues.

The student will defend the dissertation research final report in person before his/her committee, including the external reader.

All members of the committee must formally approve the dissertation document before the student can graduate. The final document will be presented in a formal colloquium during which members of the audience will be encouraged to comment and ask questions.

Note: Students may take DMGT 793 as a 6-credit course in one semester or as two 3-credit courses in two semesters. DMGT 791 and DMGT 792 must be satisfactorily completed before beginning DMGT 793.

Students must register for the 1-credit course DMGT 799 if the work is not completed to assure continual registration and doctoral supervision (see DMGT 799 below).

DMGT 799 Continuous Enrollment (1)

This course enables the student to continue work on dissertation coursework with supervision from the faculty. Students must maintain continual registration throughout their dissertation phase.

Note: DMGT 799 does not count toward the minimum 48 credits hours required toward the DM degree.

ECOM 610 Introduction to E-Commerce (3)

An overview of the managerial, strategic, and technical aspects of e-commerce functions, processes and interactions. The rapid growth of e-commerce affects the way business and every functional group is run within an organization. Topics covered include an introduction to the economics of information and ‘information products,’ definitions of e-commerce retailing, e-tailing and portals; a brief history of e-commerce; e-commerce business models; the roles of e-supply chains, corporate portals and public B2B exchanges; e-support services, auctions, and e-commerce security issues and processes; the impact of e-commerce on organizational strategy and industry structure; in-depth assessment of successful e-commerce strategies; social, ethical, and other emerging issues related to e-commerce; and innovative e-commerce systems. Overviews of the technologies that enable e-commerce are presented, including telecommunications technology trends, portals and search engines, Web site design and management, electronic payment systems, security, e-publishing and digital download features, and mobile commerce and pervasive computing.

ECOM 620 E-Marketing (3)

A study of the technologies and potential applications of the Internet with a focus on developing effective global marketing strategies using the Web as a medium. The Internet has emerged as one of the most significant forces to affect marketing since the emergence of mass media. Web site development, attracting and managing Web site traffic, use of e-mail, Internet regulatory issues, and development of Internet marketing strategies are explored in depth.

ECOM 630 Information Risk Assessment and Security Management (3)

An examination of the proliferation of corporate databases and the development of telecommunication network technology as gateways or invitations to intrusion. Ways of investigating the management of the risk and security of data and data systems are presented as a function of design through recovery and protection. Issues of risk and security, as they are related to government and specific industries, are major topics. Examples are presented of how major technological advances in computer and operating systems have placed data, as a tangible corporate asset, at risk. Quantitative sampling techniques for risk assessment and for qualitative decision making under uncertainty are explored.

ECOM 640 Internet Principles and Applications (3)

An examination of both the technological bases and applications of the Internet. The first part of the course studies Internet technology, including packet networking, TCP/IP, and Internet security and authentication (e.g. firewalls, encryption, virtual private networks), Internet 2, and IPV6. The second part of the course reviews Internet applications and their evolving use for multimedia transmission (such as voice over the Internet), private and leased service IP networks, e-commerce, data warehousing, and data mining. Finally, policy issues such as universal service and access are examined.

ECOM 650 E-Commerce Applications and Operations (3)

An overview of e-commerce applications and operations. Technical topics such as the Internet, Intranet, Extranets, Portals, and search engines are covered. Topics explored include the role of Enterprise Resource Planning (ERP) as the e-business backbone, supply and selling-chain management tools, Customer Relationship Management (CRM), outsourcing, e-procurement, and electronic payment systems. In addition, the fundamental applications associated with electronic end-to-end business are covered, including e-mail and other messaging technologies, electronic document management, workflow, data warehousing and data mining, knowledge management, and other decision support systems. Finally, management issues, such as collaboration, strategic alliances, joint ventures, and other methods to achieve strategic advantages and sustained operations, are discussed.

ECOM 660 E-Commerce Financial Management and Accounting (3)

A study of the evaluation of e-commerce/information technology investments being considered by an organization. The time value of money, discounting techniques, and option pricing principles are applied to e-commerce investment opportunities in a strategic context. Additional topics covered include financial management processes and activities significantly affected by the implementation of e-commerce technologies in organizations, such as accounting systems design, activity-based management applications, risk management as it pertains to internal controls, and the use of intelligent agents.

ECOM 670 Social, Legal, Ethical, and Regulatory Issues (3)

This course focuses on the protection of intellectual property on electronic networks through trademarks, copyrights, and patents. Privacy and liability issues will be examined in areas that include the handling of e-mail, the electronic dissemination of data, and the regulatory requirements for the safeguarding of confidentiality of information. Society's responsibility to provide universal availability of Web-based technologies is considered, and an ethical framework for the development and implementation of EC applications is developed.

ECOM 671 E-Commerce Capstone (3)

Prerequisites: Completion of 27 of the required 36 credits in the MS in e-commerce program. A capstone course that integrates all the knowledge accumulated through the previous courses. Focus is on best practices as demonstrated through case studies. Teams develop a comprehensive business plan or a market plan for a new Internet venture with a real company. Cross-cutting issues such as learning organization, the changing nature of work, entrepreneurship and intrapreneurship, technology trends, communication, creativity, and innovation are integrated.

ECOM 680 E-Commerce Application Software (3)

An examination of application software for business-to-business and business-to-consumer e-commerce. Initially studied are several fundamental e-commerce application software tools, including programming languages (e.g. Java, Perl/cgi-bin), search engines, and Web authoring tools (e.g. HTML, HTTP, and XML). Also studied are transaction processing software tools, including intelligent agents. Specific business-to-business transaction exchange methods reviewed include Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT).

ECOM 681 Introduction to Electronic Government (3)

An examination of the policy framework that enables an electronic government in the U.S. at the federal, state, and local levels of government. In 2001, nearly one in ten Americans

visited a state, county, or city government Web site for the first time. E-government has become an important part of how many Americans interact with government—most Internet users (76%) and over half (51%) of all Americans have now visited a government Web site. Government-2-Citizen, Government-2-Business, and Government-2-Government processes to provide information and services through electronic media are analyzed and evaluated within both the policy framework and the context of current U.S. government issues and activities. Critical concerns such as privacy, security, e-democracy, and access in an electronic environment are addressed throughout the course.

ENER 601 Energy Resources (3)

An overview of both traditional and nontraditional sources of energy. An understanding of the various traditional sources of energy, their availability, quality, environmental impacts, and potential alternatives is critical for managers involved in the energy business. Traditional sources such as oil, gas, and coal are nonrenewable and are currently used in meeting energy needs throughout the world. Nontraditional sources of energy such as biomass, solar, wind, and hydro are considered renewable and are likely to play an important role in fulfilling future energy demands. The resources, energy demand, and principles of conventional thermal energy conversion are critically examined. Also examined is society's dependence on energy, particularly fossil fuels, and the availability of alternative electricity-producing technologies. The evolution of new technologies, including their programmatic, development, and deployment stages, is also examined.

ENER 602 Energy Economics (3)

A study of the effect of energy and its costs on industry and the national economy. Global markets for energy are examined, along with supply, demand, pricing, and market structure. The cost-driving mechanisms for energy, including investments and competition, are also examined.

ENER 603 Energy Infrastructure Management (3)

An overview of U.S. and world energy infrastructure from the wellhead to the consumer. Topics covered include drilling, refining, transportation, and power generation and how the various energy grids fit together in a vast network of energy delivery services. The vulnerabilities in the system of energy delivery are identified and methods to reduce these vulnerabilities are discussed. Energy infrastructure issues in developing countries and the means to leapfrog over existing technologies in order to develop an energy infrastructure are also covered. Energy infrastructure risk and security issues are discussed and measures to safeguard these infrastructures and minimize risk are introduced.

ENER 604 New Technologies in Energy Management (3)

An examination of a wide array of new energy technologies being proposed to improve energy efficiency, promote the transition to renewable resources, and reduce or eliminate adverse environmental impacts. The energy cycle is reviewed, from exploration, extraction, conversion, and distribution to the application and impact of new technologies to increase the amount and delivery of traditional fuel supplies. Also, new technologies to produce energy from wind, water, solar, geothermal, and biomass sources are analyzed. Research efforts in fuel cells, batteries, electric vehicles, and engine efficiency by various organizations and governments are also examined.

ENER 646 Environmental/Energy Law and Policy Development (3)

(Also listed as ENVM 646.) 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 impacts these institutions have made on environmental and energy law and policy. Leading laws and their ensuing policies, such as the National Environmental Protection 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, are examined.

ENVM 641 Environmental Auditing (3)

An examination of methods for attaining statutory, regulatory, and permitting compliance. The protection of workers and other stakeholders is also examined in the context of organizational, budgetary, and other constraints. 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—are emphasized.

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 are identified and examined, including plant supervisors, corporate executives, regulators, the legal community, civic groups, labor unions, and the media. The types of communication discussed range 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 treatment technologies such as physical and chemical treatment of hazardous wastes, bioreactors and bioremediation, and reverse osmosis and ultrafiltration. Disposal technologies are reviewed, such as landfill design and operation, incineration, and encapsulation methods. Pollution prevention technologies are also presented, including process redesign and computer-aided process control, as well as the substitution of toxic materials.

ENVM 645 Hazardous Materials Transportation (3)

A review of the legal, regulatory, and operational requirements for the transport of hazardous materials and hazardous waste. A foundation is provided for understanding the state, federal, and international regulatory framework that governs the transport of such materials. The identification, classification, and description of transported materials (according to U.S. Department of Transportation criteria) are presented. Topics covered include the evaluation of shipment alternatives, such as the use of common carriers, contract carriage, and private carriage; compliance with shipping requirements, including the selection of appropriate packaging, labeling, and placarding; and the provision of emergency response support.

ENVM 646 Environmental/Energy Law and Policy Development (3)

(Also listed as ENER 646.) 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 impacts these institutions have made on environmental and energy law and policy. Leading laws and their ensuing policies, such as the National Environmental Protection 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, are examined.

ENVM 647 Environmental Risk Assessment (3)

An overview of the basic concepts of risk assessment. The four core parts of a risk assessment, as denoted by the National Academy of Sciences, are examined: hazard assessment, dose-response assessment, exposure assessment, and risk characterization. Methods of measurement and modeling are discussed, along with an exploration of key questions concerning uncertainty. 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. Environmental systems are presented in the study of the gaseous, liquid, and solid effluents from various industrial activities, while management methods and the statutory and regulatory requirements of major federal environmental laws affecting this management are considered. Additionally, this course provides the student with the basic vocabulary of the field and an understanding of fundamental principles relating to the transport and fate of contaminants and industrial wastes.

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 included.

ENVM 650 Land and Water Resource Management (3)

An introduction to the development of multiple-use resource management strategies and the role of public policy in land and water resource management. Free markets, market failure, and distributional equity issues are examined. The Public Trust Doctrine, Native American Trust responsibilities, and land use regulations are also examined. Enforcement of land and water restrictions, ex post liability schemes, and public purchase of private land and water rights are examined as approaches to land and water management.

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. Focus is on 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)

Introduction to the powers, process, and practice of managing the patterns and land use implications of human settlement and the built environment. Specific issues covered will include: where to build, where not to build, how to build, and when to build. In addition to the settlement history of the United States, the constitutional and legislative mandates for government, private sector participants, and institutions that shape land use policy will be discussed. The role of local government will be emphasized. Land use and environmental community planning will be covered, as well as best practices in land use management.

ENVM 670 Seminar in Environmental Management (3)

Prerequisites: Completion of 27 of the required 39 credits in the MS in environmental management program. The capstone course for the MS in environmental management program that integrates knowledge gained in program courses for the solution of environmental management problems encountered in industrial, commercial, institutional, and military organizations. Focus is on management guidelines, including 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 on 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 610 Financial Management in Organizations (3)

(For students in an accounting or financial management track or program. Formerly ADMN 631.) Recommended: UCSP 620 and 621 for students without recent coursework in accounting or economics. An investigation of financial management theory and applications in business, government, and nonprofit organizations. Basic accounting concepts and their use in financial statement analysis are discussed. Discounted cash flow and rate-of-return analysis are used to evaluate projects. Break-even analysis is employed to measure the impact of changes in volume and costs. An introduction to scenario analysis, short- and long-term financial management, international finance, and operating budgets and their preparation is provided.

FIN 615 Financial Management of Current Operations (3)

(Formerly ADMN 632.) Prerequisite: ADMN 631 or FIN 610. A study of the financial management of ongoing operations in organizations. The effects of various credit, inventory, accounts payable, and working capital policies on an organization are examined, as are alternative approaches for meeting

short-term cash needs and working capital management. Also covered are short-term investment management and managing interest rate risk. The use of e-commerce applications to manage these functions is illustrated.

FIN 620 Capital Markets, Institutions, and Long-Term Financing (3)

(Formerly ADMN 633.) Prerequisite: ADMN 631 or FIN 610. An exploration of the long-term capital needs of an organization and the roles of the capital markets and institutions. Topics include the financial environment of organizations, the role of the Federal Reserve and financial intermediaries, capital and money markets, options and futures markets, 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 are analyzed, including term loans, debt and equity securities, and leasing. Alternate policies with regard to financial leverage, capital structure, dividends, and the issuance of preferred stock, warrants and convertible debt are evaluated. Mergers, leveraged buyouts, and divestitures are examined as special situations to create value.

FIN 630 Investment Valuation (3)

(Formerly ADMN 634.) Prerequisite: ADMN 631 or 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 primary model employed as a learning tool is the discounted cash flow model. The financial drivers of value are covered, 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 discussed and applied in selected examples.

FIN 640 Multinational Financial Management (3)

(Formerly ADMN 639.) Prerequisite: ADMN 631 or FIN 610. A study of financial management issues in multinational organizations. Major 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 additional issues considered. Students may receive credit for only one of the following courses: ADMN 639 or FIN 640.

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FIN 650 Cost Management (3)

(Formerly ADMN 636.) Prerequisite: ADMN 631 or FIN 610. A study of making decisions that improve organizational performance through better cost management. The need to improve cost efficiency is driven by increased global competition and investor emphasis on shareholder value. Cost management practices must be consistent with strategic goals and objectives. Cost efficiency can be achieved by analyzing and modeling managers' decisions on cost drivers. Emphasis is on a value-chain perspective, value-added analyses activity-based management, and economic-value-added concepts in its approach to cost management. All topics are linked through an integrated perspective of cost management and through examination of the practices of "real-world" global organizations.

FIN 670 Strategic Financial Management (3)

(Formerly ADMN 655.) Prerequisites: FIN 610 (or ADMN 631), FIN 620 (or ADMN 633), and FIN 630 (or ADMN 634). An integrative course for the financial management track, heavily oriented toward readings, discussion, and case studies and/or simulations using analytical tools developed in the track courses. Current topics reflect the changing environment for and the role of financial management in organizations. Such topics include measuring and implementing economic value added; performance-based reward systems; diversification, restructuring, and strategic partnering; business-process reengineering; corporate governance; value-based management; strategic cost management; and ethics in financial management. Within the context of one or more of the topics covered in the course, students are required to analyze and make recommendations concerning a financial problem or opportunity at their workplaces or other approved organizations.

GMBA 600 GMBA/IMAN Fundamentals (1)

(Students may waive this requirement if they have taken the GMAT within the last two years and scored 600 or above or if they have a graduate degree or graduate credits in any discipline from an accredited university.) The required first course for all students in the GMBA and IMAN programs, to be taken and completed with a passing grade by all students entering either program before registering for other courses. A common foundation in basic skills needed to perform the coursework successfully is provided. Topic modules include: library research, paper writing, research, case analysis, and critical thinking skills, as well as basic concepts in statistics and financial accounting. The content is identical in most respects to the fundamentals course in the AMBA program.

GMBA 653 Information Systems and Technology for Global Operations (3)

Prerequisites: Completion of all core and track courses; however, the final IMAN course may be taken concurrently with this course. An introduction to a range of information technology systems, knowledge management models, and the processes and enabling skills and technologies to support them. One of the most critical tasks of global organizations is to coordinate the flow of strategic information and proprietary knowledge across their far-flung operations. To accomplish this task, managers need a grasp of both the relevant technologies and the systems needed for effective knowledge management and decision making within an organization and among its partner networks. Emphasis is placed on the role of managers in determining organizational needs for information and in procuring and using appropriate information systems.

GMBA 655 Managing Global Supply Chain Systems (3)

Prerequisites: Completion of all IMAN courses and GMBA 653, unless taken concurrently with this course. A study of the integration of information systems with suppliers and flows of inputs to create cost-effective sourcing networks that enable firms to remain innovative and on the competitive edge across the global marketplace. Supply chain systems in a global enterprise coordinate the value-added flow of materials, information, and funds around the world. Project management, operational management techniques, and forecasting approaches needed to make a supply chain function are introduced. Emphasis is on honing skills needed to design, build, and manage partnering networks across the globe, combining state-of-the-art information technology and supply chain design and methods with management competencies.

GMBA 660 Country/Region Projects (3)

(Students take this course twice, each time for a different country/region. The course may be taken only once in the same semester. Students gain project experience and working perspectives concerning two different country/regions other than their own.) An in-depth examination of the business environment of a major commercial country/region is combined with a project-oriented 14-day study tour, undertaken in concert with a local university in that country. The course structure provides exposure both to the business culture and institutions of that country/region, as well as to the management issues associated with the project. The course projects vary by country of destination and by type, depending on country and the local university. For example, projects may focus on developing a marketing plan, conducting an international negotiation, establishing a local operation. In each case, the country-specific economic, political, and cultural issues that are relevant to the project are examined.

GMBA 670 Capstone Course: Managing Global Operations (3)

Prerequisites: Completion of all IMAN and GMBA courses, unless one remaining GMBA course is taken together with this course. An opportunity to develop a plan for integrating the multilevel and multifunctional operations of a firm, spanning multiple country operations within or across regions, by integrating the various management disciplines covered in previous coursework. The project requires groups to compare country operations of various kinds (e.g., marketing, production, sourcing, financing), determine to what extent and at what level they should be integrated or decentralized, and develop a plan of implementation.

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 and writing skills, and enhancing ethical responses to the many ethical challenges in the health care industry.

HCAD 610 Information Technology for Health Care Administration (3)

(Formerly ADMN 669.) 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 information technology and data management and their implications for health care administrators are reviewed. The use of technology, databases, and other analytical tools to structure, analyze, and present information related to health care management and problem solving are explored. Strategic information systems planning, systems analysis, system design, evaluation, and selection are also explored. 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 also 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)

(Formerly ADMN 670.) 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, with an emphasis 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. An analysis of current trends in health care and prospects for the future is included.

HCAD 630 Public Health Administration (3)

(Formerly ADMN 671.) An introduction to 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. Major topics include the history of public health; epidemiology; the condition, issues, and problems of the U.S. public health system; core public health functions; and the politics and financing of public health. Field contact in a public health setting for the purpose of analyzing a public health program or policy may augment text and lecture presentations.

HCAD 640 Financial Management for Health Care Organizations (3)

(Formerly ADMN 672.) Prerequisite: ADMN 630, ADMN 631, MGMT 640, or FIN 610. An overview of the financial management of health care organizations and the basic economic models used in the United States. The American health care market and the attendant concepts of financial management of health services organizations within that market are described. The issues of free market and mixed market economies, regulation, licensure, certification, and other barriers to free market economies are examined, as are various insurance mechanisms. In addition, the major financial issues of health care organizations are extensively discussed, including reimbursement mechanisms, managed care, capitation, per-case or per-diagnosis payment, how these are packaged by third party-payers, and the effects reimbursement types have on health care provider organizations. Focus is also on financial problems and how health care providers should respond to financial problems such as uncompensated care, cost increases, increased competition, and increased regulation. Issues of working capital, capital budgeting and investment in relation to net present value and value added to the organization, health care organizations' ratio analysis, cost analysis, and other financial management techniques of primary importance to health care organizations are discussed.

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HCAD 650 Legal Aspects of Health Care Administration (3)

(Formerly ADMN 673.) An overview of the law and legal process as applied to the practice of health care administration. The principles of health care law, with an emphasis on contracts and torts, are discussed. Topics addressed include legal and regulatory constraints imposed on the health care industry, the liability of health care providers, the rights of patients, labor relations, and administrative law for health care organizations. A variety of pressing bioethical issues facing health care practitioners and administrators are examined.

HCAD 660 Health Care Institutional Organization and Management (3)

(Formerly ADMN 674.) Prerequisites: MGMT 625 and MGMT 635 or ADMN 625 and ADMN 635. A study of the nature of management and how it is applied in various health care settings. Health services organizations and systems that are effectively led and well managed dominate their market, attract and hold good people, and consistently deliver cost effective care. Critical perspectives, tools, and techniques needed to successfully manage in the health care environment are examined and the management of the complex human and organizational relationships that exist both internally and externally in today's health care settings is addressed.

HCAD 670 Long-Term Care Administration (3)

(Formerly ADMN 675.) A study of the management of skilled nursing, intermediate care, and long-term care facilities; the management of day care, residential care, social HMOs, and community-based programs; and the management of home health services. Long-term care administration encompasses all of those activities that relate to caring for and satisfying the essential needs of the aging population, including housing, health care, nutrition, education, and recreation. Textbooks and readings are supplemented by case studies in management of long-term care services and facilities.

HCAD 680 Special Topics in Health Care Administration (3)

(Formerly ADMN 679.) Prerequisites: ADMN 630, ADMN 631 MGMT 640, or FIN 610; and HCAD 650. An in-depth investigation of current and relevant topics impacting the rapidly evolving health care system. This exploration of health care administration content areas draws upon and incorporates previous general management and health care administration subject material. Specific topics examined further include ethics, managed care, intrapreneurship and entrepreneurship, health care marketing, the use of technology, psychosocial-behavioral issues as they relate to health care administration, and other industry-relevant topics as determined by the faculty member.

HCAD 690 Capstone Course for Health Care Administration (3)

Prerequisite: Completion of 30 credit hours. A capstone course, integrating previous core and specialized graduate-level health care administration courses 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.

HAİN 661 Health Administration Informatics (3)

This course is currently under development. Please visit www.umuc.edu/grad/mshai for updates and information about this course.

HAİN 671 Health Administration Informatics Capstone (3)

Prerequisite: Completion of all other requirements in the MS in health administration informatics with the exception of one elective course. This course is currently under development. Please visit www.umuc.edu/grad/mshai for updates and information about this course.

HRMD 610 Issues and Practices in Human Resource Management (3)

(Formerly ADMN 662. It is strongly recommended that Human Resource Management students take this course before taking the other courses in the track.) 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 included.

HRMD 620 Employee Relations (3)

(Formerly ADMN 661.) An investigation of the rights and responsibilities of employees and organizations in union and non-union environments in the United States. The legal framework is reviewed, primarily at the federal level; and the strategic fit of the employee relations program/services within the organization is discussed. Current issues are explored, such as equal employment opportunity, privacy, drug testing, wrongful discharge, health and safety, and pension and benefit plans. Public sector and global issues are included.

HRMD 621 Employee Health and Safety (3)

(Formerly HRMD 609.) An examination of the conceptual models and practical tools and techniques needed to manage health and safety programs successfully in the public and private sectors. Current issues in Employee Assistance Programs, Disease Management, and Workplace Health Promotion are investigated. Management metrics, cultural issues, the impact of technology, and ethical decisions encountered in a post-9/11 global environment are included.

HRMD 630 Recruitment and Selection (3)

(Formerly ADMN 666.) 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 as well as domestic concerns and consideration of multiple staffing levels (such as executive managers and temporary employees). Current issues in private, nonprofit, and/or public sectors are discussed.

HRMD 640 Job Analysis, Assessment, and Compensation (3)

(Formerly ADMN 663.) 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. A variety of approaches for analyzing, weighing, and specifying the detailed elements of positions within modern organizations are presented. Techniques are discussed 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. Consideration is given to the interaction of compensation, worker motivation, performance appraisal, and level of worker performance within the organization.

HRMD 641 Employee Benefits and Retirement Programs (3)

This course explores the most popular and cutting-edge employee benefits programs offered by today's organizations. It focuses on health and welfare benefits (medical, dental, disability, life insurance): what they are, how they are funded, what is mandated and what options exist. It also examines flexible spending accounts and lifestyle benefits, such as EAPs and alternative work arrangements. In addition, various retirement plans, including government and private plans, pension plans, and individual retirement accounts, will be considered. An in-depth treatment of the economic, financial, tax, legal, and manage-

ment issues of all benefits is provided in order to appreciate the strategic advantage of offering benefits as part of a comprehensive HR program. The impact of a global environment as well as international comparisons will also be discussed.

HRMD 650 Organizational Development and Change (3)

(Formerly ADMN 664.) A study of the issues, theories, and methodologies associated with organizational development and the management of change, with a major emphasis on organizational culture and organizational change processes. Areas of concentration 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)

(Formerly ADMN 665.) 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 operation 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 discussed. Students develop training proposals or programs to demonstrate knowledge of the concepts.

HRMD 652 Managing Global Teams (3)

(Formerly ADMN 667.) Prerequisite: HRMD 610 or ADMN 662. An investigation of key human resource management and organizational behavior concepts and issues in each stage of group development. Focus is on the impact of characteristics commonly found in global teams: diversity, virtual communication, and contingent job designs. Published research and field literature are examined to identify what knowledge exists and what still needs to be learned. The key questions in these unfolding areas and the implications of the findings for applied management are discussed.

HRMD 660 Human Resource Technologies (3)

(Formerly ADMN 668.) Recommended: HRMD 610 or ADMN 662. An overview of leading human resource technologies and how they should be selected, implemented, managed, and evaluated. Topics include best practices in human resource technology deployment and management, as well as the alignment of human resource technologies with corporate strategy. Leading human resource technologies are covered, ranging from human resource information systems (HRIS) to "bolt on"

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applications and emerging technologies, such as portals, kiosks, and wireless platforms. A wide variety of Web-based applications are examined, including online recruitment, online assessment systems, e-learning, knowledge management platforms, and various applications to facilitate virtual team development. Issues addressed include funding needs for a technology-enabled human resources department, selecting vendors and consultants, and documenting a return on investment for human resource technology acquisitions. Moreover, a series of self-development topics are covered to investigate what it takes to transform from a traditional to a virtual human resources professional.

HRMD 671 Human Resource Management: System and Governance (6)

This 6 credit-hour seminar is 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 rights and responsibilities of employees and organizations in union and non-union environments in the United States. The legal framework is reviewed primarily at the federal level. Current issues, such as diversity, metrics, outsourcing, employee privacy, and globalization, are also highlighted. *Note:* Students who receive credit for HRMD 671 can not receive credit for any of the following courses: ADMN 661, ADMN 662, HRMD 620, or HRMD 610.

HRMD 672 Organization Learning and Development (6)

An investigation of how change can be managed to support business strategy and enhance organizational performance. The diagnostic process, types of interventions, resistance dynamics, and consulting issues are explored. A distinction between training and other forms of adjustment is highlighted. Since employee training is often involved in the change process, the design and delivery of training services are analyzed. Adult learning models and knowledge systems are discussed. Management metrics, cultural issues, the impact of technology, and ethical decisions encountered in a global environment are included. Students who receive credit for HRMD 672 cannot receive credit for ADMN 664, ADMN 665, HRMD 650, or HRMD 651.

HRMD 673 Talent Management (6)

This 6 credit-hour seminar investigates the ability of organizations to attract, retain, use and release talent. The interrelationships among strategic planning, job analysis and design, staffing, performance measurement, and compensation programs are highlighted. Legal, productivity, and quality factors for each HR function are discussed. Current issues, such as skill shortages and

increasing health care costs, as well ethical decision-making in a global environment are included. *Note:* Students who receive credit for HRMD 673 can not receive credit for any of the following courses: ADMN 666, ADMN 663, HRMD 630, or HRMD 640.

IMAN 601 Strategic Management in a Global Environment (3)

A fundamentals course that establishes a framework for analyzing the competitive structure of industries, for ascertaining the direction of industry change, for analyzing country environments, and for formulating strategy within an international context. Theories of competition and competitive strategy are examined, as well as methodologies for formulating strategy relevant to major commercial environments. Organizational and functional issues are discussed, including transnational company structures, the role of marketing, finance, trade, technology innovation, and the public-private interface in the formulation of firm strategy.

IMAN 605 Intercultural Communication and Leadership (3)

A study of organizational communication, leadership, and decision-making skills in intercultural environments. Communication and leadership skills are essential for all managers. Applying these skills in an intercultural context is critical for managers operating in a global economy. Theories of culture are examined and applied as they affect leadership style and practices, as well as organizational communication across cultural groups. Team development and leadership are also explored in an intercultural environment.

IMAN 610 Economics for Global Managers (3)

An economics refresher, enabling managers both to understand the complexities of the marketplace and to appreciate the economic implications of their decisions. Managers need a working knowledge of key economic principles and concepts to fully appreciate the issues they face in the globalizing world economy. Competitive to monopolistic market structure and how different economic systems (from open to closed, or protected, market economies) affect economic outcomes are examined from a problem-oriented perspective. The management implication of a variety of economic concepts are covered, including scarcity, opportunity cost, price and income elasticities, income distribution, market failures, transaction costs, the role of government, unemployment, inflation, and monetary and fiscal policy.

IMAN 615 International Investment and Partnering (3)

A continuation of IMAN 601, offering in-depth treatment of the more complex business strategies and transactions for conducting and expanding transnational business operations. Case-intensive analysis is employed to gain insight into formulating

strategy, negotiating, selecting partners, and structuring and managing business transactions over a range of market entry vehicles, including outsourcing, distributorship, greenfield investment and acquisitions, technology transfer and licensing, franchising, joint ventures, and various types of strategic alliances between companies based in different countries.

IMAN 620 International Marketing Research and Analysis (3)

An overview of approaches to marketing research, data collection, and utilization that serve the practical needs of international managers. The focus is on the acquisition, analysis, and interpretation of data used in assessing the performance of individuals, work groups, and organizations in a competitive international environment. Methodologies and special topics related to the design and completion of organizational research and evaluation studies are presented, including the survey, observational, and experimental methods of assessing and segmenting markets. The use of software in the analysis of research data is introduced.

IMAN 625 International Trade and Trade Policy (3)

An examination of the theory and conduct of international trade by transnational enterprises. The international trading system has been a key lever over the past half century in stimulating world economic development. In addition to trade theory, this course explores how national trade policies affect the trading system and addresses the knowledge and skills needed by enterprises of all sizes to function effectively within trading rules. The evolution of the Bretton Woods system, the General Agreement on Tariffs and Trade (GATT), and the World Trade Organization (WTO), and the effects of these changes on national policy and international business are covered. The effects of various multilateral and regional trade agreements, national systems of trade laws and remedies are analyzed in addition to forms of trade and the types of documentation they require.

IMAN 630 International Financial Management (3)

Recommended: MGMT 640 or FIN 610. An investigation of the theory and management of financial systems in international enterprises, including the dynamics of the business system, operating funds management, and the methods of trade finance, such as export-import financing and terms of payment. Also considered are the international framework of the monetary system, foreign exchange markets and balance of payment issues, and the role of governments and multilateral banking institutions in national, regional, and international capital markets.

IMAN 631 Financial Management for Global Managers (6)

An investigation of financial decision making in business, government, and nonprofit organizations as well as the theory and management of financial systems for the global enterprise. Major

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 key issues considered. Within the same context, other topics include restructuring, strategic partnering, corporate governance, and risk associated with consolidated financial statements. There is also coverage on the application of financial and non-financial information to a wide range of management decisions, from product costing and pricing to project analysis and organizational performance measurement. Activity-based costing procedures, breakeven analysis, target costing, and kaizen costing, as well as discounted cash flow techniques, are explored as a means of improving profit planning and operational efficiency.

