



University of Maryland University College

**Master of Science in Technology Management (TMAN)
Information and Technology Systems Department**

PROGRAM ASSESSMENT PLAN
Program Outcomes and Learning Assessment Criteria

Summer 2007

Master of Science in Technology Management Program

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PROGRAM OVERVIEW

The Master of Science in Technology Management Program 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. Core courses focus upon a common management competency, while specializations 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 specialization areas: Homeland Security Management, Systems Engineering, Information Systems and Services, E-Business, Distance Education and Technology, Project Management.

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PROGRAM OF STUDY

RECOMMENDATIONS

Students who wish to improve graduate writing skills may take COMM 600, Academic and Professional Writing (3), during the first semester.

CORE COURSES

UCSP 611	Introduction to Graduate Library Research Skills	0 credit hours
TMAN 611	Principles of Technology Management	3 credit hours
TMAN 614	Strategic Management of Technology and Innovation	3 credit hours
TMAN 625	Economic and Financial Aspects of Technology-Based Firms	3 credit hours
TMAN 632	Organizational Performance Management	3 credit hours
TMAN 633	Managing People in Technology-Based Organizations	3 credit hours

Clustered Course Option: TMAN 600 Foundations of Management and Technology (6) is a six-credit course. Students who receive credit for TMAN 600 may not receive credit for TMAN 611 or TMAN 633.

SPECIALIZATIONS

Students must select one of the following five specializations and take the corresponding seven 3-credit courses (21 credits).

Homeland Security Management (HSMN) Specialization

HSMN 610	Concepts in Homeland Security	3 credit hours
HSMN 620	Physical Security	3 credit hours
INFA 630	Business Continuity: Disaster Recovery Planning and Response	3 credit hours
HSMN 660	Security, Policy, Ethics, and the Legal Environment	3 credit hours
BSBD 641	Biosecurity and Bioterrorism	3 credit hours
ENER 603	Energy Infrastructure	3 credit hours
HSMN 670	Seminar in Homeland Security (Capstone Course)	3 credit hours

Specialization Rules: HSMN 610 must be taken as one of the first two specialization courses

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Information Systems and Services (ISAS) Specialization

ISAS 600	Information Systems for Managers)	3 credit hours
ISAS 610	Information Systems Management and Integration	3 credit hours
ISAS 620	Information Systems Sourcing Management	3 credit hours
ISAS 630	Systems Analysis and Design	3 credit hours
ISAS 640	Decision Support Systems and Expert Systems	3 credit hours
ISAS 640	Information Technology, the CIO, and Organizational Transformation	3 credit hours
IMAT639	Internet Multimedia Applications	3 credit hours

Specialization Rules: ISAS 600 is the prerequisite to all other courses in this specialization

E-Business (EBUS) Specialization

EBUS 610	Introduction to E-Business	3 credit hours
EBUS 620	E-Marketing	3 credit hours
EBUS 630	Social, Legal, Ethical and Regulatory Issues	3 credit hours
EBUS 640	E-Technology	3 credit hours
EBUS 650	E-Development and Management	3 credit hours
EBUS 660	E-Business Economics	3 credit hours
EBUS 670	E-Business Capstone (Capstone Course)	3 credit hours

Specialization Rules: Courses must be taken in the order as shown above

Distance Education Technology (DETC) Specialization

DEPM 604	Leadership in Distance Education	3 credit hours
DETT 607	Instructional Design and Course Development in Distance Education	3 credit hours
DETC 630	Synchronous and Asynchronous Learning Systems in Distance Education	3 credit hours
DETC 620	Training and Learning with Multimedia	3 credit hours
DEPM 625	Distance Education, Globalization and Development	3 credit hours
IMAT 639	Internet Multimedia Applications	3 credit hours
OMDE 670	Portfolio and Project in Distance Education (Capstone Course)	3 credit hours

Project Management (PMAN) Specialization

PMAN 634	Foundations of Project Management	3 credit hours
PMAN 637	Risk Management: Tools and Techniques	3 credit hours
PMAN 638	Communication, Negotiation and Conflict Resolution	3 credit hours
PMAN 639	Project Knowledge Management	3 credit hours
PCMS 627	Legal Aspects of Contracting	3 credit hours
PMAN 650	Financial Management of Projects	3 credit hours
PMAN 670	Advanced Project Methods (Capstone Course)	3 credit hours

Specialization Rules: PMAN 634 must be taken as the first course.

