



UNIVERSITY OF
**DETROIT
MERCY**

GRADUATE PROGRAM

COMPUTER & INFORMATION SYSTEMS

M.S. IN COMPUTER & INFORMATION SYSTEMS | MAJOR: SOFTWARE MANAGEMENT

The Master of Science in Computer & Information Systems (MS CIS) with a major in Software Management produces effective leaders for advanced technology organizations. It offers the most up-to-date, industry-based knowledge of best practices in IT process development, leadership, program management and software assurance. The course of study provides seamlessly integrated strategic understanding of the correct way to manage life-cycle processes, software assurance processes, security and privacy. Graduates will be able to interact and function effectively in a multi-national, multi-tiered project environment.

Specific knowledge areas include: IT portfolio and project management, system requirements elicitation and specification, comprehensive program construction concepts, assurance and business alignment processes and audit and control. Upon graduation students will be able to create and oversee productive and continuously improving management control infrastructures for large, complex and diverse businesses.

Locations

McNichols Campus | Online

This program offers convenient course delivery and location options to meet your needs. Participate in a traditional classroom experience at the McNichols Campus in Detroit or take the online course of study which is ideal for individuals who are balancing multiple commitments and can't meet at regular class times.

Note: Tuition varies with each option. Please consult the graduate tuition fee schedule on the University website.

Admission Requirements

The MCI program is open to students of high academic promise who have earned a four-year baccalaureate degree from an accredited college or university. Of primary importance is the nature and quality of the applicant's prior academic record and work experience. No prior work in software management is necessary, since the curriculum encapsulates the entire body of knowledge. Incoming students with limited background in software development are given adequate foundation as part of their study.

Admission Materials

Applicants for this program must submit the following:

- A University of Detroit Mercy Graduate Application Form and application fee;
- Official transcripts for all previous academic work;
- Any other information that the applicant feels is important to the admission decision.

Degree Requirements

A degree candidate for the Master of Science in Computer & Information Systems must complete 30 credit hours which is comprised of five core courses and five electives.

Website: udmercy.edu/cyber

Greg Laidlaw, DMIT, CISSP
Department Chair
Email: laidlags@udmercy.edu
Phone: 313-993-3337

Theresa Carson
Graduate Admissions Counselor
Email: carsonta@udmercy.edu
Phone: 313-993-3309



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CURRICULUM - MS CIS

Required (15 credits)

CIS 5010 Introduction to Information Systems
CIS 5100 Object Orientation Software Development
CIS 5200 Specification
CIS 5300 Software Assurance
CIS 5400 Software Management

Electives (choose five from the list below)

Any CIS 3-credit graduate-level course not listed above
Any CYBE graduate-level course (with approval from the department chair.

MBA 5200 Decision Analysis
MBA 5260 Information Systems and Technology
MBA 5335 Business Intelligence

Master's Thesis Elective Option (6 credits):

CIS 5990 Master's Thesis in Software Management

Note: A student may write a thesis with the approval of his/her advisor. In this case, students are required to take only four electives.

Total: 30 credit hours

Dual MBA/MS CIS Option

See current catalog for total credits per each program and other requirements

The dual degree program is offered cooperatively between the College of Liberal Arts & Education and the College of Business Administration.

The Master of Business Administration (MBA) is designed to accommodate the career needs of professionals across a wide variety of work organizations: business, health care, industrial, educational, and governmental.

The Master of Science in Computer & Information Systems (MS CIS) with a major in Software Management produces effective leaders for advanced technology organizations. It offers leading-edge, industry-based knowledge of best practices in IT process development, leadership, program management and software assurance. It provides a seamlessly integrated strategic understanding of the correct way to manage life-cycle processes, software assurance

Submit Your Application Online

1. Go to udmercy.edu/admission/apply.php



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COURSE DESCRIPTIONS

Required Courses

CIS 5010 Introduction to Information Systems

This course provides fundamental professional skills for students who have no background in IT. The students will be able to specify, design, code and test software programs. Other topics include the norms and common practices of the profession as well as methodologies for design and coding of a typical business application.

CIS 5100 Object Orientation Software Development

Focuses on abstraction and object based modeling. Students will develop and design programs using the UDL and an object based programming language. The student of this course will have the ability to conceptualize and clearly communicate concrete models of abstract structures.

CIS 5200 Specification

This course concentrates on the BOK necessary to do effective requirements specification and development of a Software Requirements Specification (SRS). Emphasis is on formal specification approaches, methods and standards.

CIS 5300 Software Assurance

This course presents the principles and methods necessary to assure software. It covers all aspects of the assurance life cycle as embodied in the current set of proven best practices for acquiring, developing, and sustaining secure code.

CIS 5400 Software Management

This course presents the principles and practices of IT life-cycle process management. It includes software life cycle and process engineering, change management, standards, metrics and models, software maturity/capability and assessment. Tools for managing integrated software environments. The student will be able to organize, plan and lead software process improvement and IT strategic alignment projects. Student will have a complete understanding of the IEEE 12207, CMM, CMMI, ISO 15504 (SPICE) and the CBK models.

Electives

Please refer to the Detroit Mercy catalog for courses and descriptions for electives: udmercy.edu/catalog

Any CYBE graduate-level course

MBA 5200 Decision Analysis

MBA 5260 Information Systems and Technology

MBA 5335 Business Intelligence

CIS 5990 Master's Thesis in Software Management