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 types of country environments and to develop strategies for thriving in the midst of social change. Countries everywhere are seeking to attract foreign investment and, to the extent necessary, to accommodate the forces of globalization. At the same time, enterprise managers are seeking to benefit from globally expanding markets, but are faced with country-specific regulatory regimes, economic systems, cultural patterns and physical and social infrastructures that often constrain their business agendas. Topics covered include stakeholder analysis, varying rules of market competition and intellectual property protection, ethical conflicts, corporate social responsibility, and the conduct of government relations.

IMAN 640 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. Major topics include demand analysis, product development, product pricing, marketing organization, foreign representation and distribution systems, promotion, advertising, and sales and service. Regulatory issues are also reviewed as they relate to international marketing.

IMAN 645 The International Legal and Tax Environment (3)

A comparative analysis of national and regional (European Union) legal systems, covering a variety of commercial and corporate matters such as contract law and the transactional environment of business. International business transactions should be structured in the context of public and private international law and tax systems. Topics covered include the impact of competing investment laws, national tax issues, intellectual property rights, and the resolution of disputes through international litigation, arbitration, and mediation.

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IMAN 650 Managing Overseas Operations (3)

Prerequisites: Completion of all IMAN core and track courses, but may be taken with the last remaining IMAN course. An examination of a wide range of management problems facing both large and midsized enterprises as they introduce their products and services overseas. The development of a full-scale business plan for entering a foreign market enhances skills for integrating entry strategy with strategy implementation, designing business functions, solving staffing and control issues, and developing a supportive financial plan and organizational structure.

IMAN 690 International Management Project (3)

Prerequisites: Completion of all required and elective courses in the MIM program, including IMAN 650. An opportunity to structure and complete a major project that identifies and resolves an important management or organizational issue. Results are reported in written and oral form. The project may be developed in cooperation with students' current employers or with some organization of their choice, provided there is no conflict of interest. The project is conducted under the direction of an on-site supervisor in cooperation with a faculty advisor. Students have two semesters to complete the management project.

ITSM 602A Systems Engineering and Information Risk Management (3)

The first of two course modules. Systems Engineering, the first module, is an interdisciplinary concept focused on developing efficient and effective man-made systems that satisfy a mission in a given operational environment. Topics include an overview of system engineering theory and structures, general systems engineering management principles, a comprehensive study of various phases of systems life cycle, and acquisition practices with emphasis on DoD systems and policies. Individual and group projects are used to illustrate a variety of systems engineering principles and practical applications. Specific module objectives are the following: 1) learn to implement all facets of the full life cycle of a large information technology project, demonstrate mastery of currently accepted techniques in defining the scope of the project along with its full life cycle management, 2) gain sufficient knowledge of the systems development life cycle to be able to identify the technical and management factors influencing system design, and 3) understand and be able to establish systems engineering development environment, based on standard DoD and industry best practices.

ITSM 602B Systems Engineering and Information Risk Management (3)

The second of two course modules. Information Risk Management, the second module, focuses on the proliferation of corporate databases and the development of telecommunication network technology as gateways or invitations to intrusion. Ways of investigating the management of the risk and security of data and data systems are presented as a function of

design through recovery and protection. Issues of risk and security, as they relate to specific industries and government, are major topics. Examples are presented of how major technological advances in computer and operating systems have placed data, as tangible corporate assets, at risk. Quantitative sampling techniques for risk assessment and for qualitative decision making under uncertainty are explored.

ITSM 603A Acquisition of IT (3)

The first of two course modules. Acquisition of information technology (IT), the first module, defines management practices for the acquisition of information technology systems and information resources. Strong emphasis is placed on the importance of enterprise strategic planning and the concomitant information technology strategic planning. Issues related to the development of the information technology acquisition plan, financial planning and budgeting, integration of the proposed acquisition within the overall goals of the enterprise, and related information technology program management are examined in the context of overarching management challenges. Related issues include federal and commercial information technology systems and contract and procurement policies and procedures.

ITSM 603B Project Management of IT (3)

The second of two course modules. Project Management of information technology (IT), the second module, provides an overview of the theory and practice of managing any project in any organization. The fundamental building blocks of project management are addressed, including project planning, organizing, team building, and effective control mechanisms. A solid understanding and foundation is provided for successfully managing each phase of the project life cycle, working within organizational and cost constraints, setting goals linked directly to stakeholder needs, and utilizing proven project management tools to complete the project on time and within budget. Essential concepts, processes, and techniques that are used in the management of large scale governmental or commercial programs are applied. The key management aspects and proven techniques that differentiate project management from other types of management are fully addressed.

ITSM 620 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 both vulnerable assets and critical solutions.

ITSM 624 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. The course examines various factors impacting physical security including construction materials, architectural design, location, function, occupancy, and life cycle management. Accessibility, access control, traffic patterns, and internal and external communications are analyzed. Methods for protecting critical infrastructure support systems, such as electric power, water supply, airflow, and information systems, are reviewed. Typical security policies and procedures for various categories of physical facilities—for example, those involved in power generation, finance, and telecommunications—are also evaluated.

ITSM 626 Business Continuity: Disaster Recovery, Planning, and Response

An in-depth examination of managerial and technical strategies for maintaining enterprise resiliency in the face of man-made or natural disruptions to business operations. The course emphasizes the importance of advanced planning and explores techniques for performing business risk assessment and potential incident impact analysis. Alternative models for supporting contingency operations, including the use of Service Level Agreements, are discussed. Key activities and processes involved in post-event business resumption, including the recovery of key information assets, are reviewed. Various formal Business Continuity standards such as ISO 17799 are also introduced. Actual and hypothetical cases are analyzed to reinforce course concepts.

ITSM 637 IT Acquisitions Management (3)

A study of the management practices for the acquisition of information technology (IT) systems and information resources. Strong emphasis is placed on the importance of enterprise strategic planning and the concomitant information technology strategic planning. Issues related to the development of the information technology acquisition plan, financial planning and budgeting, integration of the proposed acquisition within the overall goals of the enterprise, and related information technology program management are examined in the context of overarching management challenges. Related issues include federal and commercial information technology systems contract and procurement policies and procedures. Microsoft Project project management software is used.

ITSM 670 Information Technology Integration and Application (3)

A study of the integration and application of the major concepts presented in all other coursework. Best practices and appropriate technologies to implement effective IT decisions aligned with organizational goals are identified using casework methods. Strong emphasis is placed on viewing information technology issues in a context of both day-to-day and strategic management decision making based on applied research. Issues include competitiveness, information architecture, user needs, process reengineering, value chain management, collaborative computing, globalization, social impact, information policy, and ethics. Emerging trends in information technology are analyzed to understand their potential effect on the workplace and society.

MGMT 610 The Manager in a Technological Society (3)

(Formerly ADMN 601.) An overview of the fundamental concepts of organizational theory and design in the context of a postindustrial and increasingly global society. Integrated within the study of organizations are 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. Course content addresses essential concepts in organizational theory and design, including measuring effectiveness, organizational life cycles, options for organizational structure, and becoming the learning organization, providing a knowledge base upon which other core courses build.

MGMT 620 Leadership, Communication, and Organizational Behavior (6)

(Formerly listed as ADMN 620 and ADMN 625C/ADMN 635C.) An investigation of the theories and research related to communication and leadership within modern organizations. The ability to communicate and lead in an environment of continual change is crucial for the 21st century. A central aspect of work today is collaboration in groups and teams. Collective work is explored from a number of perspectives including conformity, conflict, diversity, and meetings. Also examined are definitions, models, and traits of the individual, including perception, ethics and spirituality, motivation, and power and influence. Issues addressed include communications and leadership at the organizational level, including topics such as culture, systems leadership, leading change, and global perspectives. A constant thread throughout the course is the fact that in all of these topics, decisions must be made at the individual, group, and organizational level. Seminal ideas about communications and leadership are explored. Students who complete MGMT 620 cannot receive credit for any of the following: ADMN 620, ADMN 625, ADMN 635, ADMN 625C, ADMN 635C, MGMT 625 or MGMT 635.

MGMT 625 Organizational Communication and Group Development (3)

(Formerly ADMN 625.) An investigation of the theories and research related to communication and group development within modern organizations. Definitions, models, and barriers—including structural, psychological, and technological factors—are examined. Topics include current issues, such as the impact of the global environment, cultural diversity, and virtual environments, and strategies and methods for managing conflict and managing change. Interpersonal, small group, and large group settings are addressed. Managerial application of the concepts is stressed.

MGMT 640 Financial Decision Making for Managers (3)

(Formerly ADMN 630. Not open to students in the financial management track or program.) Prerequisite: Knowledge of the materials covered in UCSP 620 and 621, including the concepts of opportunity cost, the time value of money, financial accounting, and financial analysis. An investigation of financial decision making in business, government, and nonprofit 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 are employed in the analysis of these decisions. Break-even analysis is used in profit planning. The cost of individual products and services is determined by activity-based costing procedures. Product mix and resource allocation issues are examined using linear programming. Discounted cash flow techniques are used to compare alternative investment opportunities, and the balanced scorecard provides a framework with which organizational performance can be evaluated. In addition, contemporary managerial systems, such as target costing and kaizen costing, are explored as a means of improving operational efficiency. Students may receive credit for only one of the following courses: ADMN 630, ADMN 631, or IMAN 629.

MGMT 635 Organizational Leadership and Decision Making (3)

(Formerly ADMN 635). A study of four aspects of leadership: theory and research, individual and team perspectives, judgment and managerial decision making, and the global environment. The overriding theme is that the ability to lead and make decisions in an environment of continual change is crucial for the 21st century. Approaches to leadership such as power-influence, situational factors, individual traits, and behaviors are explored, as are various models of decision-making theory. Issues such as the relationship of management to leadership, the value of participative and charismatic leadership, the leader's role in organizational culture and organizational change, and the impact on diversity, are investigated from domestic and international perspectives. The increasing role of teams in organizational life and

the ability to apply good judgment to decisions that pertain to supervisory, participatory, and team-leadership principles at appropriate points are discussed.

MGMT 645 Legal Aspects of Management (3)

(Formerly ADMN 637.) A study of legal consequences of major issues facing managers in dynamic organizations. The nature and structure of the traditional American legal system and current alternatives for resolving disputes are reviewed. Issues such as employment contracts and reference checks, job descriptions and evaluations, employee termination, discrimination, age and handicap regulations, and substance abuse testing in the work place are considered. Additional topics of discussion include: Union and non-union environments, contracts, torts and product liability, business/white collar crime, and ethics in the work place. Emphasis is on preparing managers with limited legal experience for dealing with these situations before they develop into work place crises.

MGMT 650 Research Methods for Managers (3)

(Formerly ADMN 638.) Prerequisite: Knowledge of the materials covered in UCSP 630, including data collection techniques, presentation of data in tables and charts, basic descriptive statistics, basic probability distributions, normal distribution and sampling distributions, estimation, and hypothesis testing. A presentation of techniques and methodologies related to the evaluation and utilization of organizational research and evaluation studies in making business decisions. Emphasis is on preparing the student to evaluate and utilize research-based information developed by other individuals. Focus is on the analysis and interpretation of research-based materials in assessing the performance of individuals, work groups, and organizations. Areas covered include principles of good research design, measurement, appropriate sample size, evaluating research instruments, reviewing procedures for collecting and analyzing data, and evaluating and utilizing existing research-based materials in solving business problems. Emphasis is on approaches and skills necessary to evaluate research-based materials and their utilization in business decision making. Various approaches to data collection (including the Internet) and utilization that best serve the practical needs of the manager are provided.

MGMT 670 Strategic Management Capstone (3)

(Formerly ADMN 651.) Prerequisite: Completion of 27 credits, including all core courses. A capstone seminar that investigates how strategy interacts with and guides an organization within its internal and external environments. Emphasis is on corporate- and business-unit-level strategy, strategy development, strategy implementation, and the overall strategic management process. Key elements examined include organizational mission, vision, goal setting, environmental assessment, and strategic decision making. Techniques such as industry analysis, competitive analysis, and portfolio analysis are presented. Strategic implementation

as it relates to organizational structure, policy, leadership, and evaluation issues are covered. Emphasis is on the ability to “think strategically” and to weigh things from the perspective of the total enterprise operating in an increasingly global market environment. In addition to integrating prior core content areas through case analysis and text material, problems and issues of strategy formulation are investigated through participation in the Business Strategy Game simulation.

MRKT 600 Marketing Management (3)

(Formerly ADMN 686.) A study of the theory and practices related to the management of the marketing function as they would be applied by managers and administrators in organizations concerned with “business development.” The marketing of organizational products, programs, and services is related to either internal or external clients. Through analysis of case studies and spreadsheet exercises, the necessity of incorporating marketing functions with other business functions is demonstrated. The planning and implementation activities required to attain marketing goals for the organization are also emphasized. 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)

(Formerly PRPA 604.) A survey of communications law, emphasizing its applications to advertising and public relations. Topics include First Amendment issues, libel, privacy, confidentiality, and access to information. The integration of public relations with advertising and marketing efforts is discussed, with special emphasis on the legal issues inherent in this integration. Ethical issues surrounding the practice of public relations in a wired world are explored.

MRKT 602 Consumer Behavior (3)

(Formerly ADMN 687.) 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. Special emphasis is placed on the role of the communications strategy (for example advertising, promotion, public relations) in achieving the overall marketing objectives.

MRKT 603 Brand Management (3)

(Formerly ADMN 685.) 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. Trends toward a “marketing culture” in both public and private institutions and the implications that this change has for all managers and administrators are discussed. Emphasis is on the role of brand equity in achieving a sustainable competitive advantage.

MRKT 604 Marketing Intelligence and Research Systems (3)

(Also listed as IMAN 620. Formerly ADMN 688.)

Prerequisite: ADMN 638. A study of the applications of cross-cultural marketing research methods and techniques useful to managers and administrators with responsibility for assessing or increasing the demand for their organization’s product, programs, and services. Methodologies and special topics related to the design and completion of marketing research projects are presented, including the survey, observational, and experimental methods used in assessing and segmenting markets. Special topics in data analysis that are especially useful for marketing research (that is, focus groups, customer visits, conjoint analysis, and multidimensional scaling) are covered.

MRKT 606 Integrated Direct Marketing (3)

(Formerly ADMN 689.) Prerequisite: ADMN 638 or appropriate background in statistics. A systematic approach to integrated direct marketing. Integrated direct marketing is a process of precision deployment of multiple media and sales channels (for example, publicity and public relations, advertising, direct mail, telemarketing, and field sales channels) that seeks to maintain contact with the customer at multiple points during the sales cycle and throughout the long-term relationship with the customer. Integrated direct marketing is an information-driven marketing process, managed by database technology that enables the marketers to develop, test, implement, measure, and appropriately modify customized marketing programs and strategies. Specific measurement tools and topics to be examined include lifetime value, performance measurement, cost per million (CPM), and cost per response.

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 covered include competitive strategy, market segmentation, e-commerce issues, the product/service mix, pricing strategies, channels of distribution, customer service, and marketing communications (e.g., the role of 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 cannot receive credit for ADMN 686, MRKT 600, MRKT 601, or PRPA 604.

MRKT 625 Traditional and Electronic Integrated Direct Marketing (6)

(Formerly ADMN 689C/ECOM 620C.) A systematic approach to integrated direct marketing, dealing with an innovative way of communications planning that is geared to today's marketing realities. The Internet has emerged as one of the most significant forces to affect marketing since the emergence of mass media. The technologies of direct marketing and potential applications of the Internet are explored, with a focus on developing effective global marketing strategies using techniques of direct marketing with an emphasis on the Web as a medium. Integrated direct marketing is an information-driven marketing process, managed by database technology that enables the marketers to develop, test, implement, measure, and appropriately modify customized marketing programs and strategies. Web site development, attracting and managing Web site traffic, use of e-mail, Internet regulatory issues, development of Internet marketing strategies, LifeTime Value, performance measurement, cost per million (CPM), and cost per response are explored in depth. Students who complete MRKT 625 cannot receive credit for any of the following courses: ADMN 689, ADMN 689C, ECOM 620, ECOM 620C, or MRKT 606.

MSAF 670 Accounting and Financial Management Capstone (3)

(Formerly ADMN 619.) Prerequisite: Completion of all other requirements in the Master of Science (MS) in accounting and financial management program with the exception of either FIN 640 or one elective accounting course. The capstone course for the MS in accounting and financial management. Subject matter from the financial management and accounting track courses is integrated through readings and class discussion. Principles, techniques, and theories are applied through the analysis and presentation of case studies by teams of students. An end-of-course research paper that comprehensively analyzes an important current issue or emerging trend in the fields of financial management and accounting is required.

MSAT 670 Accounting and Information Technology Capstone (3)

(Formerly ADMN 618.) Prerequisite: Completion of all other required accounting and management information systems courses in the Master of Science (MS) in accounting and information technology program with the exception of one elective technology course. The capstone course for the MS in accounting and information technology. Subject matter from the accounting and information technology courses is integrated through readings and class discussion. Principles, techniques, and theories are applied through the analysis and presentation of case studies by teams of students. An end-of-course research paper that comprehensively analyzes an important current issue or emerging trend in the fields of accounting and information technology is required.

MSFS 670 Financial Management and Information Systems Capstone (3)

Prerequisite: Completion of all other requirements in the Master of Science in financial management and information systems program with the exception of one elective technology course. The capstone course synthesizes material from all financial management and information systems coursework in the program. As the culminating course, it provides students with an integrated learning experience that reflects the importance of information systems in modern organizations and the role of the CFO/CIO in managing this resource to maximize value. By taking part in a simulation activity, students will apply theories in practice and learn more about acquisition, installation, and management. Special readings and briefing papers are integrated with coursework and class discussion.

MSIT 610 Foundations of Information Technology (3)

A common foundation for use in all other courses in the MS in information technology program. Focus is on how the many elements that make up information technology work and what their limitations are. Mathematical and physical concepts helpful in thinking about the capabilities of information technology and its applications are reviewed. Mathematical concepts include information theory, the representation of signals in both the time and frequency domains, modulation schemes, digitization, and probability. Physical concepts include electromagnetic waves, the properties of various guided and unguided transmission media, integrated circuits, lasers, and optical transmission and switching. Concepts essential to information security applications, such as various encryption schemes and measures for assuring personnel and physical security, are also introduced. Insofar as possible, these concepts are treated descriptively rather than analytically.

MSIT 620 Computer Concepts (3)

An examination of the major hardware and system software components and underlying technologies that are the basis of the modern digital computer. Major developments in the evolution of computers are reviewed first; theoretical and engineering topics include Boolean logic, the Von Neumann architecture, and semiconductor device technology. The similarities and differences between mainframes, minicomputers, and microprocessors are then investigated. Supercomputer, parallel processor, and distributed system architectures are examined. Various types of storage media and input/output devices are discussed. An overview of system software elements, including operating systems and middleware, is also presented. Advanced topics such as optical computers and biomolecular computers are introduced.

MSIT 630 Concepts in Software-Intensive Systems (3)

An examination of the technology, engineering practices, and business economics behind the wide variety of modern software-intensive systems. The foundations of software engineering are examined. Classes of application domains, including real-time systems and transaction-based systems, are analyzed. The practices used in developing small-scale and large-scale software systems are evaluated. Modern issues, including design of the human-computer interface, software product liability, and certification of software engineers, are discussed. The structure, environment, and possible future of the software industry are also investigated.

MSIT 640 Data Communications and Networks (3)

A study of data communication fundamentals, including digital and analog signals; modulation; circuit and packet switching; multiple access schemes such as Frequency Division Multiple Access (FDMA), Time Division Multiple Access (TDMA) and Code Division Multiple Access (CDMA); and telecommunication standards such as the Open System Interconnect (OSI) Model. Telecommunications networks are covered next, with a review of Local Area Networks (LANs) including topologies; contention access methods; and inter-networking devices such as bridges, routers, and gateways. Also covered are Wide Area Networks (WANs), including the Public Switched Telephone Network (PSTN); wireless networks such as cellular, Personal Communication Systems, and wireless data; the Integrated Services Digital Network (ISDN); X.25; Frame Relay; and Asynchronous Transfer Mode (ATM). Finally, the network convergence issue—that is, one network for data, voice, images, and video—is examined.

MSIT 650 Systems Engineering (3)

An interdisciplinary approach to developing complex systems that satisfy a client mission in an operational environment. Information technology is at the heart of most systems. The systems engineering process is examined with special emphasis on computers and software systems. Topics include an overview of system theory and structures, elements of the systems life cycle (including systems design and development), risk and trade-off analyses, modeling and simulation, and the tools needed to analyze and support the systems process. Case studies from the information technology domain are used to illustrate the systems engineering principles.

MSIT 660 Internet Technologies (3)

(Also listed as TLMN 636.) A study of the Internet, addressing both its technological basis and its applications. The first part covers Internet technology, including packet networking, Transmission Control Protocol/Internet Protocol (TCP/IP), and Internet security and authentication (for example, firewalls, encryption, and virtual private networks), Internet 2, and IPV.6. The second part reviews Internet applications and its evolving use for multimedia transmission (such as voice over the Internet), private and leased service IP networks, e-commerce, data warehousing, data mining, and policy issues such as universal service and access.

MSWE 601 Issues in Software Engineering (3)

An introduction to basic concepts and practices within the field that are important to both the practitioner and the theorist as the rate of change in software engineering technology continues to increase. Also examined are current issues in systems engineering, software architectures, product assurance principles, and software project management, all described in terms of established software process improvement models. Various industry life-cycle models are presented, with examples of their use. Case studies may also be included.

MSWE 603 Systems Engineering (3)

Prerequisite: MSWE 601 or permission of faculty member. An examination of the systems engineering process, with special emphasis on software engineering as a discipline within systems engineering. Topics include an overview of system theory and structures, elements of the system life cycle (including systems design and development), risk and trade-off analyses, modeling and simulation, and the tools needed to analyze and support the systems process.

MSWE 617 Software Engineering Project (3)

Prerequisites: Either completion of all core courses and at least two electives or permission of faculty member. A comprehensive examination covering the application of the tools, skills, and techniques the students have acquired in the course of their studies. Producing software while working in teams under the schedule constraints commonly experienced in industry provides experience in applying software-engineering techniques. The instructor emulates the vagueness shown by typical customers in describing requirements. The instructor serves as a guide and mentor, not as a traditional teacher. The students are expected to have acquired the knowledge of what to do and how to do it from the prerequisite classes. It is up to the students to form their own teams (organization) and schedule their work to meet the deadlines imposed by the contract (syllabus).

MSWE 635 Software Systems Development (3)

Prerequisites: MSWE 603 and either TMAN 640 or MSWE 640 or permission of the program director. A thorough overview of the development life cycle as it applies to large software systems. Various approaches to determining if the system implementation is correct during the traditional waterfall model (system analysis, system design, system implementation, and system use and evaluation), spiral model, and rapid prototyping are discussed. Emphasis is on the integration of the principles of project management, engineering, and quality concepts to illustrate how the principles of prevention of defects may be applied across the development life cycle.

MSWE 640 Software Project Management (3)

A study of the current theory and practice of software development project management. Fundamental elements include integration, scope, time, cost, quality, human resources, communications, risk, and procurement management as defined in the Institute of Electrical and Electronics Engineers (IEEE) Standard for project management, which is an adoption of the Project Management Institute Guide to the Project Management Body of Knowledge. The relationship between each knowledge area and the detailed processes required to manage software projects is explored. Various approaches to software project planning, software project estimating, networks and scheduling, tracking and control, and technical and support processes are analyzed. The principles covered in this course are applied by developing a software project management plan for a complex system.

MSWE 645 System and Software Standards and Requirements (3)

Prerequisite: Either MSWE 601, CSMN 601, or permission of faculty member. An examination of major models of software requirements and specifications (sequential and concurrent systems), existing software standards and practices, and formal methods of software development. A comparative survey of various languages and methods serves to emphasize similarities and significant differences. Additional topics covered include writing system and software requirements, formal specification analysis, formal description reasoning, models of "standard" paradigms, and translations of such models into formal notations.

MSWE 646 Software Design and Implementation (3)

Prerequisite: Either MSWE 601, CSMN 601, or permission of faculty member. A guide for the transition from programming-in-the-small to programming-in-the-large. Software development processes and the role of design as applied in those processes are discussed. Major design methods and available computer-aided software engineering (CASE) tools, the proper application of design methods, and techniques for estimating the magnitude of the development effort are reviewed. Strengths and weaknesses of the development methods are covered, along with traceability to requirements and code.

MSWE 647 Software Verification and Validation (3)

Prerequisite: Either MSWE 601, CSMN 601, or permission of faculty member. A study of the evaluation of software for correctness, efficiency, performance, and reliability. Specific skills covered include program proving, code inspection, unit-level testing, and system-level analysis. The difficulty and cost of some types of analysis are examined in addition to the need for automation of tedious tasks. Problem-solving skills are stressed, especially in analysis of code. The textbook world is contrasted with the real world using case studies from the book and personal experiences. Industry attitudes toward reliability and performance are also discussed.

MSWE 648 Software Maintenance (3)

Prerequisite: Either MSWE 601, CSMN 601, or permission of faculty member. A guide for the transition from programming for the short term to programming for the long term. The role of creation and maintenance in the software development process, as well as analysis and implementation of a software design, is reviewed. The need for software maintenance and evolution, software maintenance process and performance issues, planning for extended software life, and effective mechanisms to control software change are additional topics of discussion.

MSWE 697 Independent Research (3)

Research in, or other study of, a systems and software engineering topic based on a proposal submitted by the student. Results are reported in written and oral form. The research is conducted under the guidance of an advisor.

MSWE 699 Advanced Topics in Software Engineering (3)

Prerequisite: MSWE601 and permission of faculty member. A study of advanced topics selected by the faculty from the literature of software engineering to suit the interest and background of students. It may be taken for repeated credit up to a maximum of six credits.

NPMN 600 Nonprofit and Association Organizations and Issues (3)

(Formerly ADMN 656.) A presentation of a framework outlining the roles and functions of the principal types of nonprofit organizations and associations. Major characteristics are introduced that distinguish nonprofit organizations from their counterparts in the private and public sectors. 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)

(Formerly ADMN 657.) A study of current ideas and approaches related to nonprofit law, governance and mission. 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 are made. Integral to the course is a discussion of nonprofit governance and trustee issues. Subsidiary issues such as lobbying and advocacy, nonprofit liability, personnel, and unrelated business income tax are analyzed. Special attention is paid to the relationship of governance and ethics in nonprofit management.

NPMN 620 Nonprofit and Association Financial Management (3)

(Formerly ADMN 654.) A detailed study of theories and practices of nonprofit and association financial management and decision making, including budgeting, reporting requirements, nonprofit accounting, and financial standards. The role of financial management in maintaining the fiscal health and legal status of the nonprofit organization is the primary focus. Emphasis is on budgeting, fund accounting, cash flow analysis, expenditure control, long-range financial planning, audits, and grant and contract management. Special attention is paid to compliance with nonprofit accounting and financial management principles with reference to maintaining public access and ethical standards.

NPMN 630 Nonprofit and Association Governance and Financial Management (6)

A study of the theories and practices of nonprofit and association law, governance, and financial decision making necessary for ethical and mission-based nonprofit management. Distinctions are made between nonprofit, educational, charitable, social action, membership, cultural, scientific, environmental, and trade associations as they relate to incorporation, tax-exempt status, governance, and accounting and financial standards. Current ideas and approaches related to nonprofit law and governance are presented. Financial decision making theories and practices crucial to budgeting, nonprofit accounting, and meeting financial standards are studied in detail. Emphasis is on budgeting, fund accounting, cash flow analysis, expenditure control, long-range financial planning, audits, and grant and contract management. Subsidiary issues such as lobbying and advocacy, nonprofit liability, personnel, and unrelated business income tax are analyzed. Students who receive credit for NPMN 630 cannot receive credit for ADMN 654, ADMN 657, NPMN 610, or NPMN 620.

NPMN 640 Marketing, Development, and Public Relations in Nonprofit Organizations and Associations (3)

(Formerly ADMN 658.) A study of the principles and practices required to develop and promote the products, services, positions, and image of nonprofit organizations and associations. Fundraising and membership recruitment issues provide a central focus. Topics include the design of a marketing strategy and marketing mix, pricing issues, alternative revenue-generating mechanisms, and customer service. Use of the media, advertising and promotion methods, and relationships with business, government, and the community are explored. The integration of sponsors, members, and chapters in the total marketing effort is examined.

NPMN 670 Strategic Management in Nonprofit Organizations and Associations (3)

(Formerly ADMN 659.) A study of the integration and application of strategic management principles, concepts, and practices in nonprofit organizations. The development of mission statements, goal-setting concepts, and strategy formulation and implementation approaches are included. The opportunity to design organizational plans and strategies relevant to the specific needs of organizations is provided.

OMAT 601 The Contemporary School (3)

Prerequisite: Admission to the MAT Program. A survey of the major developments in the history of American education, including an overview of the philosophical, sociological, cultural, political, legal, and economic foundations of education. Topics covered emphasize the structure and organization of schools, roles of classroom teachers, influences on teaching and learning, and critical policies and issues in education.

OMAT 602 Adolescent Growth and Development (3)

Prerequisite: Admission to the MAT Program. An overview of the key concepts and theories related to human growth and development across the life span, with particular emphasis on the development of the adolescent. The social, emotional, cognitive, and physical growth of adolescent learners are covered, and the theories of human development are applied to the secondary school setting.

OMAT 603 Curriculum and Instruction (3)

Prerequisite: Admission to the MAT Program. An overview of the theory and practice in curriculum design and instructional methods in elementary and secondary education. Classical and contemporary teaching theories are explored in depth for their applicability in the contemporary classroom. Emphasis is placed on a broad spectrum of teaching techniques, development of reflective teaching practices, adaptation of learning activities to meet special needs students, principles of effective

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classroom management, and use of appropriate assessment strategies. Opportunities to engage in field experiences appropriate to developing the required knowledge base for organizing the implementing quality instruction are provided. The field experiences, which take the form of guided observation, are timed so that they coincide with critical incidents in a typical school year.

OMAT 604 Subject Area Methods (3)

Prerequisites: Admission to the MAT Program and OMAT 603, OMAT 605, and OMAT 610. An overview of teaching methodology for effective instruction in secondary classrooms. Topics covered emphasize the development of learning objectives, preparation of instructional plans, selection of instructional techniques, and use of resources appropriate for secondary content/curricula. Basic principles of classroom management are explored and theories of learning and teaching are applied to the organization and presentation of secondary lessons.

OMAT 605 The Exceptional Learner (3)

Prerequisite: Admission to the MAT Program and OMAT 601. A survey of the categories of special education and the characteristics of exceptional learners. Topics covered emphasize the diverse needs of special education students and the application of appropriate instructional adaptations. A legal and historical overview of special education legislation and related issues is provided.

OMAT 606 Professional Internship and Seminar (9)

Prerequisites: Admission to the MAT Program, admission to the internship, and OMAT 604, OMAT 607. An opportunity to apply the concepts, techniques, methods, and theories learned in prior coursework and field-based experiences. Interns are assigned to a school-based mentor and required to complete a minimum of 100 days in an approved Maryland secondary classroom appropriate for the selected subject area concentration. A weekly seminar complements the professional internship experience. The weekly seminar establishes a learning community that assures a continuing support system for interns, as well as provides a forum for feedback and discussion of common readings, experiences, questions, and issues. Enrollment in OMAT 606 is available only in fall terms.

OMAT 607 Secondary Reading I (3)

Prerequisite: OMAT 603 or valid teacher certification. A study of the selection and evaluation of materials and resources for the effective teaching of reading. Topics covered emphasize the effective use of text and other media to best meet diverse reader needs. The role of the parent and community in fulfilling the goals of the literacy program is also examined.