Clustered Course Option: PMAN 600 Project Management Foundations and Advanced Methods (6) is a six-credit course. Students who receive credit for PMAN 600 may not receive credit for PMAN 634 or PMAN 670.

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DEVELOPMENT OF PROGRAM OUTCOMES

The table below identifies the curricular influences that support the program outcomes specific to the Master of Science in Technology Management Program.

SOURCES/RESOURCES PROVIDING CURRICULAR FOUNDATION FOR PROGRAM OUTCOMES Master of Science in Technology Management Program		
SOURCE	DESCRIPTION	WEB ADDRESS OR DOCUMENT NAME (if applicable)
Core Learning Areas of the UMUC Graduate School of Management and Technology	<p>UMUC degree programs are required to imbed identified institutional CLAs into each degree program. The CLAs for the Graduate School of Management and Technology are:</p> <ul style="list-style-type: none"> • Written Communication (COMM) • Technology Fluency (TECH) • Information Literacy (INFO) • Quantitative Literacy (QUAN) • Critical Thinking (THIN) <p>The expanded definition for each Core Learning Area was considered in creating the respective program outcome.</p>	<u>UMUC Institutional Plan for the Assessment of Student Learning</u>
International Association for Management of Technology	A professional organization that exhibits standards for technology managers worldwide.	(See http://www.iamot.org/)
International Journal of Technology and Innovation Management	The journal that develops and promotes the fields of innovation and technology management by providing a platform for reporting and sharing, as well as the exchange of ideas, research findings, industry best practice, and trends in the selected fields of technology.	(See http://www.iamot.org/)

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PROGRAM OUTCOMES

The program outcomes for the Master of Science in Technology Management Program are delineated below. The program outcomes describe the expectations for all graduates of the Master of Science in Technology Management Program.

PROGRAM OUTCOMES Master of Science in Technology Management Program	
CORE LEARNING AREA	PROGRAM OUTCOME
COMM	Present summaries, designs, analyses, and recommendations in written and/or oral forms in an effective and professional manner in the area of technology management.
TECH	Utilize technology based on the industry accepted practices in the area of technology management.
INFO	Utilize effective research skills to forecast trends in the management of technology.
QUAN	Apply the fundamentals of quantitative and financial analysis to technological projects.
THIN	Utilize appropriate critical thinking and problem solving strategies in managing technology.

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ALIGNMENT OF PROGRAM OUTCOMES WITH LEARNING OBJECTIVES AND ASSESSMENT METHODS

The following grid aligns the program outcomes of the Master of Science in Technology Management Program with: 1) learning objectives from the designated program coursework and 2) specific methods used to assess student learning within the degree program.

CURRICULAR ALIGNMENT Master of Science in Technology Management Program			
CORE LEARNING AREA	PROGRAM OUTCOME	LEARNING OBJECTIVE(S) AND CORRELATING COURSEWORK	METHOD(S) OF ASSESSMENT
COMM	Present summaries, designs, analyses, and recommendations in written and/or oral forms in an effective and professional manner in the area of technology management.	Show through written assignments and exams that he or she possesses graduate level research and writing skills. (TMAN 611)	Project (Capstone/ Program)
TECH	Utilize technology based on the industry accepted practices in the area of technology management.	Determine the overall process of innovation of a specific technology, as well as a life cycle analysis of the technology. (TMAN 611)	Essay and/or Writing Task
INFO	Utilize effective research skills to forecast trends in the management of technology.	Recognize patterns of organizational systems that are appropriate for today's dynamic, technology driven competitive environment. (TMAN 611)	Essay and/or Writing Task
QUAN	Apply the fundamentals of quantitative and financial analysis to technological projects.	Determine the expected benefits and costs that could result from the use of a specific technology. (TMAN 611)	Project (Capstone/ Program)
THIN	Utilize appropriate critical thinking and problem solving strategies in managing technology.	Develop strategies and techniques for matching company technology capabilities with customer and product demands. (TMAN 611)	Project (Course/ Chapter)