



University of Maryland University College

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

PROGRAM ASSESSMENT PLAN
Program Outcomes and Learning Assessment Criteria

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Master of Science in Information Technology

TABLE OF CONTENTS

Program Overview: Master of Science in Information Technology.....3

Program of Study: Master of Science in Information Technology.....4

Development of Program Outcomes: Master of Science in Information Technology5

Program Outcomes: Master of Science in Information Technology6

Alignment of Program Outcomes with Learning Objectives and Assessment Methods: Master of Science in Information
Technology7

Master of Science in Information Technology

PROGRAM OVERVIEW **Master of Science in Information Technology**

The Master of Science in Information Technology program provides a broad technical understanding of current and evolving technologies in the information technology field with an emphasis on moving technology from the laboratory to the realm of business development through its program core courses. The program is designed for those who are called upon to develop, implement, and operate information systems in a variety of organizations. Graduates of this program will be able to:

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

Students with a variety of educational backgrounds and work experiences can enter this program, but some specializations may require a background in mathematics, computer studies, or more specialized work experiences. This program offers eight specializations:

- Telecommunications Management
- Software Engineering
- Database Systems Technologies
- E-Business
- Homeland Security Management
- Informatics
- Information Systems Assurance
- Project Management

Master of Science in Information Technology

PROGRAM OF STUDY Master of Science in Information Technology

CORE COURSES: Students must complete the following list of required courses.

UCSP 611	Introduction to Graduate Library Research Skills	0 credit hours	
ITEC 610	Information Technology Foundations		3 credit hours
ITEC 620	Information Technology Infrastructure		3 credit hours
ITEC 630	Information Systems Analysis, Modeling, and Design		3 credit hours
ITEC 640	Information Technology Project Management		3 credit hours
TMAN 625	Economics and Financial Aspects of Technology-Based Firms		3 credit hours

Note: ITEC 620 must be taken before taking first specialization course. Students must complete three credit hours from the core course list before taking first specialization course.

ELECTIVE COURSES: There are no elective courses. Students must select a specialization and complete seven of the three credit hour courses offered under the chosen specialization. The areas of specialization are:

Informatics (IMAT) – *Note: Students must complete six credit hours of core courses before taking first specialization course.*

Information Systems Assurance (INFA) – *Note: Courses must be taken in a specified order.*

E-Business (EBUS) – *Note: Courses must be taken in a specified order.*

Homeland Security Management (HSMN) – *Note: HSMN 610 must be taken as one of the first two specialization courses.*

Project Management (PMAN) – *Note: PMAN 600 is a six credit course. Students who receive credit for PMAN 600 may not receive credit for PMAN 634 or PMAN 670. PMAN 634 or PMAN 600 must be taken as the first course.*

Telecommunications Management (TLMN) – *Note: ITEC 620 is prerequisite to TLMN 623, TLMN 630, TLMN 645, and TLMN 672. TLMN 670 requires completion of 27 credit hours.*

Database Systems Technology (DBST)

Master of Science in Information Technology

**DEVELOPMENT OF PROGRAM OUTCOMES
Master of Science in Information Technology**

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

SOURCES/RESOURCES PROVIDING CURRICULAR FOUNDATION FOR PROGRAM OUTCOMES Master of Science in Information Technology		
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>	UMUC Institutional Plan for the Assessment of Student Learning
Various professional, industry, and government standards relating to information technology.	<p>Many public and private organizations have developed standards and guidelines relating to the skills required of practitioners and the best practices in various fields of information technology. Among those that have influenced the program curriculum are:</p> <ul style="list-style-type: none"> • The Software Engineering Body of Knowledge (SWEBOK) • Certified Information Systems Security Professional (CISSP) requirements • Project Management Institute (PMI) certification requirements and the Project Management Body of Knowledge (PMBOK) 	

Master of Science in Information Technology

PROGRAM OUTCOMES
Master of Science in Information Technology

The program outcomes specific to the Master of Science in Information Technology are delineated below. The program outcomes describe the expectations for all graduates of the Master of Science in Information Technology.

PROGRAM OUTCOMES Master of Science in Information Technology	
CORE LEARNING AREA	PROGRAM OUTCOME
COMM	Present program summaries, designs, analyses, and recommendations for the information technology field in a professional manner.
TECH	Employ systems engineering methods in the construction of information technology based system architectures.
INFO	Analyze primary research material in order to utilize published information technology literature, form opinions, and solve technical and managerial problems.
QUAN	Use mathematical techniques for problem solving in the information technology arena.
THIN	Develop critical thinking and reasoning skills for problem solving in information technology based systems.

Master of Science in Information Technology

**ALIGNMENT OF PROGRAM OUTCOMES WITH LEARNING OBJECTIVES AND ASSESSMENT METHODS
Master of Science in Information Technology**

The following grid aligns the program outcomes of the Master of Science in Information Technology 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 Information Technology			
CORE LEARNING AREA	PROGRAM OUTCOMES	LEARNING OBJECTIVE(S) AND CORRELATING COURSEWORK	METHOD(S) OF ASSESSMENT
COMM	Present program summaries, designs, analyses, and recommendations for the information technology field in a professional manner.	Examine the organizational and behavioral aspects of Information Management and develop 'soft skills' to effectively lead, manage, communicate, and resolve conflicts. (ITEC 640)	Individual Report/Paper
TECH	Employ systems engineering methods in the construction of information technology based system architectures.	Define and discuss systems analysis and the design process. (ITEC 630)	Essay and/or Writing Task
INFO	Analyze primary research material in order to utilize published information technology literature, form opinions, and solve technical and managerial problems.	Apply selected engineering and management science tools and processes to select a systems design. (ITEC 630)	Essay and/or Writing Task
QUAN	Use mathematical techniques for problem solving in the information technology arena.	Define, evaluate, and compare major IT components: computer hardware, operating systems, and communication networks. (ITEC 620)	Essay and/or Writing Task
THIN	Develop critical thinking and reasoning skills for problem solving in information technology based systems.	Assess the utility of information technology in the operations, decision making, and investment of organizations. (ITEC 610)	Essay and/or Writing Task