OMAT 608 Secondary Reading II (3)

Prerequisite: Admission to the MAT Program and OMAT 607 or valid teacher certification. A study of the implementation of a coherent literacy program that supports content area learning and literacy. Focus is on the use of effective instructional methods and materials in the design of reading programs to meet the diverse needs and backgrounds of students.

OMAT 610 Testing, Measurement, and Evaluation (3)

Prerequisite: Admission to the MAT Program and OMAT 603. An overview of the principles and concepts of educational measurement. Topics covered examine the application of assessment measures and processes in the learning environment.

OMAT 612 Teacher Action Research (3)

Prerequisites: Admission to the MAT Program, admission to the internship, and OMAT 605 and OMAT 608. The culminating seminar that integrates professional knowledge with an introduction to research/inquiry to improve professional practice. Focus is on the identification and selection of a problem, possible interventions, and implications for solving the problem. Students collaboratively conduct teacher action research in a professional development school setting by collecting and analyzing data that are used to inform practice, improve student learning, and encourage reflection. Enrollment in OMAT 612 is available only in spring terms and concurrent with ongoing completion of OMAT 606.

OMAT 620 Processes and Acquisitions of Reading (3)

An overview of the theories, processes, and acquisition of reading and language arts skills in the elementary school. The cognitive, linguistic, social, and physiological factors involved in oral and written language development are emphasized. Concepts central to emergent literacy and the relationship between language and reading acquisition are explored.

OMAT 621 Instruction of Reading (3)

A study of the selection and application of strategies for developing oral reading, comprehension, and literacy skills. A variety of techniques for building word recognition, integrating reading and writing, and enhancing understanding of text are addressed. The development of a balanced literacy program attentive to early identification of reading difficulties and meeting diverse reader needs is also emphasized.

OMAT 622 Assessment for Reading Instruction (3)

A study of the techniques, processes, and instruments for assessment of reading performance. The administration of assessment tools, interpretation of assessment data, and diagnosis of reading deficiencies are emphasized. The appropriate use of national,

state, local, and classroom data for selecting instructional methods, facilitating instructional decisions and monitoring student performance is also explored.

OMAT 623 Materials for Reading (3)

A study of the selection and evaluation of materials and resources for the effective teaching of reading. The effective use of text and other media to best meet diverse reader needs is discussed. The role of the parent and community in fulfilling the goals of the literacy program is also explored.

OMDE 601 Foundations of Distance Education (3)

An overview of the knowledge, skills, and attitudes that are required by a competent practitioner of distance education. Critical concepts and issues identified in the distance education literature are explored and the history and theories of the field are critically examined. The course has been developed by Ulrich Bernath (Germany) and Eugene Rubin (USA) in collaboration with Borje Holmberg (Sweden) and Otto Peters (Germany).

OMDE 602 Distance Education Systems (3)

A study of distance education functions within the organizational structure of educational institutions, businesses, nonprofit organizations and government. Operational, logistic, and regulatory systems within distance education and training organizations are analyzed. A range of theories pertaining to systems in general, systems in education, systems needs in distance education, and systems approaches to organizational development are introduced.

OMDE 603 Technology in Distance Education (3)

A review of the history and the terminology of technology used in distance education (DE), building on the topics and technological issues raised in OMDE 601. The basic technology building blocks of hardware, networks, and software are identified. The characteristics of asynchronous and synchronous technologies and tools used in the teaching and learning, as well as the administration, of DE are analyzed. The relationship between technology and the goals of the educational/training organization are critically examined. The relationship between information technology and DE is explored, with special emphasis placed on online technology. Topics covered include the criteria and guidelines for selecting technologies for DE and the future directions of technology in DE.

OMDE 604 The Management of Distance Education 2: Leadership in Distance Education (3)

An introduction to the organization, management, and administration of distance education systems. Specific issues covered include management theory, organizational behavior, leadership roles, human resource management, employee relations, the impact of information technology, faculty/staff development, inter-institutional collaboration, planning, policy, and

change. Both education and training environments are explored, including the knowledge and skills necessary to function effectively in either type of organizational setting.

OMDE 606 The Management of Distance Education 1: Cost Analysis (3)

An overview of the economics of distance education within the larger context of 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. The module has been developed by Thomas Huelsmann (Germany).

OMDE 607 Instructional Design and Course Development in Distance Education (3)

An opportunity to examine 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 course project, the design of a prototype classroom. Management issues surrounding the course and curriculum development efforts are discussed, and a comprehensive curriculum management plan is developed.

OMDE 608 Student 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. 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 are addressed. In the final part of the course, an opportunity is provided to apply theory to designing a learner support model for a particular context (e.g. public or private educational institution, corporate or military training).

OMDE 611 Distance Education Library Services (3)

An overview of the design and delivery of library services to distance education students. Topics covered include the types of distance technologies used and the ways the library can be integrated into the delivery of courses in a variety of formats. In addition, methods for developing and evaluating library instructional materials are covered, primarily in Web-based formats to teach distance education students library research skills. The course has been developed by Ilene Frank, University of South Florida, Tampa Campus Library.

OMDE 614 Intellectual Property and Copyright in Distance Education (3)

An overview of intellectual property issues, with an emphasis on the United States Copyright Law and the application of federal copyright principles to the distance education environment. The advent of the Internet, along with the introduction of new technologies, presents new challenges to a system intended to balance the rights of both creators and users of copyrighted works. Although the law, not unlike the technology, will continue to develop in this area, this course provides a general framework for addressing difficult issues such as ownership of electronic course materials and use of copyrighted works at a distance. Current events and the implications of the Digital Millennium Copyright Act are also discussed.

OMDE 620 Learning and Training with Multimedia (3)

An examination of the use of digital media in a variety of educational settings to identify properties, strengths, and weaknesses of multimedia in different learning contexts. Basic psychological processes of perception, understanding, and learning are introduced. Multimedia and instructional design for online learning systems, such as Web-based training, are a special focus of the course. Hands-on experiences with several multimedia and online learning and information systems are provided. Additional topics covered include groupware and collaborative learning technologies, intelligent systems, instructional simulations, and virtual reality systems. The module has been developed by Joachim Hasebrook (Germany).

OMDE 621 Training at a Distance (3)

An examination of the role of distance training in business, non-profit, and government organizations. A wide variety of issues, problems, and solutions are explored in the areas of Web-based training, the economics of distance training, distance technology in the business organization, synchronous versus asynchronous interactive tools, collaborative and problem-solving tools, authoring tools, insourcing versus outsourcing, and the role of multimedia in distance training. Specific emphasis is given to the concept of the corporate virtual university and its design and operation.

OMDE 622 The Business of Distance Education (3)

A study of the emergence of distance education/training within a highly competitive environment. Not only does the manager need to know about cost-effectiveness issues, but also is often responsible for such issues as marketing (local, national, and increasingly worldwide), insourcing versus outsourcing, balancing the strong entrepreneurial focus of distance education within more traditional service-based organizations, and whether the distance education unit should be integrated or self-supporting. Emphasis is on the development of business and marketing plans and the use of common business analysis tools. Also

explored is the rapidly expanding role of private and publicly traded education companies that are marketing new distance education products and services to the consumer market.

OMDE 623 Web-Based Learning and Teaching and the Virtual University (3)

An overview of the brief history, definitions, and implementations of the concept of the virtual university in higher education, government, and business. The virtual university is a new concept that has recently evolved as a result of the emergence of the World Wide Web as a means of delivering higher education. The rapidly evolving literature of Web-based learning is explored, with special emphasis placed on Web-based pedagogy and course design. In addition, the impact of Web-based technologies is discussed. The student begins developing Web-based learning environments and uses Web-based communication tools.

OMDE 625 National and International Policy for Distance Education in Developing Countries (3)

An exercise in stocktaking, examining the purposes for which distance education has been used in developing countries and determining how successful it has been. An overview of open and distance learning in the developing world is provided and conceptual models are used to make informed choices among options as a manager, policy maker, practitioner, or advisor. The roles played by international agencies are analyzed, including bilateral and multilateral funding agencies, the UN family, regional bodies, and the specialist agencies. Typologies are developed and used in order to examine the advantages and disadvantages of a range of organizational models for distance education at various educational levels, relating to audience, educational purpose, and choice of technologies.

OMDE 626 Technologies for Distance Education in Developing Countries (3)

A study of the similarities and differences in a wide variety of distance education systems, institutions, and curricula across a variety of countries and cultures. Distance education is a global affair. Most countries have national distance education efforts. Usually these distance education systems reflect the internal educational and cultural structure of the country, but increasingly these systems need to interact with the distance education systems of other countries and cultures. European, Asian, Latin American, and North American models of distance education are explored. The effect of political and cultural climate on national distance education policies is analyzed. Emphasis is placed on the role of international organizations in promoting collaborative and cooperative projects and activities, and a number of examples of cross-national projects are examined in depth.

OMDE 631 Advanced Technology in Distance Education 1—Synchronous Learning Systems (3)

An advanced course, focusing on synchronous (real-time) technologies such as satellite broadcasting, microwave broadcasting, public television broadcasting, audio conferencing, site-based video conferencing, desktop video conferencing, application sharing, chat tools, MOOs, MUDs, and Web-based technologies such as push, pull, real-time streaming audio and video, and large scale real-time Web broadcasting. Some technical details regarding standards-based technologies, telecommunications technologies, and computer technologies are examined to facilitate the technical implementation of these tools.

OMDE 632 Advanced Technology in Distance Education 2—Asynchronous Learning Systems (3)

An advanced course, focusing on asynchronous (non-real-time) technologies such as computer-mediated communication (computer conferencing), e-mail, list servers, archived streaming audio and video, and so forth. Some technical details of telecommunications technologies, video technologies, and computer technologies are covered to facilitate the effective technical implementation of these tools.

OMDE 690 Distance Education Portfolio and Project (3)

A capstone course, covering two significant tasks: 1) creating a personal distance education portfolio that will serve as an ongoing professional resource, as well as a useful job search tool and 2) developing and documenting a case study/project for an organization in the area of distance education and training. These tasks provide an opportunity to display and practice a variety of skills and knowledge in the area of distance education and training.

OMED 600 Foundations of Technology in Teaching and Learning (3)

An introduction to technology integration in the schools that builds upon traditional concepts found in foundation of education courses and that focuses on how technology affects and advances learning. Issues involving the history and evolution of technological innovations in education, ethics, and the use of technology for testing and assessment are addressed. Detailed topic explorations include collaborative, object-based, and museum learning principles; the integration of technology in the assessment of learning styles; and performance-based and standards-based curricula. Strategies for using technologies with special needs populations are also examined.

OMED 610 Digital Information Literacy for K–12 Educators (3)

Prerequisite or corequisite: OMED 600. A study of the use and evaluation of a wide array of electronic information resources, including ERIC, LEXIS/NEXIS, Marco Polo, the

World Wide Web, and numerous subject-specific databases. A portfolio of electronic references is developed for use in curriculum design. Age- and content-appropriate exercises and assignments are created to help build K–12 student information literacy skills. Emphasis is on information resources in the field of education and in specific content areas to assist in future curriculum development and research activities. Criteria to evaluate the usefulness and validity of different types of education resources are developed and critically assessed.

OMED 620 Web-Based Learning and Teaching: Design and Pedagogy (3)

Prerequisites: OMED 600 and OMED 610. An examination of the theory that informs technology-enabled and Web-based education, with special attention to best pedagogical practices. Unique challenges related to original design and/or adaptation of Web courses are explored. Knowledge and skills are acquired to create individual assignments, special classes, units, and entire courses that take full advantage of synchronous, asynchronous, and/or multimedia technology. Special emphasis is placed on creation of age-, content-, and context-appropriate exercises for students in a diverse array of classroom situations. Criteria and specific evaluation tools are developed to assess student learning outcomes with different pedagogical approaches, delivery techniques, core content areas, and technologies. Current and emerging technology-enabled curricular innovations are also examined.

OMED 630 Technology in K–12 Education: Synchronous, Asynchronous, and Multimedia Technologies (3)

Prerequisites: OMED 600 and OMED 610. The technological foundation of the program, enabling K–12 teachers to employ appropriate technologies in classrooms and schools. The capacity of a variety of technologies designed to meet specific content, delivery, and learner goals and objectives are critically assessed. Particular attention is paid to Web site construction. Knowledge and skills are developed in the application of such real time technologies as satellite broadcasting, audio conferencing, videoconferencing, synchronous chats, streaming audio and video, and asynchronous technologies such as e-mail and listservs.

OMED 640 Using Technology for Instructional Improvement (3)

Prerequisites: OMED 600 and OMED 610. An overview of the use of technology to become more effective in the classroom and more efficient planners. Technologies integral to curriculum and instruction can also enhance teachers' day-to-day activities in classroom administration and management. Topics covered include presentation programs, database programs, spreadsheets, electronic gradebooks, desktop publishing, portfolio development, and various types of educational software. Practical applications for the contemporary classroom are emphasized.

COURSE DESCRIPTIONS

OMED 650 Hardware and Software in Instructional Development (3)

Prerequisites: OMED 600 and OMED 610. The application of hardware and software programs in K–12 classroom settings is the focus of this course. A variety of operating systems commonly found in schools are examined. Also investigated are a wide range of instructional software packages related to specific subjects, with a cross-disciplinary emphasis on software for reading instruction and remediation. Issues such as compatibility with curricular goals, appropriateness of use, and student learning outcomes are examined. A project is completed in which a specific software program is integrated into the classroom, experiences of students with the software are assessed, and the effectiveness of the software in achieving teaching goals and objectives is evaluated.

OMED 660 Administration of Technological Initiatives: Planning, Budgeting, and Evaluation (3)

Prerequisites: Completion of a minimum of 15 credits, including OMED 600 and OMED 610. 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. A particular emphasis is placed on knowledge and skills teachers can use to acquire classroom technology, including grant writing and public-private sector partnerships.

OMED 670 Technology Change Management in Schools (3)

Prerequisites: Completion of a minimum of 15 credits, including OMED 600 and OMED 610. An overview of the theories, approaches, and strategies that help teachers assume leadership roles in implementing technology change in K–12 schools. Specific 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.

OMED 680 Integrative Capstone Project (3)

(End-of-program course for the Master of Education program.) Prerequisites: Completion of a minimum of 27 credits. A self-directed project in which teachers collaborate with colleagues within or across grade levels or departments to incorporate innovations into their curricula. Throughout the seminar, a portfolio is built to demonstrate the development, implementation, and

outcomes of the project. This is designed as a capstone experience that provides teachers the opportunity to apply previous knowledge and skills gained from other courses in the program.

OMED 690 Special Topics in Instructional Technology (3)

An in-depth study of current issues and evolving topics in K–12 instructional technology. The focus of this course rotates on a semester basis. Anticipated topics include technological use with special needs populations, technology for performance-based testing and assessment, and technology instruction for reading enrichment. For topics for fall 2005 and spring 2006, see OMED 690 course description on the Master of Education Web site at www.umuc.edu/grad/omed.shtml.

PCMS 626 Purchasing and Materials Management (3)

(Formerly ADMN 626.) An overview of the procurement and contracting cycle, along with other organizational functions. Methods of purchasing and source selection are covered, 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.

PCMS 627 Legal Aspects of Contracting (3)

(Also listed as PMAN 636. Formerly ADMN 627.) A study of the law of commercial purchasing, including the law of agency, contracts, sales, torts, and antitrust. In addition, the Federal Acquisition Regulation and American Bar Association model procurement codes for state and local governments are examined. Topics addressed 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.

PCMS 628 Contract Pricing and Negotiations (3)

(Formerly ADMN 628. Also listed as PMAN 628.) A study of techniques for planning, conducting, and managing negotiated procurement. A primary 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 practice in preparing negotiation positions through analysis of cases containing detailed cost and pricing data. Ethical decision making throughout these processes is addressed.

PCMS 629 Strategic Purchasing and Logistics (3)

(Formerly ADMN 629.) An investigation of issues and methodologies related to strategic purchasing and logistics. The ethics, social responsibility, and accountability considerations in procurement, logistics, and contract management are among the major topics considered in this course. In addition, specific areas of study such as the professional development of staff, just-in-time management, electronic data interchange, vendor assessment and development, pricing and negotiation, and international procurement issues are presented.

PCMS 630 Commercial Transactions in a Technological Environment: Law, Management, and Technology (3)

(Formerly ADMN 660.) Recommended: PCMS 627 or ADMN 627. A presentation of the legal issues and management methodologies related to commercial transactions in a technological environment. The law, ethics, accountability, and contract management considerations in the procurement of technology products and services are among the major topics considered. In addition, specific areas of study such as 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 are presented.

PCMS 631 Integrative Supply Chain Management (3)

(Formerly ADMN 622.) A study of supply chain issues, techniques, methodologies, and strategies designed to enhance organizational procurement efficiency. Integrated supply chain management, as a core competitive strategy that affects the organization's bottom line, is explored. Topics include the integration of information, supplies and materials flows across multiple supply chain channels, and how these flows can be streamlined and optimized for more efficient procurement. Additional topics covered include 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.

PCMS 632 Contemporary Logistics (3)

(Formerly ADMN 623.) A study of logistical issues, techniques, methodologies, and strategies designed to enhance organizational efficiency. Topics examined 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.

PCMS 650 Legal Aspects of Contracting and Commercial Transactions (6)

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. Contract management considerations in the procurement of products and services are among the major topics discussed. 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 (FAR) and ABA Model Procurement Code for state and local government are investigated, and topics relevant to these frameworks, including the authority of purchasing, unauthorized purchases, rights and duties of sellers and buyers under a contract, buyer rights upon receipt on nonconforming goods, ability to terminate a sales contract, formation of government contracts, and formal dispute resolution, are addressed. Students who receive credit for PCMS 650 cannot receive credit for ADMN 627, ADMN 660, PCMS 627, or PCMS 630.

PMAN 628 Contract Pricing and Negotiation (3)

(Also listed as PCMS 628, formerly ADMN 628.) A study of techniques for planning, conducting, and managing negotiated procurement. A primary 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 practice in preparing negotiation positions through analysis of cases containing detailed cost and pricing data. Ethical decision making throughout these processes is addressed.

PMAN 634 Program and Project Management (3)

(Also listed as TMAN 640.) An overview of the theory and practice of managing any project in any organization. The fundamental building blocks of project management are addressed, including project planning, organizing, team building, and effective control mechanisms. A solid understanding and foundation is provided for successfully managing each phase of the project life cycle, work within organizational and cost constraints, set goals linked directly to stakeholder needs, and utilize proven project management tools to complete the project on time and within budget. The essential concepts, processes, and techniques that are used in the management of large scale governmental or commercial programs are applied. The key management aspects and proven techniques that differentiate project management from other types of management are fully addressed.

PMAN 635 Techniques of Scheduling and Resource Allocation (3)

Prerequisite: PMAN 634. A study of the tools and techniques of project planning, scheduling, and allocating resources. Standard networking techniques are used to design work breakdown structures, identify work packages, allocate resources, and develop project schedules. Techniques for estimating, forecasting, budgeting, monitoring, controlling, and reporting project costs are examined. Simulation techniques are applied to estimate budgets, schedule, and allocate resources. Modern project management concepts and tools are applied to “real world” projects through the use of carefully selected case studies. Project management software is used for scheduling and allocating time-critical resources to achieve optimized performance in the project management environment.

PMAN 636 Legal Aspects of Contracting (3)

(Also listed as PCMS 627, formerly ADMN 627.) An overview of the law of commercial purchasing, including the law of agency, contracts, sales, torts, and antitrust. In addition, the Federal Acquisition Regulation and American Bar Association model procurement codes for state and local governments are examined. Topics addressed 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.

PMAN 637 Risk Management: Tools and Techniques (3)

Prerequisite: PMAN 634. An in-depth analysis of risk management methodologies, from both the strategic and tactical aspects. Risk management is the systematic process of identifying, analyzing, evaluating, and controlling project risks. State-of-the-art tools and techniques for identifying, measuring, and monitoring risks in the project management environment are examined. Both qualitative and quantitative risk analyses are conducted and strategies for proactive risk aversion and reactive risk response 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 control and completion of a project.

PMAN 638 Communication, Negotiation, and Conflict Resolution (3)

An overview of the international aspects of project management and the skills needed to deal effectively with the key issues of labor, environment, stakeholders, global project workforce, and relevant country disputes. Managing the human elements of project management is as challenging as mastering the technical aspects. Innovative approaches are employed to successfully negotiate and resolve conflicts among the team members and stakeholders. In today's global corporate environment, project workers are faced with critical global

issues both at home and abroad. Proven techniques to make conflict a constructive rather than a destructive experience are discovered. Emphasis is placed on effective communication, negotiation, and conflict resolution skills to successfully lead both domestic and global projects.

PRPA 601 Public Relations Theory and Practice (3)

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 addressed 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)

Prerequisite: PRPA 601. A study of advanced public relations writing techniques designed to coach students in the preparation of specialized products and materials used with a variety of (internal and external) audiences, with an emphasis on identifying audiences and communication channels and message development. Also discussed are the variety of public relations writing techniques required for print, broadcast, and electronic media, as well as the variety of other public relations products, such as crisis management, annual reports, and Web site content.

PRPA 610 Crisis Management Seminar (3)

An examination of current approaches to defining crises, issue management, and crisis management through a mix of discussion, lecture, and presentation. Traditional and Web-based approaches to the study of issue management and crisis management are explored by applying research, theory, and case examples to these situations with a goal of developing better issue identification, public segmentation, and strategic response sets to crisis situations.

PRPA 670 Public Relations Capstone (3)

Prerequisite: completion of 30 credit hours, including MRKT 600 (or ADMN 686) and all public relations track courses. An opportunity to integrate all prior coursework and create 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 a real-world setting.

PRPA 671 Practicum/Internship (3)

Prerequisite: completion of 30 credit hours, including all public relations track courses. An on-site work experience that provides exposure to the realities of organizational requirements, in-depth exploration of a specific type of public relations, and experience applying theory to solve everyday communications problems.

RTCP 615 Resident Teacher Certificate Program (6)

Corequisite: OMAT 620 (for candidates seeking certification to teach elementary education) or OMAT 607 (for candidates seeking certification to teach in secondary education). The Resident Teacher Certification program consists of the following five modules: Teaching in the Contemporary School; Human Development, Learning, and Diversity; Curriculum, Instruction, and Assessment; Teaching in the Subject Area; and Synthesis and Application.

TLMN 602 Telecommunications Industry: Structure and Environment (3)

A study of major technological, legal, and regulatory developments (national and international) as they have molded the structure of the current telecommunications industry. The progression is traced of 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 620 Local Area Networking Systems (3)

Prerequisites: Statistics and Calculus I, or equivalent. An examination of the design, implementation, and management of computer networking systems. The seven-layer Open Systems Interconnection (OSI) reference model is discussed. Networking methods for local area networking (LAN) such as Ethernet and Token Ring are studied, along with enterprise network technologies such as Fiber Distributed Data Interface (FDDI). Also examined are local area networking devices such as repeaters, bridges, routers, hubs, and gateways. Traffic engineering techniques in networks are analyzed and evaluated. Various distributed computing architectures and emerging trends in the supporting technologies are central to course content. Topical discussions and case studies reinforce and synthesize newfound principles and provide the means for practical application of abstract concepts. Each session includes evaluation methodologies relevant to strategic and economic planning.

TLMN 625 Wide Area Networking Systems (3)

Prerequisites: Statistics and Calculus I, or equivalent. A discussion of transmission and switching for wide area networks (WAN), including circuit switched networks such as the Public Switched Telephone Network (PSTN) and packet networks such as the Internet. Other topics include Common-Channel Interoffice Signaling (CCIS), Signaling System 7 (SS7), frame relay, and asynchronous transfer mode (ATM). Wireless mobile systems are covered, including cellular and personal communication services (PCS). Audio and video compression techniques are examined. Also studied are Private Branch Exchanges (PBX), including computer-telephone integration (CTI). Current trends, including voice over Internet Protocol (IP), are reviewed.

TLMN 630 Satellite Communication Systems (3)

Prerequisites: Statistics and Calculus I, or equivalent. An analysis of issues surrounding the current and future design and use of satellite communications systems. Topics include such satellite system characteristics 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 636 Internet Technologies (3)

(Also listed as MSIT 660.) A study of the Internet, addressing both its technological basis and its applications. The first part studies Internet technology, including packet networking, Transmission Control Protocol/Internet Protocol (TCP/IP), and Internet security and authentication (for example, firewalls, encryption, and virtual private networks), Internet 2, and IPV.6. The second part reviews Internet applications and its evolving use for multimedia transmission (such as voice over the Internet), private and leased service IP networks, e-commerce, data warehousing, data mining, and policy issues such as universal service and access.

TLMN 641 Network Management and Design (3)

A study of those techniques that network managers can utilize to maintain and improve the performance of a telecommunications network. A network management system is defined and explained, including a description of how software package programs can monitor real-time performance of a network to identify problems. 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. Also covered is how the performance data gathered from the monitoring can be archived and used later as an input when decisions are made on changes in the network architecture. Additionally, network design is studied for the development of a new network architecture when only user requirements are known. Students who have already completed TLMN 640 may take TLMN 641 as a technological specialization course.

TLMN 650 Hardware and Software Acquisition (3)

An analysis of the process involved in acquisition of telecommunication systems. Topics include, but are not limited to, consideration of the approaches to determining end-user requirements, definitions of the system, statement of design requirements, development of a request for proposal (RFP), evaluation of possible vendors, evaluation of proposed equipment and services (for example, maintenance and other support), contract negotiations, and eventual system acquisition. Also discussed are project management concepts used to manage the procurement process.

TLMN 655 Systems Integration for Telecommunications Managers (3)

An overview of the methods by which a telecommunication system can be put together to serve the needs of an organization. The purpose is to prescribe a systematic process for structuring, selecting, acquiring, integrating, and managing telecommunication resources for an enterprise. The systems development life cycle is employed as it applies to telecommunication systems. Various approaches to the life-cycle process are set forth, including the associated planning techniques, project management processes, and tools currently available to support these activities. Also discussed is how the project manager should operate under constraints of time, cost, performance, competition, and regulation. A group project, laboratory exercises, and extended case studies are assigned.

TLMN 665 Wireless Security (3)

Prerequisite: TLMN645 or TLMN672. An analysis of the security aspects of wireless communication systems from both the technical and management perspectives. Wireless technologies and systems are analyzed. The most common communication system security threats are identified. These include denial of service, corruption (replacing or inserting information), and exploitation (gaining information). Technologies that facilitate wireless communication system security are identified and explained (with examples). These include authentication, encryption, and access control. The security aspects of several wireless network infrastructures are evaluated and include cellular voice and data; wireless Local Area Networks, including "WiFi hotspots"; satellite; and wireless voice over Internet protocol.

TLMN 672 Network and Internet Security (3)

Prerequisite: CSMN 636, CSMN 655, or any TLMN specialization course. An introduction to security concepts needed for the design, use, and implementation of secure voice and data communications networks, including the Internet. An overview of networking technology and standards is provided, including an introduction to the Internet communications protocols. Specific security subjects addressed include firewalls, packet filtering, virtual private networks (VPNs), wireless network security, and operating system security.

TMAN 600 Foundations of Management and Technology (6)

A course that integrates the foundations of management (TMAN 633) with the principles of technology in organizations (TMAN 611). The foundations of management include the study of various organizational factors that affect efficiency and effectiveness and global competitiveness. These factors include group behavior, organization structure, environmental factors, international competitiveness, organization culture, change management, decision making, team effectiveness, values, conflict, power, and politics. Ethics and the socially

responsible environment within which managers must operate are stressed through readings and practical applications. A gateway to the understanding of technology management is provided. Key concepts and the role of technology managers in all sectors of the workforce are introduced. Focus is on the study of technological innovation from a historical perspective, including its impact on the economy, public policy, global competitiveness, and organizational strategy, effectiveness, and efficiency. Students who receive credit for TMAN 600 cannot receive credit for TMAN 611 or TMAN 633.

TMAN 610 Economics and Financial Analysis (3)

A critical examination of the fundamental concepts of economics and financial analysis, with a special emphasis on technology-based projects. Specific topics examined include cost estimating, time value of money principles, present and future worth techniques, cash flows, rate of return, and benefit-cost analysis. Focus is also on complex situations and decisions technology managers commonly face in selecting the best alternatives. The tools and techniques used to analyze and solve complex economic situations typically confronted by technology managers are investigated. Cases are used to illustrate the application of these tools and techniques to help make better decisions in both public- and private-sector organizations.

TMAN 611 Principles of Technology Management (3)

(Formerly TMAN 601.) An introduction to the key concepts in technology management and the role of technology managers in both private- and public-sector organizations. An understanding of how organizational entities can be structured and managed to respond effectively to dynamic changes caused by technology and international competition is provided. The key cycles in the development of technology are covered from a historical perspective, including their impacts on the economy, industrial sectors, and organizational strategy and survival. Management is examined from both a process and system perspective. The major technical, social, legal, and ethical issues in innovating and implementing technology are presented.

TMAN 612 Financial Management for Technology Managers (3)

Recommended: An accounting background or UCSP 620. An in-depth overview of the financial and managerial accounting technology based organizations. A variety of financial analysis tools from simple balance sheets to activity-based costing are introduced. The principles of financial accounting that underlie the preparation of financial statements are examined. The basis of asset valuation and allocation in technology-based organizations is discussed, including capital and technological assets, intellectual property, and other important intangibles. Topics include cost of capital, cost management, product costing and pricing, capital budgeting, and financial controls for

strategic purposes. Students learn and apply these concepts and techniques to achieve organizational goals in both public- and private-sector organizations.

TMAN 613 Marketing Technology-Based Products and Services (3)

An introduction to the methods and principles of marketing new technology-based products and services with a focus on innovative strategies for bringing them to market. The issues of competitive strategy, pricing, customer service, market differentiation, and new product launches are presented. The strategic role of marketing as an integrated part of the product development process and its role in the overall strategic planning of the firm are discussed. Qualitative and quantitative market research techniques, including sampling and data collection procedures, demand forecasting, and product research and test marketing are presented.

TMAN 614 Strategic Management of Technology and Innovation (3)

A study of the effective management of technical organizations in an increasingly competitive, rapidly changing, global environment. A coherent process for the formulation, implementation, and assessment of business strategy is provided. A historical framework for the birth, growth, maturation, and decline of business innovation is presented. Findings and recommendations on contemporary businesses and industrial sectors are reported. The strategic framework for this course integrates: a) strategy setting, implementation, and assessment process; b) historical analogies/cases of business innovation through maturation lifecycle; and c) application of lessons learned in contemporary business cases in business, government, and nonprofit organizations.

TMAN 621 Systems Analysis and Operations Research (3)

An introduction to the fundamentals of systems analysis and operations research. The purpose is to provide an understanding of the systems view of a product, service, or process to include a generic representation of its elements and dynamics. The skills, tools, and methodologies needed to quantitatively analyze and optimize systems and to make decisions as technology managers are provided. State-of-the-art analytical tools and quantitative methods, including computer-based solutions, are discussed. Topics covered include decision theory, linear programming, transportation problems, network analysis, game theory, reliability theory, cost estimating, and expert systems.

TMAN 622 Systems Development, Acquisition, and Management (3)

An introduction to the concepts, processes, and techniques used in the management of programs (governmental or commercial) to develop, acquire, and implement complex systems. The life cycle phases of managing a complex system, from conception and preliminary design to detail design and development, production, acquisition, implementation, operation, and maintenance are examined. Emphasis is placed on understanding the key skills and approach to managing the total life cycle of a technically based systems program. An overview is provided of the legal issues and constraints of the organizational environment influencing the acquisition and implementation of systems. The focus is on the formulation of a strategy that integrates factors such as system requirements, competition, rights-to-data, make-or-buy decisions, source selection, standardization, and warranties/guarantees. Objectives and key activities are provided for each milestone during the development of a program.

TMAN 623 Systems Analysis and Design (3)

An introduction to the principles and techniques of systems analysis and design methods with particular emphasis on information systems. The conceptual architecture of an information system, information systems framework, and conceptual building blocks are introduced. The systems modeling design and implementation—two major elements of information systems analysis—are discussed in the context of life-cycle phases. The concept and techniques of information systems models, such as data model, process model, and network model are discussed in depth. An appreciation of the multidisciplinary approach needed for systems analysis and management are gained through an understanding of information systems project management techniques, tools, and skills required for successful completion of an information systems analysis and design project.

TMAN 632 Organizational Performance Management (3)

An overview of the most successful strategies and approaches for achieving a high-performing organization. These strategies and approaches are based on the latest research findings as well as those used by “world-class” organizations. Organizations of all types are facing increasing pressures to improve organizational effectiveness. Organizations that succeed are those that anticipate change and develop strategies in advance. This puts a premium on certain performance capabilities such as adaptability, flexibility, responsiveness, decisiveness, speed, quality, value, and customer satisfaction. Topics covered include all of the key elements that contribute to high performance and organizational effectiveness. Illustrations and examples of organizations in both the public and private sectors that have successfully applied these strategies and approaches are provided.

TMAN 633 Managing People in Technology-Based Organizations (3)

An overview of the management of three levels of behavior in organizations: individual employee behavior, group behavior, and organizational behavior. Regardless of an organization's technology, size, or mission, people are the common denominator as managers cope with the challenges in today's information-based and global economy. Topics covered include emerging organizational behavior issues facing dynamic, technology-based organizations such as knowledge management, work design, virtual organizations and teams, contingent workforce management, creativity/innovation, socio-technical systems, the development of learning and boundary-less organizations, emotional intelligence, the global workforce, and the formulation of pay/retention strategies. Contemporary organizational behavior theories are linked to their applications in technology-based organizations through the use of real-life examples, case studies, and current events.

TMAN 636 Knowledge Management (3)

A holistic and coherent overview of knowledge management from multidisciplinary perspectives. The human and technological dimensions of knowledge management are examined. Hands-on techniques and tools for managing knowledge at both public and private sector organizations are examined. The formulation and selection of the most competitive knowledge management strategy and its integration with the organization's overall business strategy is explored in depth. Focus is on the tools used both to successfully implement the knowledge management strategies and to measure their progress. The selection and deployment of the appropriate technological infrastructure to facilitate the knowledge management initiative is investigated. Furthermore, the effective management of knowledge in the fast-moving, technologically sensitive, and knowledge intensive corporate environment of the 21st century is explored.

TMAN 640 Program and Project Management (3)

(Also listed as PMAN 634.) An overview of the theory and practice of managing any project in any organization. The fundamental building blocks of project management are addressed, including project planning, organizing, team building, and effective control mechanisms. A solid understanding and foundation is provided 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 project management tools to complete the project on time and within budget. The essential concepts, processes, and techniques that are used in the management of large scale governmental or commercial programs are applied. The key management aspects and proven techniques that differentiate project management from other types of management are fully addressed.

TMAN 661 Systems Development and Management (3)

An overview of the systems development life cycle as it applies to different technological systems such as information systems, biotech systems, e-commerce systems, and organizational systems. These systems generally have multiple, interdependent subsystems, which interact in complex ways. The methods of system life cycle analysis and planning, systems management, systems development, and strategic decision making will constitute the major content of the course. Mastery of the course material is demonstrated by developing systems development and management strategies in response to a series of real-world case study scenarios.

TMAN 671 Seminar in Technology and Innovation Management (3)

Prerequisites: Completion of 27 semester hours of graduate coursework. The capstone course for the MS in technology management program. An integrative exercise that draws upon the fundamental materials and skills developed in the core courses is provided. Teams of students develop a comprehensive business plan for a new venture (that is, a new product or service). The start-up concept is developed through the stages of initial screening, market assessment, business analysis (preliminary and final plan), product development, testing, production, and market launch. The techniques of market research and planning, competitive analysis, return on investment, financing and budgeting, marketing, staffing and organizational design, quality management, and project planning are emphasized in the development of the new venture.

UCSP 611 Introduction to Graduate Library Research Skills (0)

(Required for all new graduate students and all inactive students who reapply for admission. It must be completed within the first six credits of graduate study.) An overview of online library and information resources material that is critical for 21st-century managers. The significant changes in how information is delivered make information retrieval and research an exciting challenge. An in-depth introduction to the library research process and the tools necessary to be effective in the Graduate School of Management and Technology are provided. Emphasis is on the efficient and effective use of a variety of electronic retrieval systems, including the online catalog of the University System of Maryland and Affiliated Institutions (USMAI), UMUC's subscription databases, and the Web. This faculty-mediated course is taken concurrently with an introductory course in the student's discipline. Discipline-specific research is conducted in order to gain experience in formulating viable research questions, selecting the most appropriate investigative methods and resources for research, locating relevant research materials, evaluating the scholarly value of sources, and effectively citing sources.

UCSP 620 Financial Accounting (0)

(Recommended for students without a background in accounting and finance, before enrolling in MGMT 640 or FIN 610.) A course designed for people with no prior coursework in financial accounting, encompassing basic financial concepts and their use in analyzing financial statements. Financial accounting is an information system built upon a set of fundamental concepts. Its primary purpose is to help both current and potential investors value a company's debt and equity securities, that is, its bonds and common stock. The financial statements of actual companies are analyzed and the process by which accounting principles are developed is explored. Emphasis is on a fundamental appreciation for how financial accounting information can be used to evaluate the economic performance of companies.

UCSP 621 Economics (0)

(Recommended for students without a background in accounting and finance, before enrolling in MGMT 640 or FIN 610.) An overview of both the microeconomic 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 for students without a background in statistics, before enrolling in MGMT 650.) A presentation of basic research techniques and methodologies used in organizational research and evaluation studies. The information from these studies is used in making business decisions. Emphasis is also placed on evaluating and using research-based information developed by other individuals. The focus of the course is on applying basic research techniques to assess the performance of individuals, work groups, and organizations. Areas covered 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. Focus is on basic approaches and beginning skills necessary to evaluate research materials and their use in decision making.

XCIO 693 CIO Processes (6)

A study of models and simulations applicable to the information technology field. Students will identify the appropriate application of models and simulations to various strategic and operational situations. There will be an in-depth examination of model and simulation input and output to identify the optimal use of the various tools. Students will examine the myriad of laws and regulations concerning the CIO environment. The application and implementation of the elements of the various

laws and regulations will be reviewed. An end-of-seminar project will be developed and presented, with a focus on the application of material studied during the seminar.

XMBA 601 The Role of the Manager in Organizations and Society (6)

An introduction to the concepts and theories that are essential building blocks of management thinking. Topics covered are systems thinking, the competitive structure of industry, technology trends, the future of organizations, and global challenges. These themes are incorporated throughout the program and further developed in subsequent seminars. Opportunities are provided for leadership assessments and feedback on presentation style and organizational quality.

XMBA 602 Organizational Leadership, Management of Human Resources, and Business Ethics (6)

An overview of issues that confront managers working with diverse populations in a period of rapid technological change. The focus is on managing human resources through organizational change, including understanding and affecting organizational cultures and establishing and maintaining an ethical climate. Strategies and methods for aligning individual interests and organizational needs in order to reach organizational goals are introduced. How the nature of work and the perceived value and meaning of work affect individual, group, organizational, and societal outcomes is evaluated. Self-assessment instruments, case analyses, exercises, simulations, and discussions are used to analyze and practice communication skills and decisions that motivate and effectively organize individuals and groups.

XMBA 603 Marketing, Entrepreneurship, and New Product Development (6)

A study of business development strategies from the perspective of customer needs and preferences. Market research approaches, product and service design processes and life cycles are introduced. Workshops, team projects, and case studies, are used to develop effective marketing programs that recognize the increasing importance of electronic commerce as a distribution channel.

XMBA 604 Technology and Operations Management (6)

An overview of the latest information technologies and operations management techniques that enable an organization to operate around the world and around the clock. Tools that managers use to measure operational efficiency and effectiveness are introduced, including statistical process control, decision trees, forecasting techniques, expert systems, and organizational benchmarking. Effective project management techniques, important to introducing new products and analyzing and improving an organization's processes, are introduced.

XMBA 605 Financial Systems and Management Accounting (6)

A study of economic decision making and the techniques and tools managers use to analyze the financial performance of their organizations. Performance measurement techniques include economic value added, the balanced scorecard, open-book management, and activity-based costing. The theory of constraints is introduced to analyze the value an organization provides to the customer. Other tools are used to value intellectual property and whole businesses for purposes of joint ventures, mergers, or acquisitions. In assessing the broader economic environment of an organization, participants will analyze the changing global economy, including the evolution of financial markets in response to rapidly expanding worldwide investment opportunities.

XMBA 606 International Business, Trade, and Business Law (6)

A study of how various strategic facets must be managed in the global context of trading and regulatory systems and the growing concerns about national competitive advantage. The impact on corporate decision making of laws, regulatory structures, and public policies at the local, state, national, and international levels are discussed. In addressing national competitive advantage, participants will consider the impact of technology innovation, international trade, and business and antitrust laws on business organizations.

XMBA 607 Strategy and Capstone Project (6)

Participants are teamed with sponsoring organizations to develop a strategic action plan that integrates management techniques and methodologies covered in the previous seminars. Focus on strategic models, strategy formulation and implementation, organizational assessment, and the creation of business plans, leads to insight into strategic thinking and practical application. Working in teams, participants develop business plans for their sponsoring organizations that may include a new market entry strategy, a product development project, or an organizational assessment with appropriate change strategy.

XMIT 601 IT and the Industry and Strategic Management (6)

An overview of the information technology industry. The goal is to impart an understanding of how the many elements of information technology work and what their limitations are. Mathematical and physical concepts helpful in thinking about the capabilities of information technology and its applications are presented. These topics include information theory, digitization, probability, transmission media, integrated circuits, and optical switching. Also described are concepts essential to information security applications, such as various encryption schemes and measures for assuring personnel and physical security. Strategic analysis techniques are applied to business

policy and organizational development. Emphasis is placed on linking technology policy with corporate strategy and the identification of technology options appropriate for the business or organizational strategy being executed. Strategy is covered both at the business unit and corporate (organizational) level. Topics covered include historical perspectives on strategic technology planning, external and internal strategic analysis, technology forecasting, benchmarking, corporate intelligence, knowledge management, and implementation and control strategies.

XMIT 602 Human Resources, Leadership, and Project/Financial Management (6)

An overview of issues, theories, and procedures associated with the effective management of human resources in technology-based organizations. Emphasis is placed on the integration of human resource planning with corporate strategic planning. The purpose is to help each student appreciate the value of effective management of people in a variety of organizational settings, and to provide the methods to do so. Topics include leadership requirements for managing innovative and creative people, structuring teams, management of conflict and change, communication techniques, feedback and the processes involved in project management with a focus on group and team formation and group dynamics. Career decisions within technical organizations, including the requirements for transition to management, dual career paths for scientific/technical personnel, performance incentives, and the manager's role in subordinate appraisal and development, are discussed. Project management concepts and techniques are then discussed. Project planning, organizing, team building, and effective control mechanisms are presented. The key management aspects and proven techniques that differentiate project management from other types of management are fully discussed. Topics include effective project management styles, critical factors for success, organizational support systems, project authority, and ethics in project execution. Cost, schedule and technical planning, and control are stressed. Project management software is used for creating a typical project plan and tracking the project. Finally, students identify processes to analyze and manage financial information in technology-intensive organizations with rapid product/service cycles and high value-added intellectual property. Students are introduced to the preparation of a variety of financial analysis tools from simple balance sheets to activity-based costing. The basis of asset valuation is discussed, including capital and technological assets, intellectual property, and intangibles.

XMIT 603 Advanced Topics in IT and System Security and Risk Management (6)

A study of the most successful strategies and approaches for achieving a high-performing organization. Organizational effectiveness is examined with an emphasis placed on performance capabilities such as adaptability, flexibility, responsiveness,

decisiveness, speed, quality, value, and customer satisfaction. Strategies and approaches of organizational effectiveness based on the latest research findings as well as best practices used by world-class organizations, are examined. The proliferation of corporate databases and the development of telecommunication network technology as gateways or invitations to intrusion are next examined. Ways of investigating the management of the risk and security of data and data systems are presented as a function of design through recovery and protection. Issues of risk and security as they relate to specific industries and government are major topics. Examples are presented of how major technological advances in computer and operating systems have placed data, as tangible corporate assets, at risk. Quantitative sampling techniques for risk assessment and for qualitative decision making under uncertainty are explored.

XMIT 604 Computing and Software Technology (6)

A study of the major hardware and system software components and underlying technologies that are the basis of the modern digital computer. Major developments in the evolution of computers are reviewed. The similarities and differences between mainframes, minicomputers, and microprocessors are investigated. Supercomputer, parallel processor, and distributed system architectures are examined. Various types of storage media and input/output devices are discussed. An overview of system software elements, including operating systems and middleware, is also presented. Advanced topics such as optical computers and bio-molecular computers are also discussed. Technology, engineering practices, and business economics behind the wide variety of modern software-intensive systems are then studied. Foundations of software engineering are examined. Classes of application domains, including real-time systems and transaction-based systems, are analyzed. The practices used in developing small-scale and large-scale software systems are evaluated. Modern issues, including design of the human-computer interface, software product liability, and certification of software engineers are discussed. The seminar concludes by investigating the structure, environment, and possible future of the software industry.

XMIT 605 Data Communications and Internet Technologies (6)

A study of data communication fundamentals. These include digital and analog signals; modulation; circuit and packet switching; multiple access schemes such as Frequency Division Multiple Access (FDMA), Time Division Multiple Access (TDMA), and Code Division Multiple Access (CDMA); and telecommunication standards such as the Open System Interconnect (OSI) Model. Telecommunications networks are discussed with a review of Local Area Networks (LANs) including topologies; contention access methods; and internet-working devices such as bridges, routers, and gateways. Also covered are Wide Area Networks (WANs) including the Public

Switched Telephone Network (PSTN), wireless networks such as cellular, Personal Communication Systems, wireless data, the Integrated Services Digital Network (ISDN), X.25, Frame Relay, and Asynchronous Transfer Mode (ATM). Finally, the network convergence issue is examined—that is, one network for data, voice, images, and video. The focus then moves to the Internet, addressing both its technological basis and its applications. Internet technology, including packet networking, Transmission Control Protocol/Internet Protocol (TCP/IP), Internet security, Internet 2, and IPV.6 are examined. Internet applications and the evolving use of the Internet for multimedia transmission, private and leased service IP networks, e-commerce, data warehousing, data mining, and policy issues such as universal service and access are evaluated.

XMIT 606 Systems Engineering and Capstone (6)

A study of systems engineering as an interdisciplinary approach to developing complex systems that satisfy a client mission in an operational environment. This topic is an examination of the systems engineering process with special emphasis on computers and software systems. Included is an overview of system theory and structures, elements of the systems life cycle, risk and trade-off analyses, modeling and simulation, and the tools needed to analyze and support the systems process. Case studies from the information technology domain are used to illustrate the systems engineering principles. The capstone integrates and applies the major concepts presented in all other coursework. Casework methods are used to identify best practices and appropriate technologies to implement effective information technology decisions aligned with organizational goals. Strong emphasis is placed on viewing information technology issues in a context of both day-to-day and strategic management decision making based on applied research. Issues include competitiveness, information architecture, user needs, process reengineering, value chain management, collaborative computing, globalization, social impact, information policy, and ethics. Emerging trends in information technology are analyzed to understand their potential effect on the workplace and society.

XTMN 601 Technology Overview and Financing Technology-Based Ventures (6)

An introduction to the knowledge, skills, and techniques needed to develop and continuously evaluate appropriate business technology strategies for organizations. An overview of technology management as an academic discipline and a professional practice is provided. Financial management for technology managers is introduced, including the preparation and analysis of a diverse set of financial statements and the valuation of capital and intellectual assets, intellectual property, and intangibles. The issue of pricing, customer service, market differentiation, and new product launches are presented.

XTMN 602 Marketing and Strategic Management (6)

A study of the techniques of qualitative and quantitative market research and test marketing. An introduction is given to strategic planning as an integrated part of a new technology-based product or service. The issues of competitive strategy, technology-based organizations, and new product launches are presented. The process of entrepreneurship and intrapreneurship are discussed from the standpoint of various organizational functions and levels and how these processes can be promoted through effective strategic management is also discussed. Finally, using the principles and technology explored in both this course and XTMN 601, a business plan for a new venture is created, introducing a unique technology-based produce service.

XTMN 603 Program and Operations Management (6)

A two-module course, in which the first module is an introduction to the concepts, processes, and theory of project management. A work breakdown structure, critical path, Gantt charts, and risk management plan for an identified activity are created. The final product of this activity will be the presentation of a project plan at the end of the module. The second module covers the design and management of organizational systems that can effectively adapt to a rapidly changing, highly competitive, technology-driven environment. The systems approach is used to address complex organizational problems in a logical and structured manner. Topics covered include decision theory, linear programming, network analysis, and risk analysis. Also introduced is software for program management, decision-support systems, and expert systems that will prove useful throughout this and following seminars to formulate and solve problems in technology management.

XTMN 604 Electronic Commerce (6)

A study of the rapid growth of e-commerce and how it affects the way lines of business and every functional group are run within an enterprise. An introductory module provides an overview of both the strategic and the technical essentials of what managers need to know in order to manage and lead an e-commerce initiative. Topics covered include definitions of e-commerce, a brief history of e-commerce, e-commerce business models, and the role of technology. The economics of information goods, virtual value chains, and electronic markets are also presented. The impact of e-commerce on organizational strategy and industry structure and an in-depth assessment of a successful e-commerce strategy are presented. Discussion addresses the legal, social, ethical, regulatory and other emerging issues related to e-commerce, electronic communities, and virtual organizations. An outline of the technologies that enable e-commerce is presented, including telecommunications technology trends, portals, search engines, Web site design and management, EDI and XML, electronic payment systems and security, Web access to databases, ERP and CRM software, and

e-commerce servers. The emergence of the Internet as one of the most significant forces to affect marketing since the emergence of mass media is discussed. Topics include the technologies and potential applications of the Internet, with a focus on developing effective global marketing strategies using the Web as a medium. Web site development, attracting and managing Web site traffic, use of e-mail, Internet regulatory issues, and development of Internet marketing strategies are explored in depth.

XTMN 605 Operations Performance and Human Resources (6)

An overview of operational tools, techniques, and methodologies to improve operational effectiveness and gain competitive advantage. Topics covered include operations methods and skills that are used for planning, control, and interim management. The needs of both internal and external customers are addressed using consistently high and continuously improving quality products and services. Methodologies to implement both functional and nonfunctional processes are discussed. Organizational culture, business ethics, and effective management strategies are introduced to foster an understanding of workplace behavior and motivation in technology-based organizations. Software for implementing process improvements and process management is introduced, and competencies in applying this software to practical problems, including team-based technology business ventures, are developed.

XTMN 606 Information Security and Global Management Capstone (6)

An examination of the proliferation of corporate databases and the development of telecommunication network technology as gateways or invitations to intrusion. Ways of investigating the management of the risk and security of data and data systems are presented as a function of design through recovery and protection. Issues of risk and security as they relate to specific industries and government are major topics. Examples are presented of how major technological advances in computer and operating systems have placed data, as tangible corporate assets, at risk. Quantitative sampling techniques for risk assessment and for qualitative decision making under uncertainty are explored. Finally, a framework is developed for analyzing the competitive structure of industries and for formulating strategy within an international context. Competitive theories, analyses, and strategies relevant to the major national and regional business environments are examined. Organizational and functional issues are discussed, including transnational company structures; the role of marketing, finance, trade, and technology transfer; and the public-private interface in the formulation of firm strategy.

GENERAL INFORMATION AND ORIENTATION

Before the beginning of each semester, UMUC holds information sessions online and in the Maryland area for new and prospective students. An orientation to graduate study is also held annually at UMUC's Adelphi headquarters before the fall semester. 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 be admitted and register for courses during the face-to-face open houses. An online orientation to graduate study at UMUC is also available at www.umuc.edu/grad/orientation.

For general information or to be directed to specific offices, students may call 800-888-UMUC. 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

Applicants for graduate certificate and master's degree programs must complete and submit an application for admission along with a nonrefundable application fee and an official transcript indicating completion of a bachelor's degree (or higher degree) from a regionally accredited degree-granting university or college.

Graduate Record Examination (GRE) or Graduate Management Admission Test (GMAT) scores are not required for admission to master's degree and certificate programs. (See MBA program description on p. 15 for information regarding optional submission of GMAT scores.)

The Doctor of Management (DM) program has different criteria and requirements for admission. Individuals interested in the DM program should consult the DM program Web site at www.umuc.edu/grad/dm or the program office by calling 800-888-UMUC, ext. 7056.

Some graduate programs require the submission of additional information before an admission decision can be made (see individual program descriptions for more details).

Due to the importance of strong writing skills for success in a graduate program, particularly in online courses, all applicants are encouraged to assess their writing ability at the time of application. Students who have been out of academia for a period of time or who do not write often in their profession are encouraged to enroll in COMM 600 in their first semester of enrollment. COMM 600 is a 3-credit graduate-level writing course specially designed to reinforce and strengthen the writing skills necessary for success in UMUC's graduate programs. (See individual program descriptions for specifics regarding the inclusion of COMM 600 to each program.)

To complete an application for admission, please visit our Web site at www.umuc.edu/prospect.

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 in the section on University Policies on p. 152. Information on tuition and fees may be found on p. 115.

Readmission

Students who have not enrolled in graduate classes at UMUC for more than a two-year period must complete a new application for admission.

Students who were academically dismissed from the Graduate School of Management and Technology will not be considered for readmission.

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 evaluation organization will send a copy of the evaluation both to the applicant and to the Graduate School of Management and Technology. For a transcript evaluation, students should contact directly the following independent organization, not affiliated with UMUC:

American Association of Collegiate Registrars and Admissions Officers (AACRAO)
Office of International Education Services
One Dupont Circle, N.W., Suite 520
Washington, DC 20036-1135 USA
Phone: 202-293-9161; Fax: 202-872-8857
E-mail: goughd@aacrao.nche.edu or oies@aacrao.nche.edu

Additional information on this evaluation service is available online at www.umuc.edu/students/credeval.

- Proof of English language proficiency.

Applicants who have not received a bachelor's degree from the United States, United Kingdom, Australia, New Zealand, Commonwealth Caribbean, or English-speaking Canada must demonstrate English proficiency by submitting a Test of English as a Foreign Language (TOEFL) score of at least 575 on the written format, 233 on the computerized format, or 90 on the Internet-based exam (TOEFL iBT) and a Test of Written English (TWE) score of 4 or more to be eligible for admission. Applicants must arrange to have official score

reports sent directly from the testing agency to the Graduate School of Management and Technology.

- Documentation of residency status.

Applicants must provide a photocopy (front and back) of either a permanent residency card, work authorization card, or the first page and visa page of a valid passport and Form I-94.

International students seeking Form I-20 or IAP-66 must be granted admission three months before the semester start date to register for classes.

Merely providing these documents does not ensure admission. An interview may also be required. The official transcript evaluation from AACRAO must be submitted and evaluated before admission is considered.

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 semesters) even without being registered in the program. However, after two years without a completed graduate course, students must submit a new application along with another application fee.

Note: Graduate students may take both graduate and undergraduate courses concurrently.

REGISTRATION

Ways to Register

Registration begins each semester as soon as the class schedule becomes available on the Web and continues until the day before classes begin. A late fee is charged for registering after the regular registration period. Students should check the current *Graduate Schedule of Classes* for the deadlines for regular and late registration.

UMUC offers six ways to register for courses: online via MyUMUC, by phone via the Interactive Registration and Information System (IRIS), by mail, by fax, on-site, and by e-mail to gradinfo@umuc.edu.

ONLINE AT MYUMUC

Students may register online at <https://my.umuc.edu>. If a student has questions regarding confirmation of the registration, the student should contact Graduate Advising.

BY TELEPHONE VIA IRIS

Students are eligible to register by phone via the Interactive Registration and Information System (IRIS) if they have already been admitted to UMUC as a graduate student and have received a personal identification number (PIN). (*Note:* Former students who have not registered for courses within the last two years must first be readmitted.) Through IRIS, students may register by entering all pertinent information via their touch-tone telephone. IRIS provides immediate feedback on course availability and the student's registration.

Students may call IRIS at 800-584-9413 daily from 6 a.m. to 9 p.m. Eastern Time. Visit www.umuc.edu/studserv/registration/register_iris.shtml for detailed instructions on using IRIS registration.

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 301-985-7175. 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 Visa or MasterCard.

ON-SITE

Walk-in admission and registration is held in the Student and Faculty Services Center in Adelphi, 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) at any walk-in registration. Locations, dates, and times are listed each semester in the *Graduate Schedule of Classes*.

Wait 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 <https://my.umuc.edu>.

- If a space becomes available, the first student on the wait list will automatically be registered for it, and the charge will appear on their account. An e-mail notification of the enrollment from the wait list will be sent. If a space becomes available but the first student is ineligible to enroll in the class (for reasons such as they have not met the prerequisites, or they are enrolled in a class that conflicts in time), the space will go to the next person on the wait list.
- Students who no longer want a class should remove their name from the wait list to prevent the possibility of an automatic enrollment.

- Students already enrolled in the maximum number of allowable credits (2 courses/6 credits) 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.
- Faculty members and academic advisors are NOT authorized to add students to a full class.

Schedule Adjustment

From the time a student registers through the end of late registration, he or she may make certain adjustments to his or her schedule. The schedule adjustment options available include changing a section, dropping a class, or adding a 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. 118). Graduate students must officially withdraw at least two weeks (14 days) before the final class.

Students may withdraw from a course by four methods:

- Students may access MyUMUC online at <https://my.umuc.edu> and follow the directions for dropping a course. The use of the student and personal identification numbers is considered an official authorization to withdrawal, which is effective immediately.
- Students may call IRIS at 800-584-9413 and follow the directions for dropping a course. The use of the student and personal identification numbers is considered an official “signature” authorizing the withdrawal, which is effective immediately.
- Students may complete a withdrawal form or send an e-mail 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 identification 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 of Management and Technology can only honor withdrawal requests actually received, it is recommended 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. It is recommended that the student contact a financial aid advisor before withdrawing to determine if or how this will affect his or her financial aid.

FINANCIAL INFORMATION

Tuition and Fees

All tuition and applicable fees must be paid in full at registration, unless the student is enrolled in UMUC’s interest-free monthly payment plan. Students registering by phone via the Interactive Registration and Information System (IRIS) are granted a certain number of days for payment to be received. (If payment is not received by the specified deadline, the registration may be canceled or a finance hold may be placed on the student’s account—unless the student is a financial aid recipient.)

Payment may be made by cash, check, money order, or Visa or MasterCard 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. Students interested in the monthly payment plan, administered by Academic Management Services (AMS), should contact AMS at 800-635-0120 or visit www.amsweb.com on the Web.

CURRENT TUITION AND FEES

Tuition rates and fees are published each semester 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 application, late registration, make-up testing, technology, and transcripts. There is also a service charge for dishonored checks.

Refunds

The official date used to determine a refund is either the date the withdrawal form is hand-delivered to the Information Desk at the Student and Faculty Services Center, the date and time of the IRIS request, the date and time the change was made in MyUMUC, or the postmark date on a mailed request. The official date for federal financial aid recipients is the last date of class attendance as determined by federal regulations.

Note: Students in their first enrollment period with 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 new federal pro-rata refund policy. Financial aid advisors can provide further information.

REFUND FOR COURSE CANCELLATIONS

The university refunds 100 percent of tuition and registration fees for courses canceled by the university. The application fee is nonrefundable, even when a course is canceled.

REFUND FOR STUDENT WITHDRAWALS

Tuition is refunded as follows:

100%	Withdrawal prior to the class start date
95%	Withdrawal date falls within the first week of class
50%	Withdrawal date falls within the second week of class
25%	Withdrawal falls within the third week of class
0%	Withdrawal occurs anytime after end of third week

Fees are non refundable, with the exception of technology fees, which are refundable prior to the first day of class.

Note: This policy applies only to students not receiving federal financial aid.

Dishonored Checks

For each check returned unpaid by the payer's bank (whether because of insufficient funds, stopped payment, postdating, or drawing against uncollected items), UMUC assesses a service charge of \$25 (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 of time, 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 students 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, late-registration fee, or books) and the amount to be assumed by the employer
- The student's name and student identification number
- The semester or term covered by the document
- The billing address
- The signature and telephone 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 a semester basis. All UMUC students are eligible to participate in the payment plan, regardless of financial need. More complete information is available online at www.amsweb.com or from Academic Management Services (AMS) at 800-635-0120.

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/I/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

The following grades and marks may be applied under special circumstances and are not computed in the grade-point average.

G	Grade pending
P	Passing
S	Satisfactory
I	Incomplete
AU	Audit
W	Withdrawal

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.

For management projects, the standard grading method is replaced by the satisfactory/incomplete/fail method. For non-credit courses, the standard grading method is replaced by the pass/fail method.

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 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 (explained on p. 155). 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 of Management and Technology. 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 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 in order to receive credit for that course.

ACADEMIC AND ADMINISTRATIVE REQUIREMENTS

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 in order to receive credit for that course.

The Grade of P: Passing

Since the grade of P is only awarded 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 only awarded for select courses such as management projects. 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 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 grade 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 semester. Faculty, however, are not required to grant the request. Students with a grade of I must arrange fulfillment of course responsibilities with their teachers in order to receive credit. The teacher must set a deadline within four months of the last day for the semester in which the course occurred. Grades of I are automatically converted to F after four months.

The Mark of W: Withdrawal

Students who officially withdraw from a course after the end of the schedule adjustment period 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. 115.

COMPUTING THE GPA

The grade-point average is calculated using the quality points assigned to each grade or mark (chart on p. 117). 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

Teachers may revise a grade previously assigned if a student's grade has been miscalculated 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 Society

As the oldest and most selective of the nation's honor societies, 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 semester 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 www.umkphi.org.

Presidential Management Fellows Program

The Graduate School of Management and Technology participates with the Presidential Management Fellows (PMF) Program, a prestigious leadership development program that is a pathway to a career with the Executive Branch of the federal government. The program considers graduating master's and doctoral candidates who demonstrate a strong commitment to a career in public service. Student candidates to the program are nominated by UMUC and those selected participate in a fellowship working with federal agencies in locations throughout the country. The PMF Program operates under the auspices of the

ACADEMIC AND ADMINISTRATIVE REQUIREMENTS

federal Office of Personnel Management. To learn about nomination criteria, contact Laurie Hulcher, Student Relations Coordinator, at 301-985-7200 or lhulcher@umuc.edu.

ACADEMIC STANDARDS

Master's Degree and Certificate Programs

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 semester. 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 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 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 the next semester of enrollment. Students on academic probation should seek guidance and advice from an academic advisor. Any course in which a grade of F is earned must be repeated in the next semester of enrollment. Failure to restore the GPA to 3.0 or higher will result in academic dismissal. A student who successfully restores the GPA to 3.0 or higher will be in good academic standing.

Dismissal

A student on academic probation who fails to raise the GPA to 3.0 or higher by the end of the next semester of enrollment is dismissed. A student who is dismissed is ineligible to enroll in UMUC graduate courses and ineligible for readmission to any UMUC graduate program.

Program Completion Requirements

Students are responsible for applying for graduation (for degrees and/or certificates) by completing and submitting the appropriate diploma application forms and fees by the published deadlines available on the UMUC Web site. 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.

Doctor of Management Program

The Doctor of Management (DM) program has requirements in addition to those listed above for academic standing. In addition to a minimum GPA of 3.2, a DM student who receives a grade of C in a course must repeat that course in the next semester 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 a second grade of C is dismissed from the DM program, regardless of GPA.

Time Limit for Degrees

All requirements established for the completion of a graduate degree program must be fulfilled within seven consecutive years (five years from beginning AMBA 601 or XMBA 601 for the Master of Business Administration). This regulation includes courses transferred from other institutions. Any transfer of credit must be completed within the five- or seven-year time frame applied toward the degree.

Note: Although doctoral students have seven years to complete their program, all coursework must be completed within four years in order to allow at least three years for the research project.

Time Limit for Certificates

Certificate programs that require up to 18 credits must be completed within three years; certificate programs that require more than 18 credits must be completed within five years.

DEGREE REQUIREMENTS

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. Attendance in itself is not a requirement for successfully completing a course.

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

ACADEMIC AND ADMINISTRATIVE REQUIREMENTS

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 who are not officially registered for classes are not permitted to sit in on classes.

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 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 grading submitted work promptly and adequately, and by arranging appropriate testing conditions, including having faculty members monitor examinations given in class. Students at UMUC are expected to conduct themselves in a manner that will contribute to the maintenance of academic integrity. The University System policy is found at www.usmd.edu/Leadership/BoardOfRegents/Bylaws.

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 but is not limited to the following: copying verbatim all or part of another's written work; using phrases, charts, figures, illustrations, or mathematical or scientific solutions without citing the source; paraphrasing ideas, conclusions, or research without citing the source; 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 cited, quoted, paraphrased, or summarized, and papers and research projects should acknowledge these sources in references.

Additional information on UMUC's policy on Academic Dishonesty and Plagiarism may be viewed at www.umuc.edu/policy.

Examinations

The student is responsible for obtaining information about quiz and examination schedules and policies.

Make-up examinations and tests may be given to students who for valid reasons are unable to take exams at the scheduled time. Teachers are not required to offer make-up examinations because of a student's absence unless the student can present evidence that it was caused by unavoidable circumstances or occurred on a religious holiday.* In such cases, an examination may be rescheduled for the mutual convenience of student and teacher and must cover only the material for which the student was originally responsible. Such a rescheduling must not cause a conflict with the student's other classes.

Course Load

Students are advised to limit their course loads to conform with the demands of their employment and the time they have to prepare for class. A normal load for full-time students, or for those employed no more than 20 hours a week, is 9 semester hours of credit per term. To be considered half-time status, students must be enrolled in 6 semester hours in the fall and spring semesters and 3 semester hours in the summer term. Fully employed students are limited to a maximum of 6 semester hours in the fall, spring, and summer semesters.

Full-time students who are not employed during the summer or who work fewer than 20 hours a week (except those in the Master of Business Administration program) may ask to take additional courses by submitting a request in writing to Graduate Advising. Requested exceptions must be made at least one month before the beginning of the semester.

To be eligible for a course overload, a student must

- Be a degree- or certificate-seeking student
- Be employed no more than 20 hours a week
- Have no previous grades of C or F
- Have no current marks of I
- Have never been on academic probation

Grievance/Appeal Procedure

Students having legitimate complaints about Graduate School of Management and Technology 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 the Office of Student Relations, Graduate School of Management and Technology, at 800-888-UMUC, ext. 7200, or graduateschool@umuc.edu. More information is available online at www.umuc.edu/policy/aa13070.shtml and www.umuc.edu/policy/aa13080.shtml.

*The UMUC policy on religious holidays is stated in the chapter on University Policies.

Connectivity and Computer Literacy

To take full advantage of the Graduate School of Management and Technology's educational offerings, students must own or have access to a personal computer and have access to the Internet.

All graduate students must be able to reach their fellow students, faculty, and the university via e-mail. *It is imperative that students update their e-mail address through MyUMUC at <https://my.umuc.edu>.* Students who do not have a personal e-mail account may create one by using the directions in the current *Graduate Schedule of Classes* or on the Web at www.umuc.edu/suppserv/it/hosts/itfaq.html#studentaccount. In some classes, students may be required to participate in asynchronous, computer-based class discussions and study group activities.

All graduate students are expected to have a working knowledge of, and access to, a basic word processing program such as WordPerfect or Microsoft Word; a spreadsheet program such as Lotus, QuattroPro, or Microsoft Excel; and Internet electronic mail services. Knowledge of Microsoft Windows and Internet information services such as the World Wide Web is also highly recommended. Internet information services may be necessary to conduct appropriate research for some courses.

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. The *Schedule* may be obtained by calling 800-888-UMUC and advisors may be reached at 800-888-UMUC, ext. 7939. *Schedules of Classes* and *Catalogs* are also available for download on the UMUC Web site.

Code of Student Conduct

In accordance with the Board of Regents Policy V-1.00 Policy on Student Affairs, approved on January 11, 1990, disciplinary regulations are set forth in writing to give students general notice of prohibited conduct. UMUC 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 ground 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/students/civility.html 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 guilt of the person accused by clear and convincing 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/policy/stud15100.shtml.

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 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. This access may be through use of a UMUC computer lab, university or public library, or other readily available source if the student does not have home access. However, it should be regularly available and the student should have a current e-mail address.

All students currently enrolled at UMUC are eligible for a university computer account on the UNIX system Polaris.

The computer account provides students an e-mail address and access to many text-based services such as Internet newsgroups, mailing lists, and programming languages. This computer account will remain active as long as the student is registered for classes at UMUC.

ON-SITE WEBTYCHO-ENHANCED CLASSES

All Graduate School of Management and Technology on-site classes use the university's online course delivery system WebTycho as an enhancement. WebTycho-enhanced classes provide on-site students with online educational opportunities. Faculty members may elect to use some or all of WebTycho's online features in conjunction with classroom-based activity.

ONLINE CLASSES

The Graduate School of Management and Technology's 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 and exam times. 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 English reading and writing skills.
2. Online students need to be competent in the use of computers and commonly used software programs.

3. Since WebTycho is asynchronous and students are expected to be active participants online, 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

Note: Minimum technical requirements are subject to change. Current information about technical requirements is available at tychousa.umuc.edu/wtdocs/wthelp/html/technicalrequirements.html. Students are responsible for their own phone line and Internet access costs.

BASIC TECHNICAL REQUIREMENTS

Technical requirements for students taking graduate courses include

- A PC running Windows 2000 or Windows XP operating system
- A compatible Web browser (Internet Explorer 6.0 or higher; Netscape 7.2 or higher)
- A connection to the Internet (broadband preferred)
- An e-mail account
- A sound card with speakers or headphones and a microphone
- Sun Java VM (can be downloaded for free)
- Virus protection software (updated regularly)
- Control of the desktop to allow software downloads

Some academic programs have additional technical requirements. Students should consult the section on the degree program they are considering.

MANDATORY COURSE EVALUATIONS

UMUC requires all students to complete a course evaluation. Individual responses are kept confidential. The evaluation notice for online courses will appear on the class screen about 21 days before the end of the semester. Students will have approximately one week to complete the evaluation until access to the Class Menu will be locked. If students do not open the file and either respond to the questions or click on "no response," they will be "locked out" of the Class Menu until they complete the evaluation. After completing the evaluation, access to the classroom will resume.

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 the Career Center and the offices of Enrollment Management, Student Financial Services, Information and Library Services, Information Technology, and Graduate Advising.

Among these, the Office of Student Affairs and the Office of Enrollment Management 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; veterans benefits assistance; and services for disabled students.

In the Maryland area, services are available at the following locations:

Adelphi (UMUC Headquarters)

gradschool@info.umuc.edu

Phone 800-888-UMUC; Fax 301-985-7175

Dorsey Station

410-796-3178

Shady Grove Center

Phone 301-738-6000; Fax 301-738-6040

Waldorf Center for Higher Education

Phone 301-632-2900; Fax 301-632-2940

All regional sites offer all graduate services except for advising, but the Office of Regional Programs will facilitate advising for the student.

GENERAL INFORMATION

UMUC phone representatives are available Monday through Saturday, 6 a.m. to 10 p.m., at 800-888-UMUC to provide answers to general questions and for help navigating UMUC's Web site. Representatives can also make sure that callers are on the UMUC mailing list to receive upcoming class schedules and other important announcements.

ADMISSION ASSISTANCE

Enrollment specialists 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 semester of classes.

Enrollment specialists can also help qualified senior citizens apply for Golden Identification benefits. More information is on p. 124.

Prospective and new students may contact an enrollment specialist by phone at 800-888-UMUC or by e-mail at enroll@umuc.edu. More detailed information on admission is available on p. 113.

AUTOMATED SERVICES

A number of automated services are available to current students online through MyUMUC and by telephone through the Interactive Registration and Information System (IRIS).

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) and view and print reports (such as their class schedule, grade report, statement of account, and unofficial transcript).

Through IRIS, students can register for classes or make changes to their registration. IRIS is available seven days a week, from 6 a.m. to 9 p.m. eastern time, at 800-584-9413.

ADVISING

All students who have registered in a course are assigned an advisor, who will help guide them through all 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.

Students who have not attended UMUC for a year or more should also contact an advisor, once they are readmitted, for assistance in getting back on track.

It is up to the student to seek advising and to keep track of his or her program requirements. Students should retain the catalog of the year they entered their program as it contains all degree requirements for which they will be held accountable.

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, fax, or e-mail. In the local 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

An advisor can help students with the process to determine whether any previous graduate coursework is eligible to be accepted as transfer credit.

Up to 6 semester hours of graduate credit may be considered for transfer to most graduate degree programs at UMUC if earned

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at a regionally accredited institution and if applicable to the student's program of study. Credits may be considered for transfer to the Master of Business Administration program; students should contact their advisor for specific information. The Master of Arts in Teaching program does not accept transfer credit. The Graduate School of Management and Technology will accept up to 3 graduate transfer credits for a certificate program.

All graduate credits offered for transfer credit must meet the following criteria:

1. The credits must have been earned as graduate credit.
2. The credits must not have been used to meet the requirements for any degree the student previously earned or is expected to earn.
3. The credits must have been awarded within the time limit for the degree or certificate.
4. 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.)
5. The department advisor and the program director must have determined that the transfer courses are relevant to the student's program of study.
6. The credits must have been earned at a regionally accredited institution and be equivalent to graduate-level coursework or recommended for graduate-level credit by the American Council on Education (ACE).

SERVICES FOR STUDENTS WITH DISABILITIES

Reasonable accommodations are available for students who have disabilities and are enrolled in any program offered at UMUC. To allow for adequate planning, students who need accommodations should contact the director of Veteran and Disabled Student Affairs at least four to six weeks before the beginning of the semester.

Students must request accommodations each time they register. The first time a student requests accommodation, current (within three years) documentation of a disability must be submitted. 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.

All UMUC students are required to meet university policies and procedures and the academic requirements of all graduate degrees and certificates. Students with disabilities should review the academic and administrative requirements listed under the program descriptions in this *Graduate Catalog*. Students should not apply to

a UMUC certificate or degree program with the expectation that any academic requirement or administrative policy will be waived or substituted.

For more information, students should call the director of Veteran and Disabled Student Affairs at 800-888-UMUC, ext. 7930, or 301-985-7466 (TTY) or send an e-mail to vdsa@umuc.edu.

TRANSCRIPT SERVICES

Students should contact the Office of the Registrar to receive an official UMUC transcript. Written requests should be addressed to Office of the Registrar, University of Maryland University College, 3501 University Boulevard East, Adelphi, MD 20783. Continuing students may request transcripts online at <https://my.umuc.edu>.

GRADUATION SERVICES

Advisors are available to answer any questions about requirements for graduation and the application for diploma or certificate at 800-888-UMUC, ext. 7155, or gradinfo@umuc.edu.

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 semester 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 during late registration on a space-available basis. Benefits do not apply to Global Master of Business Administration, Master of Business Administration, Executive Program, or 700-level courses. To request an application, students should contact Graduate Advising at 800-888-UMUC, ext. 7155. More information on this program is available online at www.umuc.edu/grad/studserv/golden.shtml.

STUDENT ADVISORY COUNCIL

The Student Advisory Council provides an avenue for students to express their concerns about UMUC or their academic career. 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 see certain issues addressed or who have questions should contact their council representative by e-mail at stac@umuc.edu.

More information on shared governance is available in the chapter on University Policies in this catalog and online at www.umuc.edu/gov.

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 within 24 hours on receipt, Monday through Friday. Overnight and two-day delivery is available for an additional fee. Payment by personal check, MasterCard, VISA, American Express, and Discover is accepted. Some employer contracts may be accepted.

University Book Center/Barnes & Noble offers purchase of UMUC required textbooks and software by mail, phone, fax and online, as well as at their College Park store, for courses offered in all formats. Most major credit cards and some employer-provided assistance documents are accepted. Students should call for additional information and store hours.

CAREER SERVICES

The Office of Career Services provides resources and services to assist UMUC students and alumni worldwide with their career and job search needs.

Career Development & Planning

Career Services professionals are available to provide personalized attention to help you clarify your skills, interests, and work-related values; making career/life-related decisions; research career options; plan for further study; and search for employment.

Job Search Services

Opportunities in the job market most often come to those who actively pursue jobs and take control of their employment search. Services designed to assist the employment needs of UMUC students and alumni include job fairs; employability skills workshops, such as resume 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 resumes for prospective employers.

Resource Library

The Office of 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.

Services are available on a walk-in basis, by appointment, or online via e-mail or the ReadyMinds Distance Career Counseling program. For more information please call 301-985-6785 or send an e-mail message to careerservices@umuc.edu.

COMPUTER LABS AND SERVICES

Computer labs are available at many UMUC sites (including Adelphi, 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 floppy or zip disk 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 students taking online courses is available 24 hours a day, seven days a week, at webtychosupport@umuc.edu or 800-807-4862.

INFORMATION AND LIBRARY SERVICES

UMUC's Information and Library Services promotes the use of library technology and resources, teaches library research classes, and provides access to a variety of library resources on the Information and Library Services Web page at www.umuc.edu/library. UMUC reference librarians are located in the Student and Faculty Services Center in Adelphi, Maryland, and at the McKeldin Library on the campus of University of Maryland, College Park. Reference librarians are available to assist students in a variety of formats; service is available 24 hours a day, seven days a week via chat, e-mail, and telephone.

Resources that currently enrolled students can access through the Web page include the online catalog of the University System of Maryland and affiliated institutions (USMAI), tutorials on how to conduct research and cite sources, and more than 140 databases, most providing full-text articles, covering a variety of academic disciplines including business administration, management, computer science and information technology, health, education, social sciences, and arts and humanities.

Information and Library Services also provides students with instruction in finding and using library resources. The Peck Virtual Library Classroom is available within WebTycho as an additional free resource for students who want to improve their research skills.

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Currently enrolled students have borrowing privileges at all USMAI libraries. Students also are encouraged to make use of library resources in their residential areas, including community colleges and other libraries. The USMAI online catalog is available from the Information and Library Services Web page at www.umuc.edu/library or through WebTycho. To borrow USMAI materials, students must have a current bar code on their UMUC student ID card. USMAI library materials can be delivered for pickup at any of the USMAI libraries or UMUC circulation sites. UMUC students who reside outside the state of Maryland and within the continental United States may have books sent to their address of record. In addition, all UMUC students can request, through interlibrary loan, that journal articles or book chapters that are not available in full text online be mailed or sent to them electronically in a portable document format (PDF) file via the Web.

Students who have any questions about these or other library services or resources should call 800-888-UMUC, ext. 7209, or 800-295-2084 after scheduled hours.

FINANCIAL AID

UMUC's Student Financial Services Office administers a variety of financial assistance programs—including grants, loans, federal work-study, and scholarships—to help students meet the costs of their university education. Aid is available for students who can prove financial need, academic merit, or both. Students are urged to research the various sources of aid through their employers and through the UMUC Student Financial Services Office.

UMUC attempts to assist all adult students, particularly those studying part-time, who would otherwise be unable to afford a college education. Regardless of income level, all students are encouraged to apply for assistance; many financing alternatives are available.

Students must apply for aid through UMUC, not through any other office or institution of the University System of Maryland. (This can be a confusing point; students must be clear in all correspondence.) Students must reapply for financial aid at each school attended.

General Eligibility Requirements

An eligible applicant for UMUC need-based assistance must

- Be admitted to UMUC as a regular degree-seeking or eligible certificate-seeking student
- Be a U.S. citizen or classified as an eligible noncitizen
- Be enrolled half-time (6 credits during the fall and spring semesters and 3 credits during the summer) for federal loan programs; institutional aid requires enrollment for at least 3 credits

- Demonstrate satisfactory academic progress toward a degree or certificate according to UMUC policy
- Have a high school or GED diploma
- 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 offers several kinds of aid, including grants, scholarships, work-study, and loans. In most cases, at least half-time enrollment (6 semester hours) is required.

Amounts and eligibility for financial aid vary from year to year. Following is a brief description of amounts likely to be available for the 2006–7 award year. For more detailed information, students may refer to the current *UMUC Guide to Financial Aid*.

GRANTS AND SCHOLARSHIPS

Gift assistance, for which no repayment is required, is offered by the state of Maryland and UMUC. The UMUC Student Financial Services 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 during the 2005–6 year will range from \$100 to \$500 per semester, based on need. Funds are limited, so students are urged to apply early.

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. A separate scholarship application must be completed for consideration. Requirements vary according to the individual scholarship programs. Typical awards range from \$200 to \$1,500 per semester, depending on the specific program. Most scholarships require a minimum GPA for consideration. Students may refer to the UMUC scholarship brochure for further information.

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 \$200 to \$3,000 annually. Senatorial and Delegate Scholarship awards are based on criteria established by the elected official. For more information, students should contact the Office of Student Financial Assistance at 410-260-4565 or 800-974-1024.

Many UMUC students receive **private scholarships** offered by corporations, associations, foundations, and other organizations

that offer awards on a competitive basis to students who meet specific criteria. Students should inquire about scholarship possibilities through organizations with which they have an affiliation. Additional scholarship links and search tools are available through the Web at www.umuc.edu/financialaid.

LOANS

Loan programs are available to students enrolled for at least 6 credits 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 offers need-based, low-interest federal loans. UMUC is the lender. Award amounts typically range between \$500 and \$1,500 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. Students may qualify for a subsidized Federal Direct Loan, which is based on financial need. Students can also acquire an unsubsidized Federal Direct Loan, which is not based on need—that is, personal or family income level is not considered. The federal government pays the interest on need-based Federal Direct Loans while the borrower is in school or a deferment status. Students with an unsubsidized Federal Direct Loan (not based on need) are responsible for the interest during in-school and deferment periods. The interest rate is variable but will not exceed 8.25 percent. Interest rates are set each year in June. Loan amounts vary based on grade level and dependency status. 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 see the *UMUC Guide to Financial Aid*.

Alternative student loan programs are also an option 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 private student loan programs offered by many banks and other lenders. These education loans are not federal loans; students borrow directly from and make payments to the lender. Alternative student loans typically require a credit check and often a cosigner. Students are generally required to be enrolled for at least 6 credits. Students with an alternative loan must pay their tuition charges when they register for classes. Registration will not be held pending payment, since alternative loan checks are usually mailed directly to the borrower. Students who are interested in an alternative student loan should contact the bank of their choice or visit UMUC's Web page on alternative student loans at www.umuc.edu/financialaid for more information.

EMPLOYMENT PROGRAMS FOR STUDENTS

UMUC recognizes the importance of flexible, part-time employment for students who are in transition or who have financial need.

The Federal Work-Study program is a need-based program that provides jobs to assist students in meeting college costs. The amount of the award varies according to financial need and availability of funds. Funds are paid biweekly, based on hours worked. Students must apply and be hired for employment in the university setting or in an approved community-service position. Students who do not secure such employment forfeit their work-study award. More information is available from the Student Financial Services Office.

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 placed on financial aid probation for one semester, during which they may receive financial aid. If a student fails to meet the minimum requirements during probation, the student is denied aid the following semester and financial aid is not disbursed. Students should refer to the chapter on University Policies for details of the appeal process and the complete Satisfactory Academic Progress policy for financial aid students.

Completing the Financial Aid Application Forms

Students must complete the Free Application for Federal Student Aid (FAFSA) and the UMUC Financial Aid Data Form to be considered for any type of financial aid at UMUC. There is no cost to the student to obtain or process these forms. The FAFSA must also be completed for a student to be considered for need-based Maryland state scholarships. The application process can take from six to ten weeks, so students are encouraged to apply early. The *UMUC Guide to Financial Aid* provides more information on the application process.

UMUC Financial Aid Priority Deadlines

One of the most important aspects of the financial aid process is applying for assistance as early as possible. The application deadlines listed on this page are priority deadlines. Students meeting these dates will have the opportunity to be considered for the various grant and scholarship programs with limited funds. Students meeting the priority deadlines will also enjoy the security of having their award authorizations ready at the time of registration. Those who do not meet these deadlines may not receive their financial aid in time for registration.

Students who apply late may still receive aid, depending on their eligibility and the availability of funds. Late applications are

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processed continually throughout the award year, so students are always encouraged to apply. Eligibility for both loans and grants can be authorized even after the semester has begun.

To be given high priority for their financial aid applications and a determination of eligibility early enough for funds to be reserved by registration, students should complete both their Free Application for Federal Student Aid (FAFSA) and the UMUC Financial Aid Data Form by the priority deadlines below.

Program or Period Being Applied for	Priority Deadline for Filing Financial Aid Forms
Maryland State Scholarships	March 1
Full Academic Year or Fall Term Only	June 1
Spring Term Only	November 1
Summer Term	April 1

Federal Return of Funds Policy

Students receiving federal financial aid have the responsibility to follow the institution's withdrawal procedures as outlined on p. 115 of this catalog. The 1998 Reauthorization of the Higher Education Act requires the university to calculate a return of Title IV funds for all federal financial aid students who withdraw from all classes on or before the 60-percent attendance point in the semester. UMUC is required to return to the federal programs any award funds that were "unearned" based on the percentage of attendance. Students who stop attending all classes without officially withdrawing are also subject to a return of funds calculation at the end of the semester based on the last documented date of attendance as determined by the teachers. For further information, students should refer to the *UMUC Guide to Financial Aid*.

For Further Information

Information and applications are available from Student Financial Services. Students can also obtain a current financial aid kit by contacting their advisor. All financial aid information and forms are also available at www.umuc.edu/financialaid on the UMUC Web site. Students with additional questions should either contact Student Financial Services by phone at 800-888-UMUC, ext. 7510, or by e-mail at gradfinaid@umuc.edu.

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:

- The Montgomery GI Bill–Active Duty Educational Assistance Program (Chapter 30)
- Vocational Rehabilitation (Chapter 31)
- Post-Vietnam Era Educational Assistance Program (Chapter 32)
- 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)

Detailed information on these programs is available online at www.umuc.edu/vabenefits and www.gibill.va.gov.

Application Procedures

Students who are eligible for educational benefits from the U.S. Department of Veterans Affairs should review the online information on application procedures at www.umuc.edu/studserv/vainfo.html. 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 Veterans Certification form each semester 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 semester hours of credit for which the student is registered, the length of the semester, 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.umuc.edu/studserv/vainfo.html.

Benefits are paid directly to students on a monthly basis. The money may be used to help with tuition, books, or other costs of college education. Eligibility for benefits does not defer payment of tuition.

The U.S. Department of Veterans Affairs offers an accelerated payment program to students eligible for 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 semester must be more than double the MGIB benefits that a student would receive otherwise for the semester. More information on the accelerated payment program is available on the U.S. Department of Veterans Affairs Web site 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 semester 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:

- Each student is expected to make satisfactory progress toward a degree or certificate; everyone must comply with the academic standards of UMUC.
- Each student 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 nonpunitive grade 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, 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.

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-time may qualify. Payments are allowed when students demonstrate deficiency in courses that are required for their degree programs.

Work-Study Allowance

Students who are registered at least three-quarters time (9 semester hours of credit) and who need money to attend school may participate in work-study. Recipients of benefits under the provisions of Chapters 30, 31, 32, 35, and 106 may be eligible. Students may work up to 400 hours during a semester and receive either the federal minimum wage or the state minimum wage, whichever is greater.

For Further Information

Information and applications are available from the student's advisor or at www.umuc.edu/studserv/vainfo.html on the UMUC Web site.

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The Graduate Council serves in an advisory capacity to the dean of the Graduate School of Management and Technology. The council is responsible for advisement on academic affairs including curriculum development, program initiatives, policies, and standards. The council meets monthly or more frequently, on call of the dean, and is comprised of the following members:

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William J. Hurley, *DuPont (Ret.)*

Benjamin F. Matthews, *U.S. Department of Agriculture-Agricultural Research Service-Plant Sciences Institute*

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Theodore Prociw, *President and Chief Executive Officer, Versar, Inc.*

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MS, American University, 1990
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BS, Rutgers University, 1981
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MEA, George Washington University, 1983
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MA, College of Europe, Belgium, 1993
PhD, Sussex European Institute, 2000

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PhD, Northern Illinois University, 1988

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MS, Ohio University, 1977
MS, Pennsylvania State University, 1978
MS, Boston University, 1984

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PhD, George Washington University, 2004

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MS, Pennsylvania State University, 1969
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MS, George Washington University, 1973

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MPA, Harvard University, 1993

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MLIR, Michigan State University, 1981
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PhD, University of Texas, 2003

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PhD, Harvard University, 1978
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JD, Emory University, 1976
LLM, Georgetown University, 1980

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MBA, University of Kentucky, 1981
DBA, University of Kentucky, 1988

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JD, Georgetown University Law Center, 1978
MS, National Defense University, 2000

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DSc, Robert Morris University, 2002

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PhD, The Union Institute and University, 2002

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DSc, George Washington University, 1996

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MS, Texas A&M University, 1969
PhD, Texas A&M University, 1972

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MBA, Wharton School of Business, University of Pennsylvania, 1998

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PhD, University of California, Los Angeles, 1997

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MBA, Temple University, 1992
PhD, Temple University, 1997

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MBA, Minnesota State University, 1990
DBA, Cleveland State University, 1994

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BS, University of Calcutta (India), 1961
MS, University of Florida, 1963
PhD, University of Florida, 1967
BA, University of Evansville, 1974

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GG, Gemological Institute of America, 1998

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JD, George Mason University, 1985

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MA, University of New Mexico, 1989
PhD, University of Technology Sydney (Australia), 2000

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MS, Southern Illinois University, 1966
MS, University of Oregon, 1968
PhD, University of Oregon, 1973
MBA, University of Puget Sound, 1978
MSIS, Claremont Graduate School, 1987

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DEd, Pennsylvania State University, 2003

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MS, Columbia University, 1989
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JD, Western State University, 1979

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PhD, Pennsylvania State University, 1992

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MBA, University of Dayton, 1976

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MS, Johns Hopkins University, 1984

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MS, Coppin State College, 1993
EdD, Morgan State University, 1998

Deacon, Ronald W.

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PhD, University of Massachusetts, 1970

Debakey, George T.

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MBA, Southern Methodist University, 1974

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MLS, University at Buffalo, 1999

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MS, Institute of Physical Chemistry, Academy of Sciences of the Union of Soviet Socialist Republics, 1988
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MLS, University of Pittsburgh, 1993
MEd, University of Pittsburgh, 2000

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MS, Rensselaer Polytechnic Institute, 1994
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PhD, Ohio State University, 1982
MBA, Northwestern University, 2001

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MLS, San Jose State University, 2000
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MIM, University of Maryland University College, 1995

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JD, Georgetown University, 2002

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PhD, University of California, Irvine, 1997

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MA, Washington College, 1972
PhD, University of Maryland, College Park, 1982

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BS, Cairo University (Egypt), 1966
PhD, Hungarian Academy of Sciences (Hungary), 1979

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PhD, George Washington University, 1990

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MA, Golden Gate University, 1992
MA, Stanford University, 1996
PhD, Stanford University, 1997

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Adjunct Associate Professor
BS, Federal U of Rio de Janeiro, 1991
MS, University of Politecnica, 1993

Evanchik, Michael A.

Department Chair, Business and Executive Programs, and Collegiate Professor
BS, Rensselaer Polytechnic Institute, 1971
MS, Rensselaer Polytechnic Institute, 1972
MS, University of Southern California, 1974
PhD, University of Washington, 1989

Fawcett, Caroline

Adjunct Associate Professor
BA, University of New Mexico, 1975
MA, American University, 1980
PhD, Johns Hopkins University, 1991

Fawson, Trude J.

Adjunct Assistant Professor
BA, Queens College, City University of New York
MA, University of Chicago
PhD, University of Chicago, 1972

Fazio, Rosario "Russ"

Adjunct Associate Professor
BS, City College of New York
MS, Hunter College, City University of New York
PhD, Syracuse University, 1988

Fekete, Paul J.

Adjunct Assistant Professor
BA, Bates College, 1978
MA, Johns Hopkins University, 1982

Field, Ralph, T.

Program Director, Nonprofit Management, and Collegiate Professor
BA, Colby College, 1974
MA, University of Maine, 1976
PhD, Cornell University, 1988

Finkelstein, Robert

Collegiate Professor
BA, Temple University, 1964
MS, University of Massachusetts, 1966
MS, George Washington University, 1974
DBA, George Washington University, 1995

Fitzpatrick, Edmund W.

Adjunct Professor
BA, Hamline University, 1957
MA, University of Minnesota, 1958
PhD, Catholic University of America, 1970

Fitzsimmons, Charles F.

Collegiate Professor
MLA, Johns Hopkins University, 1965
EdD, George Washington University, 1975

Fleming, Emmett L.

Program Director, Procurement and Contract Management, and Collegiate Professor
BS, Virginia State University, 1964
MS, Virginia State University, 1965
JD, University of Maryland, Baltimore, 1976
PhD, Catholic University of America, 1977

Fletcher, Patricia D.

Adjunct Associate Professor
BS, State University of New York, 1975
MLS, Syracuse University, 1985
PhD, Syracuse University, 1990

Flynn, Patrice

Adjunct Associate Professor
BA, Catholic University of America, 1979
MSW, Catholic University of America, 1980
MA, University of Chicago, 1986
PhD, University of Texas at Austin, 1991

Flyzik, James J.

Adjunct Professor
BS, University of Maryland, College Park, 1975
MBA, University of Maryland, College Park, 1982

Fonseca, Ana Flavia

Adjunct Associate Professor
BA, Universidade Federal Da Paraiba (Brazil), 1971
MS, Universidade Federal do Rio de Janeiro (Brazil), 1979
PhD, University of Maryland, College Park, 2003

Forbes, Judith L.

Adjunct Professor
BA, California State University, Fullerton, 1974
MS, California State University, Fullerton, 1979
MBA, University of Southern California, Los Angeles, 1984
PhD, Claremont Graduate University, 1993

Forster, Anne

Adjunct Associate Professor
BA, University of New South Wales (Australia), 1973
Graduate Diploma of Education, University of Newcastle (Australia), 1973
MEd, University of Sydney (Australia), 1983

Foudy, Geraldine

Adjunct Assistant Professor
BA, State University of New York, Binghamton, 1987
MA, New York University, 1993
MS, Long Island University, 1997

Francois, Olga

Adjunct Associate Professor
BA, Smith College, 1989
MLIS, University of Pittsburgh, 1996

Frank, Ilene

Adjunct Assistant Professor
BSD, University of Michigan, 1967
MLS, University of Michigan, 1974
MFA, University of South Florida, 1986

Frank, Michael S.

Department Chair, Information and Technology Systems Department, and Collegiate Professor
BA, University of Maryland, College Park, 1968
MA, University of Maryland, College Park, 1973
PhD, University of Maryland, College Park, 1981

Frenkel, William G.

Adjunct Assistant Professor

BA, Baruch College, City University of New York, 1985

JD, New York Law School, 1988

Friedman, Yali

Adjunct Assistant Professor

BS, University of Western Ontario (Canada), 1997

PhD, University of Buffalo, 2004

Frohnhofer, Francis W.

Adjunct Associate Professor

BA, Catholic University of America, 1963

MA, University of Pennsylvania, 1965

MBA, University of Pennsylvania, 1978

Fuller, Mila M.

Adjunct Assistant Professor

BS, University of Illinois, Urbana-Champaign

MA, College of Notre Dame of Maryland, 2000

Fulton, James A.

Adjunct Associate Professor

BA, Kansas State College of Pittsburg, 1965

AM, University of Illinois, 1968

PhD, Brown University, 1970

Gabriel, Kenneth

Adjunct Associate Professor

BS, University of Illinois, 1977

MS, University of Illinois, 1979

MS, University of Illinois, 1981

PhD, University of Illinois, 1984

Ganguly, Pradeep

Adjunct Associate Professor

BA, Delhi University (India), 1966

MA, Delhi School of Economics (India), 1968

PhD, Clemson University, 1980

Gantz, Stephen

Adjunct Assistant Professor

BA, Harvard University, 1990

MPP, Harvard University, 1998

Gao, Shaojian James

Adjunct Assistant Professor

BS, Shandong University (China), 1984

PhD, University of Kentucky, 1994

Garuba, Moses

Adjunct Associate Professor

MS, University of London, 1993

MS Howard University, 2000

PhD, University of London, 2004

Gay, Billy F.

Adjunct Professor

BS, Morehouse College, 1962

MS, American University, 1974

PhD, University of California, Santa Barbara, 1980

Geiger, Marshall A.

Adjunct Professor

BS, Bloomsburg University of Pennsylvania, 1982

MS, Pennsylvania State University, 1985

PhD, Pennsylvania State University, 1988

Gelatt, James P.

Program Director, Interdisciplinary Studies in Management, and Collegiate Professor

BA, St. Lawrence University, 1966

MA, Colgate University, 1969

PhD, University of Southern California, 1979

Georgiou, George

Adjunct Professor

BA, Drew University, 1973

MPH, George Washington University, 1978

PhD, George Washington University, 1979

Gilbert, Daniel E.

Adjunct Associate Professor

PhD, University of Maryland, College Park, 1972

MBA, Syracuse University, 1986

Glickstein, Ira S.

Adjunct Associate Professor

BEE, City College of New York, 1961

MS, State University of New York at Binghamton, 1990

PhD, State University of New York at Binghamton, 1996

Glickstein, Violet

Adjunct Assistant Professor

BS, Brooklyn College, 1963

MS, State University of New York at Binghamton, 1983

Goff, Donald L.

Collegiate Professor

BAT, Western Illinois University, 1969

AM, University of Illinois, 1970

PhD, Northwestern University, 1991

Goldstein, Jerry M.

Adjunct Associate Professor

BA, University of Toledo, 1969

MAT, State University of New York College at Brockport, 1971

MA, University of Toledo, 1972

PhD, Pennsylvania State University, 1975

Gong, Wen

Adjunct Assistant Professor

BE, Beijing University of Posts and

Telecommunications (China), 1988

MBA, University of International Business and Economics (China), 1994

Goodale, Beverley J.

Adjunct Assistant Professor

BS, University of Maryland University College, 1986

MS, University of Maryland University College, 1996

Goodwin, Robert C., Jr.

Program Director, MIM

Collegiate Associate Professor

BA, Fordham University, 1963

JD, Georgetown University, 1969

Goulding, Thomas L.

Adjunct Professor

BS, Washburn University, 1967

MS, University of Florida, 1969

PhD, University of Florida, 1971

Goyette, Heather N.

Adjunct Assistant Professor

BA, Ramapo College, 1996

MLS, Rutgers University, 2000

Graber, Eric S.

Adjunct Professor

BA, California State College, 1965

PhD, Iowa State University, 1978

Grabowski, Beatrice

Adjunct Associate Professor

PhD, University of Maryland, College Park, 2000

Grachev, Mikhail

Adjunct Professor

BS, Moscow State University, 1976

MEcon, Russian Academy of Science, 1982

PhD, Russian Academy of Science, 1998

Gray, George L.

Adjunct Assistant Professor

MS, Rensselaer Polytechnic Institute, 1967

MA, University of Delaware, 1972

PhD, University of Delaware, 1978

Gray, Joshua P.

Adjunct Assistant Professor

PhD, Pennsylvania State University, 1998

Gray, Sheila

Adjunct Assistant Professor

BA, University of Pittsburgh, 1973

MEd, Loyola College (Maryland), 1978

PhD, University of Maryland, College Park, 1992

Gray, Terrie

Adjunct Assistant Professor

BA, University of California, Davis, 1973

MA, California State University, Sacramento, 1993

EdD, Pepperdine University, 1998

Green, Timothy D.

Adjunct Associate Professor

BA, Andrews University

MS, Indiana University, Bloomington, 1998

PhD, Indiana University, Bloomington, 2000

Greene, James

Adjunct Associate Professor

BS, University of Maryland University College, 1989

MS, American University, 1992

JD, University of Maryland, Baltimore, 1998

Greene, Robert C.

Adjunct Professor

BS, Pennsylvania State University, 1967

MBA, University of Detroit, 1970

PhD, Florida State University, 1985

Greenia, Earl G.

Adjunct Associate Professor
BA, University of Vermont, 1989
MHA, University of Southern California, 1994
PhD, University of Southern California, 2004

Griessbach, Lothar

Adjunct Assistant Professor
MA, Fletcher School of Law and Diplomacy, Tufts University, 1972
DrJur, Free University Berlin (Germany), 1974

Grodsky, Milton

Adjunct Professor
BS, University of Wisconsin, 1953
MA, University of South Dakota, 1954
PhD, Emory University, 1963

Grojean, Michael W.

Adjunct Assistant Professor
BS, Park College, 1990
MA, University of Maryland, College Park, 1999
PhD, University of Maryland, College Park, 2002

Grunin, Susan Krup

Adjunct Associate Professor
BA, Anderson University, 1973
MA, University of Illinois, Chicago, 1975
MA, University of Illinois, Chicago, 1980
PhD, University of Illinois, Chicago, 1990

Gudsnuk, Joseph III

Adjunct Associate Professor
BA, Southern Connecticut State College, 1966
BA, University of Connecticut, 1968
MBA, New York Institute of Technology, 1986
MAS, Johns Hopkins University, 1990

Gulbro, Robert D.

Adjunct Professor
BS, University of Alabama
MBA, University of Alabama
DBA, Mississippi State University, 1991

Gupta, Ashis

Adjunct Professor
PhD, Boston University, 1976

Haddad, Mahmoud M.

Adjunct Professor
AS, Montgomery County Community College, PA, 1974
BS, Minnesota State University, 1975
MBA, Minnesota State University, 1977
PhD, University of Alabama, 1984

Hallion, Marie E.

Collegiate Professor
BA, University of Maryland, College Park, 1963
MA, University of Maryland, College Park, 1964
PhD, University of Maryland, College Park, 1968

Hannah, Christina

Program Director, Master of Business Administration, and Collegiate Professor
BA, Simon Fraser University (Canada), 1970
BEEd, Queen's University (Canada), 1973
MPA, Carleton University (Canada), 1978
PhD, Carleton University (Canada), 1989

Hanouille, Leon J.

Adjunct Associate Professor
BS, Merrimac College, 1969
MS, Syracuse University, 1971
PhD, Syracuse University, 1983

Hanson, Greg J.

Adjunct Professor
BS, U.S. Air Force Academy, 1977
MS, Air Force Institute of Technology, 1981
PhD, University of Central Florida, 1987

Happ, Barbara

Adjunct Associate Professor
BSN, George Mason University, 1982
MS, Georgetown University, 1984
PhD, George Mason University, 1993

Harding, George

Adjunct Associate Professor
BS, New England College, 1963
MBA, University of Delaware, 1968
EdD, Wilmington College, 1996

Hardy, Stuart B.

Collegiate Professor
BA, Bates College, 1968
MA, Georgetown University, 1973
PhD, Georgetown University, 1974

Harlow, Harold D.

Adjunct Associate Professor
PhD, University of Texas at Austin, 1971

Hartigan, Rosemary

Program Director, Master of Business Administration, and Collegiate Professor
BA, State University of New York at Stony Brook
MA, Antioch University McGregor
JD, University of Wisconsin, 1978

Haskins, John W.

Program Director, Executive MBA Programs, and Collegiate Associate Professor
BA, Dartmouth College, 1965
JD, Columbia University, 1969
MBA, MA, Columbia University, 1970
MSW, Florida International University, 1999
MSHR, American University, 2001
MPP, George Mason University, 2004

Hause, Spedden A.

Collegiate Associate Professor
BA, Hood University, 1984
MS, Johns Hopkins University, 1986
PhD, University of Maryland, College Park, 1993

Hazari, Sunil I.

Adjunct Associate Professor
BS, Maharaja Sayajirao University, 1983
MS, Eastern Kentucky University, 1986
EdD, West Virginia University, 1990

Head, Stephany

Adjunct Assistant Professor
BA, National-Louis University
MBA, College of William and Mary
PhD, University of Maryland, College Park, 1999

Helfers, Eric C.

Adjunct Associate Professor
BS, College of Charleston, 1966
MS, University of Southern California, 1973

Henriksen, Kermit

Adjunct Professor
BA, Utica College of Syracuse University, 1964
MS, University of Wyoming, 1966
PhD, University of New Mexico, 1971

Herd, Ann M.

Adjunct Associate Professor
PhD, University of Tennessee, Knoxville, 1987

Hillery, Joseph M.

Adjunct Professor
BS, Loyola University, 1965
MA, University of Detroit, 1968
PhD, University of Akron, 1973
BS, University of Maryland University College, 1979

Hilliard, Philip E.

Adjunct Assistant Professor
BS, Georgia Institute of Technology, 1986
MBA, Georgia State University, 2000
MS, Florida State University, 2003

Hinkle, Norman W.

Adjunct Professor
BBA, Marshall University, 1982
MBA, Marshall University, 1985
DBA, Nova Southeastern University, 2004

Hoferek, Mary J.

Program Director, Database Systems Technologies, and Collegiate Professor
BA, Trenton State College, 1965
MA, University of Michigan, 1969
PhD, University of Wisconsin, 1978
MS, American University, 2000

Holt, Harry W. Jr.

Adjunct Assistant Professor
BS, Brown University, 1984
MBA, Dartmouth College, 1991

Hoover, L. John

Adjunct Assistant Professor
BS, Pennsylvania State University, 1964
PhD, Pennsylvania State University, 1968

Howard, Edward G.

Adjunct Professor

BS, Stanford University, 1960
MBA, Northwestern University, 1962
MS, Georgetown University, 1969
PhD, Georgetown University, 1972

Howard, James A.

Associate Chair, Management, Accounting, and Finance Department; Program Director, Financial Management; and Collegiate Professor
BA, University of Nebraska, 1968
MBA, Syracuse University, 1976
PhD, George Washington University, 1991

Hruneni, George A.

Adjunct Assistant Professor

BA, Santa Clara University, 1966
MA, Santa Clara University, 1967
PhD, University of California, 1972

Hurley, James M.

Adjunct Professor

BA, Georgetown University, 1975
MA, University of Maryland, College Park, 1976
DPA, George Washington University, 1986

Hurley, Tracy A.

Adjunct Associate Professor

BBA, University of Houston, 1982
MBA, University of Houston, 1984
PhD, University of Houston, 1991

Hurt, Robert L.

Adjunct Professor

BS, Southern Missouri State University, 1981
MS, California State Polytechnic University, 1985
PhD, Claremont Graduate University, 1991

Ibe, James G.

Adjunct Associate Professor

BS, Northern Michigan University, 1985
PhD, University of Texas, 1985
MA, University of Texas, 1986
MBA, Amber University, 1989

Ijaz, Mohammad K.

Adjunct Associate Professor

DVM, University of Agriculture, Pakistan, 1976
MS, University of Agriculture, Pakistan, 1979
PhD, University of Ottawa, 1985

Ikoku, Alvan E.

Adjunct Associate Professor

BBA, University of Oklahoma, Norman, 1981
MBA, University of Oklahoma, Norman, 1982
MA, University of Southern California, 1986
PhD, University of Southern California, 1995

Irwin, Barbara A.

Adjunct Assistant Professor

BA, Salem-Teikyo University, 1963
MEd, Bowie State University, 1977

Islam, Mazhar M.

Adjunct Professor

BA, University of Dhaka (Bangladesh), 1974
MA, University of Dhaka (Bangladesh), 1976
MA, Vanderbilt University, 1985
PhD, Vanderbilt University, 1987

Ismond, Deborah R.

Adjunct Associate Professor

BA, Calvin College, 1977
MA, George Washington University, 1980
PhD, Union Institute and University, 2003

Jacobs, Michael A.

Adjunct Assistant Professor

BS, Florida Agriculture & Mechanical University, 1979
JD, Howard University School of Law, 1983

Jacobs, Norma M.

Adjunct Professor

BA, University of Texas
MEd, University of Houston, 1984
PhD, Texas A&M University, 1989

Jacques, Frederick

Adjunct Associate Professor

BA, Concordia University (Canada), 1981
MA, City University (Washington), 1994
PhD, University of Calgary (Canada), 2002

Jaffe, Roger J.

Adjunct Assistant Professor

MS, University of Maryland University College, 2000

Jain, Bharat A.

Adjunct Associate Professor

BS, Delhi College of Engineering (India), 1983
MBA, Pennsylvania State University, 1989
PhD, Pennsylvania State University, 1992

Jain, Kamlesh

Adjunct Associate Professor

BStat, Indian Statistical Institute (India), 1966
MStat, Indian Statistical Institute (India), 1967
MS, University of California, Los Angeles, 1973
PhD, University of Maryland, College Park, 1993

Jamsa, Kris

Adjunct Associate Professor

BS, U.S. Air Force Academy, 1983
MS, University of Nevada, Las Vegas, 1997
PhD, Arizona State University, 1993
MBA, San Diego State University, 1997

Japzon, Andrea C.

Adjunct Assistant Professor

BA, University of Florida, 1992
MLS, Florida State University, 1994
MA, Hunter College, 2002

Jerome, Robert W.

Assistant Provost, Faculty and International Affairs, and Collegiate Professor

BA, Pomona College, 1970
MA, Fletcher School of Law and Diplomacy, Tufts University, 1972
PhD, University of Geneva (Switzerland), 1981

Jin, Zhenyi (Jenny)

Adjunct Assistant Professor

BS, Nanjing University (China), 1987
MS, George Mason University, 1993
PhD, George Mason University, 2001

Jirage, Dayadevi

Adjunct Assistant Professor

BSc, University of Madras (India), 1988
MSc, University of Madras (India), 1990
PhD, University of Maryland, College Park, 1999

Johnson, James W.

Adjunct Associate Professor

BS, Prairie View A&M University, 1963
MS, University of Maryland, College Park, 1969
DSc, George Washington University, 1981
MS, George Washington University, 1990

Johnson, Travis M.

Adjunct Assistant Professor

MLS, University of Maryland College Park, 2000

Johnston, Timothy C.

Adjunct Professor

BS, University of Illinois Urbana-Champaign, 1980
MBA, Harvard University, 1983
MS, University of California at Berkeley, 1990
PhD, University of California at Berkeley, 1993

Jones, C. Kenneth

Adjunct Associate Professor

BS, University of Michigan, 1976
MBA, University of Florida, 1980
PhD, University of Colorado, 1986

Jones, Rhonda J.

Program Director, HRM

Collegiate Assistant Professor

BA, Swarthmore College
MBA, California State Polytechnic University, 1998
EdD, George Washington University

Joseph, Larry M.

Adjunct Associate Professor

BS, Rensselaer Polytechnic Institute, 1966
MS, Tufts University, 1968
PhD, University of Michigan, 1974

Kankanahilli, Srinivas

Adjunct Associate Professor

BS, Bangalore University, India, 1982
MS, Indian Institute of Technology, India, 1985
PhD, New Mexico State University

Kaske, Neal K.

Adjunct Professor

BA, Baker University, 1965
MLS, Kansas State Teachers College, 1968
PhD, University of Oklahoma, 1973

Kaskowitz, Gary

Adjunct Assistant Professor

BS, University of Illinois, 1983
MBA, Averett College, 1990
MA, University of Maryland, College Park, 1995
PhD, University of Maryland, College Park, 1998

Kasprzak, James E.

Adjunct Professor
BS, Canisius College, 1963
PhD, Loyola University Chicago, 1967

Kavoossi, Masoud

Adjunct Associate Professor
BA, Bowie State University, 1974
MA, American University, 1976
PhD, Catholic University of America, 1982

Kayes, Anna B.

Adjunct Assistant Professor
BA, Catawba College, 1990
MA, George Washington University, 2000
EdD, George Washington University, 2004

Kearsley, Greg

Adjunct Professor
BS, University of Toronto (Canada), 1973
MS, University of Alberta (Canada), 1976
PhD, University of Alberta (Canada), 1978

Keaton, Frederick M.

Adjunct Associate Professor
BA, Howard University, 1967
MA, Central Michigan University, 1977
EdD, Western Michigan University, 1983

Keller, Paul F. G.

Program Director, Information Resources Management and Management Projects, and Collegiate Professor
BS, Mansfield State University, 1963
MS, Elmira College, 1967
PhD, Southern Illinois University at Carbondale, 1977

Kelley, Kimberly

Associate Provost, Information and Library Services, and Collegiate Associate Professor
BA, Emory University, 1982
MLS, Emory University, 1985
PhD, University of Maryland, College Park, 1998

Kennedy, Thomas H.

Adjunct Assistant Professor
BS, Indiana University, 1971
JD, Indiana University, 1974
LLM, George Washington University, 1976
LLM, George Washington University, 1978
MBA, George Washington University, 1978
MS, Johns Hopkins University, 2002

Kerr-Walker, Joi

Adjunct Associate Professor
BS, Morgan State University, 1990
MS, Morgan State University, 1992
MAT, Towson State University, 1993
PhD, University of Maryland, College Park, 2001

Khan, Rana

Program Director, Biotechnology Studies, and Collegiate Associate Professor
MS, Tulane University, 1989
PhD, University of Maryland, College Park, 1999

Khatrri, Anil

Adjunct Associate Professor
BS, Meerut University (India), 1979
MS Meerut University (India), 1982
MS, Jackson State University, 1989
PhD, George Mason University, 2000

Khawaja, Dilshad A.

Adjunct Associate Professor
MPhil, City University of New York, 1984
PhD, City University of New York, 1985

Kilpatrick, Henry E. Jr.

Adjunct Assistant Professor
BS, Valdosta State University
MA, Pennsylvania State University
PhD, George Mason University, 1998

Kimiavi, Sassan

Adjunct Assistant Professor
BS, George Washington University, 1985
MS, George Washington University, 1987
PhD, George Washington University, 1998

Kinney-Cartwright, Kara

Adjunct Assistant Professor
BA, Syracuse University, 1990
JD, Georgetown University, 1993

Kirk, Florence R.

Adjunct Associate Professor
MS, Cornell University, 1986
PhD, Cornell University, 1988

Kirkhorn, Judith B.

Collegiate Professor
BS, University of Wisconsin–Madison, 1963
MS, University of Wisconsin–Milwaukee, 1967
PhD, University of Wisconsin–Milwaukee, 1977

Klisch, Karen

Adjunct Professor
BS, Florida State University, 1963
MA, University of Maryland, College Park, 1968
PhD, University of Maryland, College Park, 1980

Klose, Kathryn

Associate Program Director, Accounting and Finance, and Collegiate Associate Professor
BS, Kutztown University, 1980
MS, University of Maryland University College, 2000

Knodel, Steven

Adjunct Professor
BS, Duke University, 1966
MS, University of North Dakota, 1970
PhD, Syracuse University, 1978

Kogge, Stephen N.

Adjunct Assistant Professor
BS, University of Notre Dame, 1971
PhD, University of Notre Dame, 1976

Kolasheski, Richard F.

Adjunct Professor
BS, Bucknell University, 1958
MBA, University of Georgia, 1973
PhD, University of Georgia, 1976

Kornilov, Guerman V.

Adjunct Assistant Professor
MBA, American University, 1995
MA, American University, 1998
PhD, American University, 2003

Kraus, Peter L.

Adjunct Assistant Professor
BA, Florida State University, 1991
MLS, Florida State University, 1993

Krivan, Howard C.

Adjunct Associate Professor
BS, University of New Mexico, 1980
MS, University of New Mexico, 1982
PhD, Virginia Polytechnic Institute and State University, 1986

Kroopnick, Allan

Adjunct Assistant Professor
BA, New York University, 1968
MS, University of Manitoba (Canada), 1970
MS, Johns Hopkins University, 1982
PhD, University of South Africa, 1991

Kuhns, Barbara A.

Collegiate Assistant Professor
BA, University of Southern California, 1970
MA, University of Southern California, 1972
PhD, University of Geneva (Switzerland), 1978

Kurtz, Gila

Adjunct Associate Professor
BA, Tel Aviv University (Israel), 1980
MA, Tel Aviv University (Israel), 1987
PhD, Bar-Ilan University (Israel), 1995

LaBarge, Andrea L.

Adjunct Associate Professor
BS, College of St. Rose, Albany, NY, 1979
MBA, University of Hawaii at Manoa, 1988
MA, University of Hawaii at Manoa, 1996
PhD, University of Hawaii at Manoa, 2002

Label, Wayne A.

Collegiate Professor
BS, University of California, Berkeley, 1965
MBA, University of California, Los Angeles, 1966
PhD, University of California, Los Angeles, 1971

Lad, Pramod M.

Adjunct Associate Professor
BSc, King's College, London University (England), 1970
MS, Cornell University, 1973
MBA, California State University, Los Angeles, 1977
PhD, Cornell University, 1975

Lamphere, Jo Ann*Adjunct Associate Professor*

BS, Pennsylvania State University, 1974
 MS, State University of New York at Stony Brook, 1977
 DrPH, Columbia University, 1996

Landry, Steven P.*Adjunct Professor*

BS, U.S. Military Academy at West Point, 1973
 MBA, University of Colorado, 1985
 PhD, University of Colorado, 1992

Laraqui, Saad

Program Director, Global Master of Business Administration, and Collegiate Associate Professor
 BBA, Institut Supérieur de Gestion (France), 1982
 MBA, University of Tampa, 1985
 PhD, Rutgers University, 1998

Lassiter, Linda B.*Adjunct Assistant Professor*

BS, University of Maryland University College, 1988
 MSwE, University of Maryland University College, 2001

Latimier, Philippe-Henri*Adjunct Professor*

MS, University of Paris 1, Pantheon-Sorbonne (France), 1976
 PhD, University of Paris 1, Pantheon-Sorbonne (France), 1983

Leberre, Maria L.*Adjunct Associate Professor*

BA, University of Virginia, 1986
 MA, Ohio State University, 1988
 PhD, George Mason University, 1997

Lerman, Richard*Adjunct Assistant Professor*

BA, Brooklyn College, 1980
 MA, Brooklyn College, 1981

Levine, Jerald*Adjunct Associate Professor*

BA, Brooklyn College, 1964
 MA, University of Wisconsin, 1965
 PhD, University of Wisconsin, 1971

Leviton, Edward B.*Adjunct Associate Professor*

BA, Brooklyn College, 1967
 MA, State University of New York at Binghamton, 1971
 PhD, State University of New York at Binghamton, 1973

Li, Aiguo*Adjunct Assistant Professor*

BS, Shanxi Agricultural University (China), 1984
 MS, University of Idaho, 1995
 PhD, University of Idaho, 1999

Li, Ming*Adjunct Assistant Professor*

BS, Tsinghua University, Beijing, 1993
 MS, Tsinghua University, Beijing, 1996
 MS, University of Maryland, College Park, 2000
 PhD, University of Maryland, College Park, 2002

Liburd, Vincent*Adjunct Assistant Professor*

BA, University of the West Indies, 1971
 MDiv, Gordon-Conwell Theological Seminary, 1978
 MA, University of Maryland, College Park, 1987
 PhD, University of Maryland, College Park, 1996

Ligon, Jack M.*Adjunct Associate Professor*

BS, Virginia Polytechnic Institute and State University, 1960
 MS, University of Pennsylvania, 1968
 PhD, George Mason University, 1990

Lin, Jia-Ling*Adjunct Assistant Professor*

BBA, National Cheng-Chi University (Taiwan), 1990
 MS, George Mason University, 1993
 PhD, George Mason University, 1999

Lindenberg, Terry S.*Adjunct Professor*

BS, Northern Illinois University, 1972
 MS, Northern Illinois University, 1974
 EdD, Northern Illinois University, 1984

Lindsey, David W.*Adjunct Assistant Professor*

BS, University of Missouri, 1981
 MBA, Fontbonne College, 1991

Lingayat, Sunil*Adjunct Professor*

BS, Bhopal University (India)
 MS, Mississippi State University
 PhD, Rensselaer Polytechnic Institute, 1993

Little, Douglas A.*Adjunct Assistant Professor*

BS, Mount Saint Mary's College, 1985
 MA, Catholic University of America, 1989
 PhD, Catholic University of America, 1995

Livingstone, John Leslie "Les"*Collegiate Professor*

BCom, University of the Witwatersrand (South Africa), 1956
 MBA, Stanford University, 1963
 PhD, Stanford University, 1966

Lombardo, David D.*Adjunct Professor*

BA, Albright College, 1961
 MA, New York University, 1964
 PhD, New York University, 1978

Love, Jamie*Adjunct Associate Professor*

BA, Northland College, 1978
 MS, Saint Cloud State University, 1981
 PhD, Louisiana State University, 1990
 MBA, Heriot-Watt University (Scotland), 1996

Lubich, Bruce H.*Program Director, Accounting, and Collegiate Associate Professor*

BA, University of Maryland, Baltimore County, 1977
 MA, Pennsylvania State University, 1986
 PhD, Pennsylvania State University, 1991

MacKenzie, Garth*Program Director, Information and Technology Systems Department, and Collegiate Associate Professor*

BA, Johns Hopkins University, 1967
 BS, Johns Hopkins University, 1971
 MAS, Johns Hopkins University, 1977

Mackey, William*Adjunct Professor*

BS, University of Pittsburgh, 1962
 MS, Rensselaer Polytechnic Institute, 1967
 PhD, University of Pennsylvania, 1975
 JD, American University, 1981

Madison, David L.*Adjunct Associate Professor*

BS, University of Maryland, College Park, 1967
 MS, American University, 1973
 PhD, American University, 1983

Magnuson, Matthew B.*Adjunct Associate Professor*

BA, Connecticut College, 1998
 MA, University of Massachusetts, 1998
 MLS, University of Southern Mississippi, 2004

Makarov, Vladimir*Adjunct Assistant Professor*

BS, Moscow State University (Russian Federation), 1992
 MS, Northern Illinois University, 1993
 PhD, Baylor College of Medicine, 1998

Makin, Viola*Adjunct Associate Professor*

BA, University of Natal (South Africa), 1973
 MBL, University of South Africa, 1987
 DBA, Pretoria University (South Africa), 1996

Manickavasagam, Joe*Adjunct Associate Professor*

BA, University of Otago (New Zealand), 1968
 MA, University of Canterbury (New Zealand), 1972
 PhD, Brunel University (United Kingdom), 1984

Mann, Clarence J.*Associate Chair, MBA, International, and Executive Programs, and Collegiate Professor*

BA, Wabash College, 1957
 LLB, Yale University, 1963
 MA, Yale University, 1963
 DrJur, University of Bonn (Germany), 1967

Mansour, Mohamed A.

Adjunct Associate Professor

BS, American University in Cairo (Egypt), 1975
MS, George Washington University, 1983
EdD, George Washington University, 1994

Mao, Jeng F.

Adjunct Assistant Professor

BS, University of Central Florida, 1993
JD, Howard University, 1998

Marchand, Laureen

Adjunct Assistant Professor

BA, University of Alberta (Canada), 1971
MLS, University of Western Ontario (Canada), 1978
MA, University of Saskatchewan (Canada), 1985

Marconi, Katherine M.

Adjunct Associate Professor

BA, St. Joseph's College, 1970
MA, State University of New York at Buffalo, 1972
PhD, George Washington University, 1976

Marcus, Sara

Adjunct Assistant Professor

BA, State University of New York, Stony Brook, 1996
MLS, Queens College of the City University of New York, 1998
MS, University of Missouri, 2001

Markenson, Ari J.

Adjunct Assistant Professor

BA, Syracuse University, 1993
JD, Brooklyn Law School, 1996
MPH, Columbia University School of Public Health, 1998

Markevich, John W.

Adjunct Assistant Professor

BS, University of Oklahoma, 1972
BS, Navy Postgraduate School, 1983
MS, Navy Postgraduate School, 1983
DSc, George Washington University, 2001

Marron-Grodsky, Theresa

Chair, Management, Accounting, and Finance Department; Program Director, Marketing Management; and Collegiate Associate Professor

BS, Suffolk University, 1975
MA, University of Maryland, College Park, 1978
PhD, University of Maryland, College Park, 1985

Marsh, Alfred B. III

Adjunct Professor

BA, Johns Hopkins University, 1968
MSE, Johns Hopkins University, 1969
MS, Johns Hopkins University, 1972
MS, Johns Hopkins University, 1982
PhD, Johns Hopkins University, 1979

Martin, Carolyn Wimbley

Adjunct Associate Professor

BA, Duke University, 1977
JD, Harvard University, 1981

Martin, Michael L.

Adjunct Professor

BA, University of Montana, 1968
MBA, Saint Louis University, 1972
MS, Johns Hopkins University, 1985
PhD, George Mason University, 1995

Martin, William F.

Adjunct Associate Professor

BS, Xavier University of Louisiana, 1982
MA, Catholic University of America, 1985
MPH, Rutgers Medical School, 1988
PsyD, Rutgers University, 1989

Martins, Francisco V.

Adjunct Assistant Professor

BA, City College of New York, 1971
MBA, Columbia University
PhD, City University of New York, 1978

Marwanga, Ruben O.

Adjunct Assistant Professor

BS, Nairobi University (Kenya), 1984
ME, Fourah Bay College (Sierra Leone), 1988
PhD, Pennsylvania State University, 1998

Maschmeyer, Richard A.

Adjunct Professor

BS, Utah State University, 1966
MAcc, Utah State University, 1975
DBA, University of Kentucky, 1981

Masi, Ralph J.

Adjunct Professor

BS, U.S. Military Academy at West Point, 1977
MPA, University of Oklahoma, 1984
MS, Texas A&M University, 1988
PhD, University of Illinois, 1994

Mathews, Cheryl D.

Adjunct Assistant Professor

BA, University of Colorado, 1984
PsyD, U.S. International University, 1996

Matteson, Miriam L.

Adjunct Assistant Professor

BS, Indiana University Bloomington, 1992
MLS, Indiana University Bloomington, 1995
CAS, University of NC at Chapel Hill, 2001

Matthews, Wayne A.

Adjunct Assistant Professor

BS, University of Southwest Los Angeles, 1969
MPA, University of Southern California, 1978
PhD, University of Southern California, 1988

Maxwell, James R.

Adjunct Professor

BS, Maryville University, 1988
MBA, Maryville University, 1992
DMgt, Webster University, 1997

Mazzei, James A.

Adjunct Associate Professor

BA, University of Notre Dame, 1963
BS, University of Missouri, 1974
MS, University of Missouri, 1974

Mbonglou, Gaston

Adjunct Associate Professor

BS, University of Technology Dresden (Germany), 1991
MS, University of Technology Dresden (Germany), 1992
PhD, University of Technology Dresden (Germany), 1996

McCabe, Michael E.

Adjunct Assistant Professor

BS, Polytechnic Institute of Brooklyn, 1961
MS, Polytechnic Institute of Brooklyn, 1965
DSc, George Washington University, 1985
MS, University of Maryland University College, 1996

McElroy, Barbara

Adjunct Assistant Professor

BGS, Ohio University, 1989
MBA, Kent State University, 1993
PhD, Pennsylvania State University, 1997

McGrath, Robert

Program Director, Project Management, and Collegiate Associate Professor

BS, United States Air Force Academy, 1977
MA, University of Northern Colorado, 1980
MBA, Xavier University, 1989
PhD, Louisiana State University

McKeeby, Jon W.

Adjunct Assistant Professor

BS, Hope College, 1988
MS, Bowling Green State University, 1990
DSc, George Washington University, 2001

McKelvey, Cornelius P.

Adjunct Associate Professor

BS, Philadelphia College, 1962
MS, University of Maryland, Baltimore, 1970
MA, George Washington University, 1973
MPhil, George Washington University, 1985

McKenna, Patricia

Acting Associate Dean and Collegiate Assistant Professor

MA, University of Maryland, College Park, 1987
PhD, Vanderbilt University, 2000

McLaughlin, Michael W.

Adjunct Assistant Professor

BS, Virginia Polytechnic Institute and State University, 1976
JD, Washington and Lee University, 1979

McMillan, Michael G.

Adjunct Associate Professor

BA, University of Pennsylvania, 1979
MBA, Stanford University, 1983
PhD, George Washington University, 2002

Means, William D.

Adjunct Assistant Professor

BS, Pennsylvania State University, 1966
MS, Pennsylvania State University, 1968

Mendis, Patrick*Adjunct Associate Professor*

BS, University of Sri Lanka, 1983
 MA, Humphrey Institute of Public Affairs, 1986
 PhD, University of Minnesota, 1989

Menta, Prasanna K.*Collegiate Assistant Professor*

MS, University of Maryland University College,
 2004

Michelson, Barton*Adjunct Professor*

BA, Ohio State University, 1962
 MA, Ohio State University, 1970
 PhD, Ohio State University, 1973

Mierzwa, Thomas J.*Collegiate Professor*

BFA, University of Illinois, 1965
 MLA, Harvard University, 1968
 MPA, University of Southern California, 1984
 DPA, University of Southern California, 2003

Miller, Christopher J.*Adjunct Assistant Professor*

BS, University of Michigan, 1985
 MPH, University of Michigan, 1988
 PhD, University of Rhode Island, 1998

Miller, David W.*Adjunct Professor*

BA, Dartmouth College, 1956
 MA, Cornell University, 1963
 EdD, Temple University, 1977

Mills, Joette V.*Adjunct Assistant Professor*

BA, Rutgers University, 1978
 MPA, New York University, 1980
 PhD, Walden University, 1999

Millson, Murray R.

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 Administration, and Collegiate Associate
 Professor*

BS, Clarkson College, 1967
 MS, Clarkson College, 1969
 MBA, Syracuse University, 1988
 PhD, Syracuse University, 1993

Mishler, John W. III*Adjunct Assistant Professor*

BA, Macalester College, 1972
 MS, University of Southern California, 1985
 MPhil, George Washington University, 1998
 PhD, George Washington University, 2000

Mitchell, Randolph*Adjunct Assistant Professor*

BS, Virginia State University, 1978
 MS, Johns Hopkins University, 1989
 PhD, George Mason University, 2000

Mittal, Ravi O.*Adjunct Professor*

BE, University of Bombay (India), 1982
 MTech, Indian Institute of Technology (India),
 1984
 MS, Ohio State University, 1986
 PhD, Pennsylvania State University, 1990

Monaco, Pamela J.*Adjunct Professor*

BBA, George Washington University, 1981
 MA, Catholic University, 1987
 PhD, Catholic University, 1995

Monaco, Salvatore J.

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BSE, Manhattan College, 1967
 MSE, University of Michigan, 1968
 PhD, Rensselaer Polytechnic Institute, 1974

Montroll, Mark L.*Adjunct Associate Professor*

BS, University of Rochester, 1972
 MEE, Catholic University of America, 1976
 PhD, Catholic University of America, 1981

Morrissy, J. David*Adjunct Associate Professor*

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Mostaghimi, Siroos*Adjunct Associate Professor*

BS, Pahlavi University (Iran), 1974
 MS, Texas A&I University, 1977
 PhD, Ohio State University, 1982
 MS, Virginia Polytechnic Institute and State
 University, 1990

Moumena, Lhadj*Adjunct Associate Professor*

BS, University of Sciences and Technology (Algeria),
 1983
 MS, University of Maryland, College Park, 1986
 PhD, University of Maryland, College Park, 1991

Myers, Joseph H.*Adjunct Associate Professor*

BS, North Carolina State University, 1971
 MS, Carnegie-Mellon University, 1974

Myers, Raymond W.*Adjunct Associate Professor*

BA, American University, 1965
 MIS, American University, 1967

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BE, University of Waikato (New Zealand), 1977
 MA, University of the South Pacific, 1985
 PhD, Concordia University, 1991

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MS, University of Oklahoma, 1986
 PhD, University of Oklahoma, 1991

Napius, Chris N.*Adjunct Associate Professor*

BA, Cornell University, 1963
 MS, University of Washington, 1968
 PhD, University of Washington, 1969
 MBA, Bryant College, 1976

Narayanan, Chathapuram Rajan*Adjunct Associate Professor*

BS, University of Calcutta (India), 1981
 PhD, State University of New York at Stony Brook,
 1986

Nayak, Nick*Adjunct Professor*

BS, University of Maryland, College Park, 1986
 MS, Florida Institute of Technology, 1988
 PhD, Walden University, 2002

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MS, Plekhanov Institute (USSR), 1971
 PhD, Research Institute of the USSR, 1977

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 MS, University of Southern California, 1971
 PhD, Pace University, NY, 1984

Nichols, Randall K.*Adjunct Assistant Professor*

BS, Tulane University, 1967
 MBA, University of Houston, 1970
 MS, Texas A & M University-Kingsville, 1991

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BA, University of Maryland, College Park, 1976
 MA, Virginia Polytechnic Institute and State
 University, 1986
 PhD, Virginia Polytechnic Institute and State
 University, 1990

Nixon, George*Collegiate Associate Professor*

BA, San Francisco State University, 1977
 MA, Central Michigan University, 1978
 DPA, University of Alabama, 1994
 MS, National Defense University, 1995

Nnadi, Eucharia*Adjunct Professor*

BS, Creighton University, 1977
 MS, University of Minnesota, 1978
 PhD, University of Minnesota, 1982
 JD, Florida State University, 1993

Norman, Ronald*Adjunct Professor*

PhD, University of Arizona, 1987

O'Connell, Laurence F.

Adjunct Assistant Professor
MS, Rensselaer Polytechnic Institute, 1999

Odionu, Chris

Adjunct Associate Professor
BS, University of Houston, 1980
MBA, University of Houston, 1983
EdD, University of Houston, 1995

Officer, Alvin D.

Adjunct Professor
BS, Kansas State College
MEd, University of Pittsburgh, 1972
PhD, University of Pittsburgh, 1974

Oleru, George U.

Adjunct Professor
BA, College of the Holy Cross, 1968
MS, University of Rhode Island, 1970
PhD, New York University, 1971
DrPH, Columbia University, 1974

Olson, Edwin E.

Collegiate Professor
BA, St. Olaf College, 1959
MA, American University, 1961
PhD, American University, 1967

Olson, Susan B.

Collegiate Associate Professor
AB, Regis College, 1964
MA, Fordham University, 1966
PhD, University of Illinois, 1976

Orban, Joseph A.

Adjunct Associate Professor
BA, University of South Dakota, 1976
MS, Virginia Polytechnic Institute and State University, 1979
PhD, Virginia Polytechnic Institute and State University, 1981

Ore, Timothy

Adjunct Assistant Professor
JD, Duquesne University, PA, 2001

Orobato, Nosa

Adjunct Assistant Professor
MD, University of Ibadan (Nigeria), 1983
MPH, Johns Hopkins University, 1990
PhD, Johns Hopkins University, 1995
MBA, Johns Hopkins University, 2004

Ouellette, Robert P.

Program Director, Electronic Commerce, and Collegiate Professor
BS, University of Montreal (Canada), 1962
PhD, University of Ottawa (Canada), 1964
MBA, New York Institute of Technology, 1988

Owens, Sherdeana L.

Adjunct Assistant Professor
BA, Goucher College, 1973
MPA, University of Oklahoma, 1978
DDS, Baylor College of Dentistry, 1983

Ozag, David

Adjunct Associate Professor
BS, University of Maryland, College Park, 1984
MBA, Mount St. Mary's College, 1987

Paas, David E.

Adjunct Professor
BA, University of Nebraska, 1971
MA, University of Nebraska, 1974
JD, University of Nebraska, 1977
PhD, University of Nebraska, 1982

Pal, Kausik B.

Adjunct Assistant Professor
MBA, University of Baltimore, 1988
MS, University of Baltimore, 1991

Pande, Suchira

Adjunct Associate Professor
BS, Sri Venkateswara college, India, 1980
MS, Indian Agricultural Research Institute, 1982
PhD, University of Alberta, 1988

Pandit, Ganesh M.

Adjunct Associate Professor
BCom, University of Bombay (India), 1983
MBA, University of Louisiana at Monroe, 1990
DBA, Louisiana Tech University, 1994

Pang, Leslie

Adjunct Professor
BS, University of Hawaii, 1974
MS, University of Nebraska, 1979
PhD, University of Utah, 1983
MBA, University of Maryland, College Park, 1988

Parker, Mark L.

Adjunct Associate Professor
BA, Florida State University, 1988
MA, Florida State University, 1991

Parks, Janet M.

Adjunct Assistant Professor
BS, Drexel University, 1985
MS, University of Maryland, University College, 2004

Parnell, John A.

Adjunct Professor
BSBA, East Carolina University, 1984
MBA, East Carolina University, 1985
MEd, East Carolina University, 1986
EdD, Campbell University, 1990
PhD, University of Memphis, 1992

Pathak, Divaker V.

Adjunct Assistant Professor
BS, Marathwada University (India), 1966
MS, University of Maryland, College Park, 2002
PhD, Purdue University, 1974

Pauli, Richard A.

Adjunct Associate Professor
BA, Hiram College, 1970
JD, Boston University, 1973
MA, MacGregor School of Antioch University

Paulone, Stephen T.

Adjunct Assistant Professor
BA, Fairfield University
MBA, Rensselaer Polytechnic Institute, 1995
MS, Rensselaer Polytechnic Institute, 1997

Peacock, Bruce E.

Adjunct Associate Professor
BS, Oklahoma State University, 1978
MS, New Mexico State University, 1984
PhD, University of Arizona, 1994

Peters, Laurence

Adjunct Associate Professor
BA, University of Sussex (England), 1976
MA, University of London (England), 1978
PhD, University of Michigan, Ann Arbor, 1986
JD, University of Maryland, Baltimore, 1986

Petersohn, Henry

Adjunct Assistant Professor
BS, University of Pennsylvania, 1952
MBA, Temple University, 1964
PhD, American University, 1967

Petrello, George J.

Collegiate Professor
BA, Montclair State University
MBA, Seton Hall University
PhD, New York University, 1969

Pfoertsch, Waldemar

Adjunct Professor
MA, Free University of Berlin (Germany), 1978
MBA, Free University of Berlin (Germany), 1978
PhD, Free University of Berlin (Germany), 1981

Phelan, Joseph R.

Adjunct Assistant Professor
BA, New School of Social Research
MA, New School of Social Research
PhD, University of Toronto, 1985

Pickering, Willa

Adjunct Assistant Professor
BA, Oklahoma State University, 1963
MSEE, University of New Mexico, 1977
PhD, George Mason University, 2003

Pierce, Barbara L.

Adjunct Professor
BA, University of Rochester, 1959
MS, University of Rochester, 1962
PhD, University of Rochester, 1965

Plumley, Joseph P. Jr.

Adjunct Professor
ABJ, University of Georgia, 1967
MEd, University of Georgia, 1975
EdD, University of Georgia, 1978

Pomea, Neal F.

Adjunct Assistant Professor
BA, University of Louisiana, Lafayette, 1976
BA, University of Louisiana, Lafayette, 1982
MLS, University of Maryland University College, 1997

Porto, Stella

Associate Chair, Information and Technology Systems Department, and Collegiate Professor
MS, Pontifical Catholic University of Rio de Janeiro (Brazil), 1991
PhD, Pontifical Catholic University of Rio de Janeiro (Brazil), 1995

Posluns, Ronald J.

Collegiate Associate Professor
BCom, Concordia University (Canada), 1963
MBA, McGill University (Canada), 1965
PhD, Syracuse University, 1972

Powell, Karan Hinman

Adjunct Professor
BS, Western Illinois University
MDiv, Loyola University
PhD, George Mason University, 1998

Power, Frank R.

Adjunct Associate Professor
BCE, Manhattan College, 1960
MS, Cornell University, 1964
JD, New York University, 1966

Pressman, Rebecca R.

Adjunct Associate Professor
BA, Hamilton-Kirkland College, 1978
JD, Catholic University, 1981
MLS, Rutgers University, 1993
PhD, Florida State University, 2002

Procaccino, Joseph A.

Adjunct Associate Professor
BA, George Washington University, 1973
JD, American University, 1976
MFS, George Washington University, 1979

Promboin, Ronald L.

Collegiate Associate Professor
BA, Williams College, 1966
MA, Stanford University, 1968
PhD, Stanford University, 1971

Purcell-Robertson, Rita

Adjunct Associate Professor
BS, James Madison University, 1978
MS, Pennsylvania State University, 1980
PhD, University of Virginia, 1998

Rabatin, Angela J.

Adjunct Associate Professor
BS, University of Pittsburgh, 1974
MA, St. Francis University of Pennsylvania, 1977
JD, Duquesne University, 1981
LLM, University of Baltimore, 1996

Rabin, Bonnie R.

Adjunct Professor
BA, New York University, 1981
MS, Cornell University, 1986
PhD, Cornell University, 1987

Raider, Alfred S.

Program Director, Advertising and Public Relations, and Collegiate Professor
BA, University of Wisconsin-Madison, 1975
JD, University of Maryland, Baltimore, 1978
LLM, Georgetown University, 1987

Raimondo, Paula G.

Adjunct Assistant Professor
BA, Rutgers University, 1975
MLS, Rutgers University, 1975

Raisinghani, Mahesh S.

Adjunct Associate Professor
BCom, Osmania University (India), 1988
MBA, University of Central Oklahoma, 1990
MS, University of Texas at Arlington, 1992
PhD, University of Texas at Arlington, 1997

Ramkumar, Vasant C.

Adjunct Associate Professor
BS, Philadelphia College of Textiles and Science, 1982
MS, City University of New York, 1985
PhD, City University of New York, 1991
MS, National Technological University, 1993

Rathinasamy, Rathin S.

Adjunct Professor
BS, University of Madras, India, 1970
MS, Tamilnadu Agricultural University, India, 1972
MBA, University of Tennessee, 1980
PhD, University of Tennessee, 1987

Rawson, James H.

Adjunct Associate Professor
BA, State University of New York College at Cortland, 1970
MA, State University of New York at Albany, 1974
MS, Syracuse University, 1986
PhD, University of Maryland, College Park, 2002

Renda-Tanali, Irmak

Program Director, Information and Technology and Collegiate Assistant Professor
DSc, George Washington University, 2002

Reynolds, Arthur

Collegiate Professor
BA, City College of New York, 1970
MA, University of Minnesota, 1973
MHA, University of Minnesota, 1976
JD, William Mitchell College of Law, 1977

Rhodes, Shelton

Adjunct Associate Professor
BA, Virginia Military Institute, 1977
MA, Howard University, 1985
PhD, Old Dominion University, 1994

Richardson, John M.

Adjunct Professor
BA, University of Colorado, 1942
MA, Harvard University, 1947
PhD, Harvard University, 1951

Rife, Patricia

Collegiate Assistant Professor
BS, Grand Valley State University, 1978
PhD, Union Institute, 1983

Rivkin, Malcolm

Adjunct Associate Professor
AB, Harvard College, 1953
MCP, Massachusetts Institute of Technology, 1956
PhD, Massachusetts Institute of Technology, 1964

Robbani, Mohammad G.

Adjunct Associate Professor
BCom, University of Dhaka (Bangladesh), 1980
MCom, University of Dhaka (Bangladesh), 1982
MBA, University of Massachusetts, 1988
PhD, Florida International University, 1994

Roberson, Ponchitta J.

Adjunct Assistant Professor
BA, District of Columbia Teachers College, 1974
MA, George Washington University, 1989
EdD, George Washington University, 1998

Roberts, Elizabeth

Adjunct Assistant Professor
BA, University of Virginia, 1989
MLS, University of Kentucky, 1999

Roberts, Judith M.

Adjunct Assistant Professor
BA, York University (Canada), 1968
MA, University of Toronto (Canada), 1972

Robertson, James A.

Collegiate Assistant Professor
BS, University of Houston, Clear Lake, 1989
MS, University of Dayton, 1995

Robinson, Doreen A.

Adjunct Assistant Professor
BS, Cornell University, 1981
PhD, University of Buffalo, 1988

Roblyer, Margaret D.

Adjunct Professor
BA, University of Maryland, College Park, 1969
MEd, Pennsylvania State University, 1972
PhD, Florida State University, 1978

Roman, Cynthia

Adjunct Associate Professor
BA, University of Virginia, 1976
MEd, University of Georgia, 1977
EdD, Virginia Polytechnic Institute and State University, 1994

Ross, Jane

Program Director, Master of Business Administration, and Collegiate Professor
PhD, University of Cambridge (England), 1987

Rowe, Joyce M.

Adjunct Professor
BS, Virginia Commonwealth University, 1967
MS, Virginia Commonwealth University, 1970
PhD, Virginia Commonwealth University, 1991

Rubin, Eugene

Associate Chair, Information and Technology Systems Department, and Collegiate Professor
BA, Ohio Wesleyan University, 1963
MS, Kansas State University, 1965
MA, University of Michigan, 1971
PhD, University of Michigan, 1971

Rudman, Stephen T.

Adjunct Associate Professor
LLM, Golden Gate University
AB, Washington University (Missouri)
JD, Washington University (Missouri)
MBA, Columbia University
PhD, University of Cambridge (England), 2003

Ruffini, Michael F.

Adjunct Associate Professor
BA, Rowan University, 1979
BS, West Chester University, 1981
MS, West Chester University, 1985
MEd, Widener University, 1995
EdD, Widener University, 1997

Russotto, Thomas

Adjunct Assistant Professor
BS, Stevens Institute of Technology, 1966
MBA, Loyola College, 1975
MBA, George Washington University, 1991
PhD, George Washington University, 1993

Ryan, Daniel J.

Adjunct Professor
BS, Tulane University, 1966
MA, University of Maryland, 1971
MBA, California State University, 1977
JD, University of Maryland, Baltimore, 1984

Sadhwani, Arjan T.

Adjunct Professor
BA, University of Bombay (India), 1956
MCom, University of Bombay (India), 1959
PhD, Michigan State University, 1971

Sadiq, Salman

Adjunct Assistant Professor
BA, George Washington University, 1993
MBA, George Washington University, 1994
JD, Emory University School of Law, 1997

Salimi, Anwar Y.

Adjunct Professor
PhD, University of California, Los Angeles, 1984

Salmon, Peter M.

Adjunct Assistant Professor
BS, University of Cape Town (South Africa), 1980
MS, Stanford University, 1984
PhD, Stanford University, 1989

Sapp, J. Robert

Adjunct Assistant Professor
BA, University of Maryland, Baltimore County, 1986
MA, University of Maryland, Baltimore County, 1990
MS, Johns Hopkins University, 1992
EdD, University of Pennsylvania, 2001

Saunders, John H.

Adjunct Associate Professor
BS, Pennsylvania State University, 1971
MBA, George Washington University, 1983
PhD, George Washington University, 1994

Savage, Howard A.

Adjunct Professor
BA, Oklahoma City University, 1968
PhD, University of Texas at Austin, 1978
MA, Johns Hopkins University, 1985

Sax, Christina

Adjunct Professor
BS, University of Rochester, 1982
PhD, Medical College of Virginia, Virginia Commonwealth University, 1987

Sayala, Dash

Adjunct Associate Professor
BS, Osmania University (India), 1962
MS, Osmania University (India), 1964
MS, University of New Mexico, 1972
PhD, George Washington University, 1978

Sayani, Hasan H.

Program Director, Software Engineering, and Collegiate Professor
BSE, University of Michigan, 1965
MSE, University of Michigan, 1966
PhD, University of Michigan, 1973

Scanlan, Eugene A.

Adjunct Associate Professor
BA, Lafayette College, 1964
MEd, University of New Hampshire, 1968
PhD, Loyola University Chicago, 1972

Scheira, Thomas R.

Adjunct Associate Professor
BA, State University of New York at Buffalo, 1979
MEd, State University of New York at Buffalo, 1987
PhD, State University of New York at Buffalo, 1991

Schmidt, Richard J.

Adjunct Professor
BS, University of Utah, 1961
MBA, University of Utah, 1962
PhD, Santa Clara University, 1979

Schultz, Christopher

Collegiate Associate Professor
BA, State University of New York Regents College, 1989
MA, Saint Louis University, 1990
PhD, University of New Mexico, 1996
MBA, University of Texas at Austin, 2000

Schuster, Richard L.

Adjunct Associate Professor
BA, Colgate University, 1971
MS, Indiana University, 1973
EdD, University of Georgia, 1990

Schutte, Carol

Adjunct Assistant Professor
BS, Rensselaer Polytechnic Institute, 1978
MS, University of Rochester, 1980
PhD, Massachusetts Institute of Technology, 1990

SchWeber, Claudine

Program Chair, Doctoral Programs, and Collegiate Professor
BA, Hunter College, City University of New York, 1968
MA, State University of New York at Buffalo, 1970
PhD, State University of New York at Buffalo, 1978

Sha, Bey-Ling

Adjunct Assistant Professor
BA, Purdue University at West Lafayette, 1993
MA, University of Maryland, College Park, 1995
PhD, University of Maryland, College Park, 1999

Shafer, Edward

Adjunct Professor
BA, Brooklyn College, 1956
MBA, City College of New York, 1959
DBA, George Washington University, 1980

Shahdad, B. Moe

Program Director, Technology Management, and Collegiate Associate Professor
BS, University of Tehran (Iran), 1966
MS, Queen's University (Northern Ireland), 1971
PhD, University of London (England), 1974

Sharif, Nawaz

Program Director, Doctoral Programs, and Collegiate Professor
BS, East Pakistan University of Engineering and Technology, 1964
MEA, George Washington University, 1967
PhD, Texas A&M University, 1970

Shattuck, James M.

Adjunct Assistant Professor
BS, University of Maine, 1979
MBA, University of Tampa, 1981

Sheehan, Nancy J.

Adjunct Assistant Professor
AAS, Trocair, Buffalo, NY, 1984
BA, National-Louis University, 1988
JD, SUNY at Buffalo, 1994

Sheehy, William J.

Adjunct Associate Professor
BSBA, Michigan State University, 1966
JD, University of Michigan, 1969
LLM, New York University, 1972

Shepherd, Norman Glenn

Adjunct Associate Professor

BS, Appalachian State University, 1980
BS, University of North Carolina at Greensboro, 1977
MEd, Elon College, 1990
EdD, North Carolina State University, 1998

Sherlock, John

Adjunct Assistant Professor

BS, James Madison University, 1982
MBA, University of Maryland, College Park, 1988
EdD, George Washington University, 2000

Sherlock, Robert

Collegiate Professor

BS, University of Utah, 1973
JD, University of Utah, 1976
MPA, University of Utah, 1985

Shihadi, Maurice M.

Adjunct Assistant Professor

BA, Towson State University, 1986
MA, California State University, Long Beach, 1996
EdD, Pepperdine University, 2001

Shilesky, Donald

Adjunct Assistant Professor

BS, University of Cincinnati, 1964
MS, University of Cincinnati, 1966
DSc, Washington University, 1973

Shirazi, Joyce T.

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BS, Howard University, 1977
MS, University of Tennessee, 1988
DSc, George Washington University, 1994

Shoukat, Michael M.

Collegiate Associate Professor

BS, Memphis State University, 1982
MS, Air Force Institute of Technology, 1987
PhD, University of Missouri-Rolla, 1992

Sicotte, Hugues B.

Adjunct Assistant Professor

BS, McGill University (Canada), 1989
MA, Princeton University, 1991
PhD, Princeton University, 1995

Silard, Con D. Jr.

Adjunct Assistant Professor

BSBA, American University, 1973
MS, University of Maryland University College, 2000

Silberg, Carol A.

Adjunct Assistant Professor

BS, University of Maryland, College Park, 1971
MS, Central Michigan University, 1980
PhD, University of Maryland, College Park, 1990

Singer, Abe

Adjunct Professor

BEE, City College of New York, 1961
MS, University of Maryland, College Park, 1970
PhD, Johns Hopkins University, 1975
MS, National Defense University, 1996

Singh, Lisa O.

Adjunct Assistant Professor

BS, Duke University, 1993
MS, Northwestern University, 1997
PhD, Northwestern University, 1999

Smith, Linda L.

Collegiate Assistant Professor

BS, University of Tennessee
MS, University of Tennessee
MA, Columbia University, 1994
EdD, Columbia University, 1995

Smith, Walter P.

Adjunct Associate Professor

BS, Ohio State University, 1988
BA, Marietta College, 1992
PhD, Ohio State University, 1998

Smola, Karen W.

Adjunct Assistant Professor

BS, Oklahoma City University, 1972
MA, University of Oklahoma, 1983
MS Auburn University, 2001
PhD, Auburn University, 2003

Smucny, Darlene A.

Collegiate Associate Professor

BA, Lake Erie College, 1981
MS, Cleveland State University, 1989
PhD, University of California, 1999

Snyder, Deborah

Adjunct Professor

PhD, Wayne State University, 2001

Solomon, Paul

Adjunct Professor

BS, University of Minnesota, 1971
MBA, DePaul University, 1973
PhD, University of Minnesota, 1981

Spector, Kathleen D.

Adjunct Associate Professor

BS, Charter Oak State College, 1995
PhD, Union Institute and University, 2002

Spilman, Mary Ann

Executive Director, Client Relations, and Collegiate Professor

BA, Rutgers University, 1974
MIM, University of Maryland University College, 1997
PhD, Rutgers University, 1983

Sponder, Barry M.

Adjunct Professor

BA, Incarnate Word College, 1975
MA, Adelphi University, 1977
EdD, Utah State University, 1990

Srikantaiah, Taverekere

Adjunct Professor

BS, Mysore University, India, 1958
MS, Karnataka University, India, 1960
MPA, University of Southern California, 1971
PhD, University of Southern California, 1973

Staley, Blair

Adjunct Associate Professor

BA, Western Connecticut State University, 1984
MPA, University of Texas, 1987
DBA, Nova Southeastern University, 1997
MS, American University, 2003

Stauffer, Suzanne M.

Adjunct Assistant Professor

BS, Weber State University, 1978
MLS, Brigham Young University, 1986
PhD, University of California, Los Angeles, 2004

Steinberg, Taddeus

Adjunct Assistant Professor

BBA, Hofstra University
MS, George Washington University, 2000

Steinheiser, Frederick H.

Adjunct Associate Professor

BA, University of Michigan, 1966
MA, University of Cincinnati, 1969
PhD, University of Cincinnati, 1970

Stewart, James J.

Program Director, Master of Business

Administration, and Collegiate Professor
DSc, George Washington University, 1988

Stone, Theodore E.

Adjunct Professor

BA, University of Maryland, College Park, 1976
MA, University of Maryland, College Park, 1988
PhD, University of Maryland, College Park, 1991

Stover, Mary Liana

Adjunct Professor

BA, Kansas State University Manhattan, 1970
MA, University of Hawaii at Manoa, 1980
MA, University of Hawaii at Manoa, 1983
PhD, University of Hawaii at Manoa, 1990

Strange, Martha L.

Adjunct Professor

BS, Virginia State University, 1970
MS, Pennsylvania State University, 1989
PhD, Pennsylvania State University, 1993

Sturm, Philip R.

Adjunct Associate Professor

BS, Murray State University, 1970
MBA, Murray State University, 1971
PhD, Virginia Commonwealth University, 1998

Sullo, Elaine

Adjunct Assistant Professor

BA, University of Connecticut, 1992
MLS, Southern Connecticut State, 2002

Sundaram, Appavu Kalyana

Adjunct Assistant Professor

BSc, Barathiar University (India), 1988
MSc, Annamalai University (India), 1990
PhD, Ohio State University, 1997

Sutherland, Alan R.

Collegiate Professor
BFA, Pratt Institute, 1964
PhD, New York University, 1984

Sweeney, Michael

Adjunct Associate Professor
BA, Aquinas College, 1975
BS, Aquinas College, 1975
MBA, University of Detroit, 1977
PhD, University of Kentucky, 1994

Szporer, Michael M.

Collegiate Associate Professor
BA, Hunter College, 1969
MA, Indiana University Bloomington, 1980
PhD, Indiana University Bloomington, 1980

Tenenbaum, Jacob E.

Adjunct Professor
BS, University of Pittsburgh, 1969
MPH, University of Pittsburgh, 1973
DPA, Nova University, 1984

Terrell, Sharron L.

Adjunct Associate Professor
BA, Marygrove College, 1980
MA, University of Notre Dame, 1986
PhD, University of Notre Dame, 1993

Terwilliger, Thom

Adjunct Associate Professor
BS, Christopher Newport College 1983
MBA, Golden Gate University, 1983
EdD, College of William and Mary, 1992

Thayer, Richard

Collegiate Professor
BA, Mary Immaculate Seminary and College, 1958
PhD, Saint Louis University, 1966

Theis, John

Adjunct Professor
BBA, University of Texas at Austin
MBA, University of Texas at Austin, 1969
JD, South Texas College of Law, 1976
PhD, University of North Texas, 1997

Thomas, Jennifer A.

Adjunct Assistant Professor
BA, St. Mary's College of Maryland, 1995
MLS, University of Maryland, College Park, 2000

Tillery-Larkin, Rochelle

Adjunct Assistant Professor
BA, Howard University, 1993
MA, University of Maryland, College Park, 1995
PhD, Southern Illinois University, 1999

Tinerella, Vincent P.

Adjunct Assistant Professor
BA, Northeastern Illinois University, 1982
MA, DePaul University, 1994
MLIS, Dominican University, 1998

Tobe, Brenda H.

Adjunct Associate Professor
BS, Hampton University, 1975
MA, George Washington University, 1975
DPA, George Washington University, 1985

Todino, Honorio

Adjunct Professor
BS, University of the Philippines, 1981
MBA, University of Virginia, 1985
PhD, University of Western Ontario (Canada), 1994

Toplin, Marc B.

Adjunct Associate Professor
BA, Temple University, 1975
MA, University of Maryland, College Park, 1977
MBA, American University, 1986

Trittipio, Tom L.

Collegiate Professor
BBA, University of Central Oklahoma, 1973
BS, Oklahoma Baptist University, 1975
MEd, University of Central Oklahoma, 1977
PhD, University of Oklahoma, 1985

Tsai, Henry W. H.

Adjunct Associate Professor
BS, National Chung-Hsing University (Taiwan), 1973
MS, National Taiwan University (Taiwan), 1975
PhD, University of Maryland, College Park, 1985

Tschechtelin, James D.

Adjunct Professor
BA, University of Kansas, 1965
MA, Ohio University, 1967
EdD, George Washington University, 1977

Tucker, Shin-Ping Liu

Adjunct Associate Professor
BA, Tunghai University (Taiwan)
MS, University of North Texas, 1996
PhD, University of North Texas, 2001

Tunon, Johanna R.

Adjunct Professor
BA, Valparaiso University, 1971
MLS, Texas Woman's University, 1989
EdD, Nova Southeastern University, 1999

Turner, Marvin W.

Adjunct Associate Professor
BBA, Howard University, 1981
MBA, George Washington University, 1988
JD, Georgetown University, 1998

Uberoi, Vikas

Collegiate Assistant Professor
BT, Banaras Hindu University (India), 1991
DSc, Tulane University, 1996
MBA, University of Navarra (Spain), 2002

Umbert, Wanda L.

Adjunct Professor
BS, Lubbock Christian College, 1979
MS, Arizona State University, 1982
EdD, University of New Mexico, 1999

Uri, Noel D.

Adjunct Professor
BA, San Diego State College, 1967
MA, San Diego State College, 1969
PhD, University of Illinois, 1974

Usilaner, Brian

Collegiate Professor
BS, New York University, 1962
MS, New York University, 1963
DSc, George Washington University, 1971

Varghese, John V.

Adjunct Assistant Professor
BS, University of Maryland University College, 1990
MBA, Central Michigan University, 1995
PhD, Argosy University/Sarasota, 2003

Versace, Stephen V.

Collegiate Professor
BA, University of Maryland, College Park, 1970
MS, Central Missouri State University, 1972
PhD, University of Maryland, College Park, 1978

Viamonte, Gail

*Chair, Teacher Education Programs, and
Collegiate Associate Professor*
BA, Alfred University, 1971
MA, Pennsylvania State University, 1996
PhD, Pennsylvania State University, 1996

Vikas, Shree

Adjunct Assistant Professor
BS, Indian School of Mines (India), 1989
MEng, Syracuse University, 1974
PhD, State University of New York at Albany, 1998

Vockley, Joseph G.

Adjunct Associate Professor
BS, Pennsylvania State University, 1983
PhD, University of Delaware, 1991

Vucetic, Jelena

Adjunct Assistant Professor
BSEE, University of Belgrade (Yugoslavia), 1983
MSCS, University of Belgrade (Yugoslavia), 1986
PhD, University of Belgrade (Yugoslavia), 1990

Wakim, Nagi T.

Adjunct Professor
BS, College of Staten Island, City University of
New York, 1983
MS, Polytechnic Institute of New York, 1985
PhD, Polytechnic University, 1989

Wallace, Patricia M.

Adjunct Professor
BA, University of Texas at Austin, 1969
MS, University of Maryland University College,
2000
PhD, University of Texas at Austin, 1973

Wandersee, Kim

Adjunct Assistant Professor
MS, University of Maryland University College, 2000
MS, Missouri State University
BS, University of Missouri

Ward, David O.*Adjunct Professor*

BA, Queens College of the City University of New York, 1975

MS, Pepperdine University, 1977

JD, Pace University, 1987

Ward, Raymond C.*Adjunct Associate Professor*

BA, State University of New York at Stony Brook, 1979

MA, State University of New York at Binghamton, 1982

MS, Central Michigan University, 1989

PhD, Capella University, 2002

Weatherford, Smiley W.*Adjunct Associate Professor*

BBA, University of Georgia, 1966

MHA, Georgia State University, 1973

PhD, University of Georgia, 1982

Weissbein, Daniel A.*Adjunct Assistant Professor*

BA, George Washington University, 1991

MA, Michigan State University, 1996

PhD, Michigan State University, 2000

Wensveen, John G.*Adjunct Assistant Professor*

BA, University of Victoria, Canada

MPhil, University of Wales Cardiff, UK

PhD, University of Wales Cardiff, UK, 1999

West, Barry C.*Adjunct Assistant Professor*

BS, Northern Michigan University, 1985

MS, Central Michigan University, 1990

MS, University of Maryland University College, 2002

White, Lawrence M.*Adjunct Associate Professor*

BA, King's College, 1964

MA, Fielding Institute, 1995

PhD, Fielding Institute, 1997

Whitest, Beverly J.*Adjunct Assistant Professor*

BS, North Carolina Agricultural and Technical State University, 1974

MEd, University of Maryland, College Park, 1994

PhD, University of Maryland, College Park, 1999

Whitley, Janet L.*Adjunct Assistant Professor*

BA, Temple University, 1988

PhD, Indiana University, 1998

Whittemore, Abel A.*Adjunct Professor*

BA, Loma Linda University, 1979

MS, Loma Linda University, 1982

DBA, Alliant International University, San Diego, 1986

Wilcox, Bonita*Adjunct Associate Professor*

PhD, University of Pittsburgh, 1990

Williams, Robert S.*Adjunct Assistant Professor*

BS, California Institute of Technology

PhD, University of Maryland, College Park, 1971

Williams, Victoria R.*Collegiate Assistant Professor*

BA, University of Maryland University College, 1994

MS, University of Maryland University College, 2000

Williamson, Ron*Adjunct Assistant Professor*

BS, University of California, Los Angeles

MS, University of California, Los Angeles

PhD, University of Southern California, 1984

Williams-Stanton, Sonya*Adjunct Associate Professor*

BA, Brown University, 1984

MBA, University of Michigan, 1986

PhD, University of Michigan, 1994

Willnat, Annette*Collegiate Associate Professor*

BS, Oklahoma State University, 1991

MS, Oklahoma State University, 1991

PhD, University of Oklahoma, 1994

Wilson, Clay*Adjunct Assistant Professor*

MS, University of Maryland University College, 1994

PhD, George Mason University, 2001

Wilson, Elizabeth C.*Adjunct Associate Professor*

BS, Thomas A. Edison State College, 1976

MBA, Colorado State University, 1992

PhD, The Fielding Institute, 1997

Windelberg, Marjorie E.*Adjunct Associate Professor*

BA, University of Rochester, 1973

PhD, University of North Carolina, 1978

Winters, Dennis E.*Adjunct Associate Professor*

BA, Western Montana College, 1958

MA, University of Montana, 1960

PhD, Southern Illinois University, 1968

Winters, Irving*Adjunct Professor*

PhD, University of Massachusetts Amherst, 1988

Witz, Laura Drake*Collegiate Associate Professor*

BA, Southern Illinois University, 1986

MA, Michigan State University, 1993

PhD, Michigan State University, 1995

Wojdak, Joseph F.*Adjunct Associate Professor*

BS, University of Scranton, 1962

MBA, University of Scranton, 1964

PhD, Louisiana State University, Baton Rouge, 1968

Wolk, Peter*Adjunct Associate Professor*

BA, Trinity College, 1977

ME, Harvard University, 1978

JD, American University, 1984

Woodward, Katherine S.*Program Director, Education, and Collegiate**Associate Professor,*

BA, Harvard University, 1972

MAT, Brown University, 1973

PhD, University of Maryland, College Park, 1988

Yan, Jijin*Adjunct Assistant Professor*

BS, Peking University (China), 1983

MS, Zhejiang University (China), 1991

PhD, George Washington University, 2002

Yates, Frances*Adjunct Assistant Professor*

BA, Purdue University, 1979

MA, Indiana University, 1981

Yazdipour, Rassoul*Adjunct Professor*

BBA, Tehran Business School (Iran), 1974

MBA, Indiana University, 1985

PhD, Ohio State University, 1987

Yesilyaprak, Ata*Adjunct Associate Professor*

BS, Gazi University (Turkey), 1981

MBA, Southeastern Louisiana University, 1988

MA, University of New Orleans, 1992

PhD, University of New Orleans, 1995

Yilmaz, Levent*Adjunct Assistant Professor*

BS, Bilkent University, 1993

MS, VPI & State University, 1993

PhD, VPI & State University, 2002

Zaffarano, Mark*Adjunct Associate Professor*

BA, University of Virginia, 1977

MPA, University of Southern California, 1979

DPA, George Mason University, 1992

Zietlow, John*Adjunct Professor*

BS, Ohio State University, 1978

MBA, Ohio State University, 1979

DBA, University of Memphis, 1985

Zuba, Marge Tye*Adjunct Associate Professor*

BS, St. Mary-of-the-Woods

MSW, University of Illinois, Chicago, 1973

EdD, Northern Illinois University, 1990

POLICY ON STUDENT CLASSIFICATION FOR ADMISSION, TUITION, AND CHARGE DIFFERENTIAL PURPOSES

(Approved by the Board of Regents August 28, 1990; Amended July 10, 1998; Amended November 27, 2000; Amended April 11, 2003)

I. Policy

It is the policy of the Board of Regents of the University System of Maryland (USM) to recognize the categories of in-state and out-of-state students for the purpose of admission, tuition, and charge differentials at those institutions where such differentiation has been established.

- A. An in-state student is a student whom the university determines to be a permanent resident of the state of Maryland. For the purposes of this policy, "permanent resident" is defined as a person who satisfies all the following conditions and has done so for at least twelve (12) consecutive months immediately prior to and including the last date available to register for courses in the semester/term for which the person seeks in-state status:
 1. Is not residing in the state of Maryland primarily to attend an educational institution;
 2. Owns and continuously occupies or rents and continuously occupies living quarters in Maryland. There must exist a genuine deed or lease in the individual's name reflecting payments/rents and terms typical of those in the community at the time executed. Persons not having such a lease may submit an affidavit reflecting payments/rents and terms, as well as the name and address of the person to whom payments are made that may be considered as meeting this condition. As an alternative to ownership or rental of living quarters in Maryland, a student may share living quarters in Maryland that are owned or rented and occupied by a parent, legal guardian, or spouse;
 3. Maintains within Maryland substantially all personal property;
 4. Pays Maryland income tax on all earned taxable income, including all taxable income earned outside the state;
 5. Registers all owned motor vehicles in Maryland in accordance with Maryland law;
 6. Possesses a valid Maryland driver's license, if licensed, in accordance with Maryland law;
 7. Is registered in Maryland, if registered to vote;
 8. Receives no public assistance from a state other than the state of Maryland or from a city, county, or municipal agency other than one in Maryland; and
 9. Has a legal ability under federal and Maryland law to live permanently without interruption in Maryland.

- B. In addition, persons with the following status shall be accorded the benefits of in-state status for the period in which they hold such status:
 1. A full-time or part-time (at least 50-percent-time) regular employee of the USM.
 2. The spouse or financially dependent child of a full-time or part-time (at least 50-percent-time) regular employee of the USM.
 3. A full-time active member of the Armed Forces of the United States whose home of residency is Maryland or one who resides or is stationed in Maryland, or the spouse or a financially dependent child of such a person.
 4. For UMUC, a full-time active member of the Armed Forces of the United States on active duty, or the spouse of a member of the Armed Forces of the United States on active duty.
 5. A graduate assistant appointed through the USM for the semester/term of the appointment. Except through prior arrangement, this benefit is available only for enrollment at the institution awarding the assistantship.
- C. Students not entitled to in-state status under the preceding paragraphs shall be assigned out-of-state status for admission, tuition, and charge-differential purposes.
- D. Assignment of in-state or out-of-state classification will be made by the university upon an assessment of the totality of facts known or presented to it. The person seeking in-state status shall have the burden of proving that he or she satisfies all requirements.
- E. Either of the following circumstances raise a presumption that the student is residing in the state of Maryland primarily for the purpose of attending an educational institution:
 1. The student was attending high school or residing outside Maryland at the time of application for admission to a USM institution, or
 2. The student is both (a) not financially independent and (b) is financially dependent upon a person who is not a resident of Maryland.

The burden shall be on the student to rebut the presumption.

II. Procedures

- A. An initial determination of in-state status will be made by the university at the time a student's application for admission is under consideration. The determination made at that time, and any determination made thereafter, shall prevail for each semester/term until the determination is successfully challenged in a timely manner.
- B. A change in status must be requested by submitting a USM "Petition for Change in Classification for Admission, Tuition, and Charge Differential." A student applying for a change to in-state status must fur-

nish all required documentation with the petition by the last published date to register for the forthcoming semester/term for which the change in classification is sought.

- C. The student shall notify the institution in writing within fifteen (15) days of any change in circumstances that may alter in-state status.
- D. In the event incomplete, false, or misleading information is presented, the institution may, at its discretion, revoke in-state status and take disciplinary action provided for by the institution's policy. Such action may include suspension or expulsion. If in-state status is gained due to false or misleading information, the university reserves the right to retroactively assess all out-of-state charges for each semester/term affected.
- E. Each institution of the USM shall develop and publish additional procedures to implement this policy. Procedures shall provide that on request the president or designee has the authority to waive any residency criterion set forth in Section I if it is determined that the student is indeed a permanent resident and the application of the criteria creates an unjust result. These procedures shall be filed with the Office of the Chancellor.

III. Definitions

- A. Financially Dependent: For the purposes of this policy, a financially dependent student is one who is claimed as a dependent for tax purposes or who receives more than one-half of his or her support from another person during the twelve- (12-) month period immediately prior to the last published date for registration for the semester or session. If a student receives more than one-half of his or her support in the aggregate from more than one person, the student shall be considered financially dependent on the person providing the greater amount of support.
- B. Financially Independent: A financially independent student is one who (1) declares himself or herself to be financially independent as defined herein; (2) does not appear as a dependent on the federal or state income tax return of any other person; (3) receives less than one-half of his or her support from any other person or persons; and (4) demonstrates that he or she provides through self-generated support one-half or more of his or her total expenses.
- C. Parent: A parent may be a natural parent, or, if established by a court order recognized under the law of the state of Maryland, an adoptive parent.
- D. Guardian: A guardian is a person so appointed by a court order recognized under the law of the state of Maryland.
- E. Spouse: A spouse is a partner in a legally contracted marriage.

- F. Child: A child is a natural child or a child legally adopted pursuant to a court order recognized under the law of Maryland.
- G. Self-Generated: Self-generated describes income that is derived solely from compensation for an individual's own efforts as evidenced, for example, by federal or state W-2 forms or IRS Form 1099, where interest income is based upon finances created from one's own efforts. For the purposes of this policy, grants, stipends, awards, benefits, loans, and gifts (including federal and state aid, grants, and loans) may not be used as self-generated income.
- H. Regular Employee: A regular employee is a person employed by the USM who is assigned to a state budget line or who is otherwise eligible to enroll in a state retirement system. Examples of categories not considered regular employees are graduate students, contingent employees, and independent contractors.

IV. Implementation

This policy as amended by the Board of Regents on November 27, 2000, shall be applied to all student residency classification decisions made on or after this date.

POLICY ON RELIGIOUS OBSERVANCES

(UMUC Policy 51.00)

- I. UMUC conforms to the Board of Regents Policy III-5.10 Concerning the Scheduling of Academic Assignments on Dates of Religious Observance, approved on January 11, 1990.
- II. So that the academic programs and services of UMUC shall be available to all qualified students who have been admitted to its programs, regardless of their religious beliefs, students shall not be penalized because of observances of their religious holidays. Students who miss a course session because of an observance of their religious beliefs must be allowed
 - To make up any examinations, other written tests, or class work;
 - To have access to any handouts or other material distributed in class; and
 - To have the opportunity to obtain or review any duplicated lecture notes or slides presented in class.
- III. UMUC prohibits scheduling examinations on the following religious holidays: Rosh Hashanah, Yom Kippur, and Good Friday.

SHARED GOVERNANCE

(From UMUC Policy 20.20)

In accordance with Board of Regents I-6.00 Policy on Shared Governance in the University System of Maryland, UMUC developed a new worldwide shared governance structure. Each of the three primary stakeholder groups—students, faculty, and staff—of UMUC has an advisory council consisting of elected representatives. These councils advise senior UMUC leadership on broad issues related to the university's strategic planning, communications, academic initiatives, and other issues. Further, there is a University Advisory Council, made of representatives from each of the three stakeholder councils, to advise and assist the president of UMUC.

Student Advisory Council

The Student Advisory Council consists of twelve (12) student representatives from UMUC locations worldwide and includes both undergraduate and graduate students. Student Advisory Council representatives serve on the overall University Advisory Council, the Graduate Council, and the Undergraduate Curriculum Committee. The Student Advisory Council provides senior management with critical input on a wide variety of institutional initiatives that affect students and student life at UMUC. To learn more about the Student Advisory Council or contact a representative, students should visit the Web page at www.umuc.edu/gov/stac.

POLICIES AND REGULATIONS ON 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, or 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 state, federal, and/or local authorities for prosecution in the courts. See www.umuc.edu/inform/report.html for additional information.

FINANCIAL AID—SATISFACTORY ACADEMIC PROGRESS, GRADUATE

(UMUC Policy 220.31)

Financial aid is intended to meet the financial needs of the student who otherwise could not or would not consider continuing their education. Students who receive financial aid must not only demonstrate financial need, but must also make satisfactory progress as determined by University of Maryland University College in accordance with federal regulations.

Financial aid recipients are required to be in good standing and to maintain satisfactory academic progress toward their degree requirements for each semester/term in which they are enrolled. Satisfactory academic progress, as described below, is evaluated three times annually, in January, June, and August. Failure to maintain satisfactory progress, as described below, may result in cancellation of financial aid awards, and the student may have to repay any funds already received.

Basic Standard for Graduate Students

UMUC's institutional requirements for minimum satisfactory performance for financial aid recipients are defined as follows:

1. **Minimum cumulative grade-point average (GPA).**
Graduate students must maintain a minimum cumulative GPA of 3.0.
2. **Minimum passing grade.**
The minimum passing grade for a graduate student is a B grade for each course. A student may not receive a grade of C or below for a course in the most recent semester of enrollment and be considered to meet the minimum academic standards.
3. **Minimum cumulative completion rate.**
Graduate students must maintain a minimum cumulative completion rate of two-thirds of credits attempted (67 percent).
4. **Maximum timeframe to completion.**
The federally mandated maximum timeframe to complete the program or degree. The student must complete his or her educational program within a time frame no longer than 150 percent of the published length of the educational program (for example, complete his or her program after attempting a maximum of 54 credits for a 36-credit program).

Federal regulations require that UMUC track the academic progress of financial aid recipients from the first date of enrollment at UMUC, whether or not financial aid was received. Credits transferred from all other credit sources will be considered as attempted and completed credits in the evaluation of the completion rate standards.

Students who do not earn their degree within the maximum timeframe to completion, outlined above, will be placed on

Financial Aid Denied status, not Financial Aid Probation. No financial aid will be disbursed for the student during subsequent semesters/periods of enrollment unless the student has made an appeal of the Financial Aid Denied and the appeal is granted.

Treatment of W, I, AU, F, S, P, RT, H, and G Grades, No Grade Reported, and Repeated Coursework

1. Course withdrawals (W) after the drop/add period are not included in the GPA calculation, but are considered a non-completion of attempted coursework.
2. Incomplete (I) grades are not included in the GPA calculation and are considered a noncompletion of attempted coursework until the Incomplete grade is replaced with a permanent grade and academic progress can be re-evaluated.
3. An audit (AU) grade or a course taken out of sequence (H) grade is not considered attempted coursework. It is not included in the GPA calculation or completion rate determinations.
4. A satisfactory (S) grade, a passing (P) grade, or a repeat through transfer credit (RT) grade is treated as attempted credits which are earned, but is not included in calculation of GPA.
5. F grades will be treated as attempted credits that were not earned and so will be included both in the calculation of GPA and minimum completion rate.
6. If a grade pending (G) or no grade is assigned, for any reason, it will not be included in the GPA calculation and will not be considered a noncompletion of attempted coursework until a grade is assigned and academic progress is reevaluated.
7. The highest grade earned in a course that is repeated will count in the GPA computation, but every repeated attempt will be included in the completion rate determinations. No financial aid can be disbursed for a repeated attempt if the student already has achieved a passing grade for that course.

Financial Aid Probation Status

Graduate students who fail to meet the minimum 3.0 cumulative grade-point average standard or fail to complete at least two-thirds of cumulative credits attempted or who receive a grade of C or below for a course in the most recent semester/period of enrollment will be placed on Financial Aid Probation for the subsequent semesters/periods of enrollment. Financial aid can be received during the semesters/terms of probation. Financial aid disbursements for the next period of enrollment will be held until the grades and course completions have been reviewed for the probationary semesters/periods of enrollment of Financial Aid Probation.

Students receiving financial aid for the first time will be placed on Financial Aid Probation if they do not meet the minimum

grade point average or course completion standards as noted in this policy in a previous semester/period of enrollment at UMUC.

Financial Aid Denied Status

Students who, while on Financial Aid Probation or on Financial Aid Denied status, fail to maintain the minimum completion rate of 67 percent and/or fail to maintain a minimum cumulative GPA of 3.0 or better and/or receive a grade of C or below for a course in the most recent semester/period of enrollment will be placed on Financial Aid Denied status for subsequent semesters/periods of enrollment. No financial aid will be disbursed during subsequent semesters/periods of enrollment until the student is removed from Financial Aid Denied status.

Graduate students who do not earn their degree within the maximum timeframe to completion will be placed in Financial Aid Denied status. No aid will be disbursed during subsequent semesters/periods of enrollment unless the student has made an appeal and the appeal is granted for that semester/period of enrollment. There are no exceptions to this requirement.

Reinstatement of Aid After Financial Aid Denied Status

Reinstatement of financial aid after a student is placed in Financial Aid Denied status is achieved in one of the following ways:

1. The student submits a written letter of appeal in accordance with the appeal process and the Financial Aid Appeals Committee grants the appeal. The student is placed on Financial Aid Probation for the semester/period of enrollment rather than in Financial Aid Denied status.
2. The student attends UMUC, pays for tuition and fees without the help of student financial aid, and does well enough in the coursework to satisfy all the satisfactory academic progress standards. The student regains aid eligibility in a probationary status. Students who are in Financial Aid Denied status for failure to graduate within the maximum timeframe to completion cannot regain eligibility this way. Students who are beyond the maximum timeframe to completion cannot regain financial aid eligibility except on a semester/period of enrollment-by-semester/period of enrollment basis through the appeal process.

Appeal Process

The student must submit an appeal of Financial Aid Denied status in writing to the associate director of Financial Aid by the date specified in the Financial Aid Denied notification letter. The Financial Aid Appeals Committee will review the appeal and notify the student in writing of their decision within 14 working days after the Appeals Committee meets and makes its determination.

DISCLOSURE OF STUDENT RECORDS

(UMUC Policy 210.14)

I. Introduction

UMUC complies with the Family Educational Rights and Privacy Act (FERPA) of 1974 (also known as “the Buckley Amendment”) which protects the privacy of students. In accordance with FERPA, this policy informs students of their rights to

- A. Inspect and review their education records;
- B. Seek an amendment of their education records, where appropriate;
- C. Limit disclosure to others of personally identifiable information from education records without the student’s prior written consent; and
- D. File formal complaints alleging a violation of FERPA with the Department of Education.

II. Definitions

- A. “Student” is an individual who is attending or who has attended UMUC. It does not include any applicant for admission to UMUC who does not matriculate, even if he or she previously attended UMUC.
- B. “Education records” are records that contain information directly related to a student that are maintained by UMUC or by a third party on behalf of UMUC. The following records are not education records:
 1. Campus police or security (“law enforcement unit”) records maintained solely for law enforcement purposes and maintained by that law enforcement unit.
 2. Employment records, except where a currently enrolled student is employed as a result of his or her status as a student.
 3. Records of a physician, psychologist, or other recognized professional or paraprofessional if made or used only for treatment purposes and available only to persons providing treatment.
 4. Records that contain only information relating to a person’s activities after that person is no longer a student at UMUC.

III. Inspection and Review of Education Records by Students

- A. Right of Access
 1. Each student has a right of access to his or her education records, except financial records of the student’s parents and confidential letters of recommendation received prior to January 1, 1975.
 2. A student may, by a signed writing, waive his or her right of access to confidential recommendations in

three areas: admission to any educational institution, job placement, and receipt of honors and awards. UMUC will not require such waivers as a condition for admission or receipt of any service or benefit normally provided to students. If the student chooses to waive his or her right of access, he or she will be notified, upon written request, of the names of all persons making confidential recommendations. Such recommendations will be used only for the purpose for which they were specifically intended. A waiver may be revoked in writing at any time; and the revocation will apply to all subsequent recommendations, but not to recommendations received while the waiver was in effect.

- B. Custodians of Education Records
The custodian of education records is
 1. For UMUC–Adelphi: the registrar located in Adelphi, Maryland.
 2. For UMUC–Asia: the registrar located in Tokyo, Japan.
 3. For UMUC–Europe: the registrar located in Heidelberg, Germany.
 4. For Mannheim: the registrar located in Heidelberg, Germany.
 5. For Schwäbisch Gmünd: the registrar located in Adelphi, Maryland.
- C. Procedure to Request Review and/or Inspection of Education Records

Requests for review and/or inspection of education records should be made in writing to the appropriate custodian of records, as defined above. The custodian of records or designee will comply with a request for access within a reasonable time by arranging for the student to review his or her records in the presence of a staff member. If facilities permit, a student may obtain copies of his or her records by paying reproduction costs. The fee for copies is 50 cents per page. UMUC will not provide copies of any transcripts in the student’s records other than the student’s current UMUC transcript. Official transcripts (with the seal of UMUC) will be provided for a separate fee.

IV. Amendment of Education Records

Students may request an amendment of their education records in accordance with this procedure.

- A. Request to Amend Education Records
A student who believes that his or her education record is inaccurate, misleading, or in violation of the student’s rights of privacy may ask the custodian of the education records to amend the record. The custodian of the education records or designee will decide whether to amend the record within a reasonable time after the request. If the custodian of the education records or designee decides not to amend the record, he or she will inform the student of the right to a hearing.

B. Hearings

1. A student may submit a written request for a hearing to challenge the content of his or her education records to the university registrar. The written request must state what records the student believes are inaccurate, misleading, or in violation of the privacy rights of the student.
2. A hearing will be conducted by the university registrar or designee. The hearing may take place via telephone or video conferencing. The student will be given an opportunity to present evidence relevant to the issues raised and may be assisted or represented by individuals of his or her choice at his or her own expense, including an attorney.
3. Within a reasonable period of time after the conclusion of a hearing, the university registrar will notify the student in writing of his decision. The written decision will include a summary of the evidence and the reasons for the decision.
 - a. If the university registrar determines that the education record is inaccurate, misleading, or in violation of the privacy of the student, the education records will be amended. The university registrar will inform the student of the amendment in writing.
 - b. If, as a result of the hearing, the university registrar decides that the education record is not inaccurate, misleading, or otherwise in violation of the privacy rights of the student, he will inform the student of the right to place a statement in the record commenting on the contested information in the record or stating why he or she disagrees with the decision of the agency or institution, or both. Any such explanation will be kept as part of the student's record as long as the contested portion of the record is kept and will be disclosed whenever the contested portion of the record is disclosed.

V. Disclosures

UMUC will not disclose education records or the personally identifiable information contained therein unless permitted by FERPA and under the following circumstances:

A. Prior Written Consent

The custodian of the records will provide the education records or personally identifiable information contained therein if the student provides prior written consent that the information may be disclosed. The consent must

1. Specify the records that may be disclosed;
2. State the purpose for the disclosure;

3. Identify to whom the disclosure is to be made; *and*

4. Be signed and dated by the student.

At the student's request and expense, a copy of the records disclosed will be provided to the student.

B. Directory Information

1. UMUC designates the following categories of information as directory information:
 - a. Name;
 - b. Major field of study;
 - c. Dates of attendance;
 - d. Degrees and awards received;
 - e. Previous educational institution most recently attended; and
 - f. Birth date.
2. Directory information may be disclosed in the absence of consent unless the student files a written notice, within three weeks of the first day in which the student is enrolled, informing UMUC not to disclose any or all of the categories. To prevent automatic disclosure of directory information, this notice must be filed annually within the time allotted above, with the appropriate custodian of the education records, as defined in this policy.

C. Additional Disclosures Without Prior Consent

Prior consent is not required for disclosure of education records or the personally identifiable information contained therein in the following circumstances:

1. The disclosure is to other school officials generally within the University System of Maryland (USM) or UMUC who have legitimate educational interests.
 - a. "School officials" includes internal and external instructional or administrative personnel who are or may be in a position to use the information in furtherance of a legitimate educational objective, such as to provide student services. This includes, but is not limited to, faculty, staff members, and security personnel.
 - b. "Legitimate educational interests" include interests directly related to the academic environment.
2. The disclosure is to officials of other schools in which a student seeks to enroll or is enrolled. Upon his or her request and at his or her expense, the student is provided with a copy of the records that have been transferred.
3. The disclosure is to authorized representatives of the comptroller general of the United States, the secretary of the U.S. Department of Education, and state or local educational authorities.
4. The disclosure is to authorized persons and organizations in connection with a student's application

for, or receipt of, financial aid—but only to the extent necessary for such purposes as determining eligibility, amount, conditions, and enforcement of terms and conditions.

5. The disclosure is to state and local officials to whom, according to effective state law adopted prior to November 19, 1974, such information is specifically required to be reported.
6. The disclosure is to organizations conducting educational studies for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction. The studies shall be conducted so as not to permit personal identification of students to outsiders, and the information is destroyed when it is no longer needed for those purposes.
7. The disclosure is to accrediting organizations for purposes necessary to carry out their functions.
8. The disclosure is to the parent of a student who is dependent for income tax purposes. (*Note:* UMUC may require documentation of dependent status, such as copies of income tax forms.)
9. The disclosure is to comply with a judicial order or lawfully issued subpoena. Unless expressly prohibited by the subpoena, UMUC will make a reasonable effort to notify the student or parent of the order or subpoena in advance of compliance in order to give them time to seek protective action.
10. The disclosure is in connection with a health or safety emergency.
11. The disclosure is to an alleged victim of any crime of violence, of the results of any disciplinary proceeding conducted by UMUC against the alleged perpetrator of that crime with respect to that crime.
12. The disclosure is to an alleged victim of any crime of violence of the results of any disciplinary proceeding conducted by UMUC against the alleged perpetrator of that crime with respect to that crime.

D. Record of Disclosures

UMUC maintains with the student's education records a record of each request and each disclosure, except for

1. Disclosures to the student himself or herself.
2. Disclosures made pursuant to the written consent of the student (the written consent itself suffices as a record).
3. Disclosures to USM instructional or administrative officials.
4. Disclosures of directory information. This record of disclosures may be inspected by the student, the official custodian of the records, and other officials of UMUC and governmental officials.

VI. Right to File Complaint

A student alleging that UMUC has not complied with the Family Educational Rights and Privacy Act (FERPA) may file a student grievance in accordance with UMUC's Student Grievance Procedures (Policy 130.70) or submit a written complaint to

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-4605

INTELLECTUAL PROPERTY

(UMUC Policy 190.0)

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 on the Web at www.umuc.edu/policy/research19000.shtml.

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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 (215-662-5606). 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 40.30 Policy and Procedures on Affirmative Action, Equal Opportunity, and Sexual Harassment (www.umuc.edu/policy/admin04030.shtml). 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 director of Diversity Initiatives, Office of the President, UMUC, 3501 University Boulevard East, Adelphi, MD 20783-8000 (phone 800-888-UMUC, ext. 7940).

Visit UMUC on the Web at
www.umuc.edu

To speak with a UMUC academic
advisor or an enrollment specialist, call

800-888-UMUC

or send an e-mail to

gradschool@umuc.edu.

ABOUT UMUC

University of Maryland University College (UMUC) is one of the 11 degree-granting institutions of the University System of Maryland. The global university specializes in high-quality, career-oriented degree and non-degree programs tailored to the needs of today's working adults.

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 for lifelong learning to students in Maryland, as well as throughout the United States and the world. UMUC serves its students through undergraduate and graduate degree and certificate programs, noncredit leadership development and customized programs, as well as conference services at its Inn and Conference Center in Adelphi, Maryland. For more information regarding UMUC and its programs, visit www.umuc.edu.



University of Maryland University College

*Graduate School of Management & Technology
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Adelphi, MD 20783-8030 USA*

University of Maryland University College is a constituent institution of the University System of Maryland.