

MASTER OF COMPUTING AND INFORMATION SYSTEMS

Program Director

Alina Lazar
307C Meshel Hall
(330) 941-2981
alazar@ysu.edu

Program Description

The Master of Computing and Information Systems is designed to emphasize important applied areas of computing, providing background in the overall structure of information systems, in-depth knowledge in vital areas, such as databases and networking, and opportunities to learn a variety of other important, emergent, and current areas of computing, such as web design, application development, and computer security.

The program is designed to serve students with some background in computing (possibly work related) but who need additional deeper, more comprehensive, or more up-to-date knowledge of computing/information systems in order to make career advancements or to better utilize the technology that they are required to use on a daily basis.

Like most applications of information systems, the program is also interdisciplinary in nature to allow students with a background in areas other than information systems to learn how to apply information systems to those areas. A number of interdisciplinary courses are supported, and students may take elective courses outside of the department.

Admission Requirements

In addition to the minimum College of Graduate Studies admission requirements, students must also have previous courses in or the equivalent of:

COURSE	TITLE	S.H.
CSIS 1590	Survey of Computer Science and Information Systems (or equivalent of information systems courses)	3
CSIS 2610	Programming and Problem-Solving (or equivalent of computer programming)	4
CSIS 3700	Data Structures and Objects (or equivalent of computer programming)	4
CSIS 3722	Development of Databases (or equivalent of databases courses)	3
CSIS 3723	Networking Concepts and Administration (or equivalent of networking courses)	3
or CSIS 3782	Cisco Networking Academy 1	
INFO 3704	Business Communication (or equivalent of technical communication skills courses)	3

Equivalent employment-related experience may be substituted for some of these requirements. The experience must be described in detail and reliably documented (in a letter of recommendation from an employer, for example).

Students are also required to submit a résumé, a written statement describing their past experience in computing/information systems (both employment and academic), and their reasons and goals for applying to the program. The Graduate Record Examination (general test) is also required and students must obtain an acceptable score.

Students not satisfying all admission requirements may be admitted with provisional status subject to the approval of the graduate program director and the graduate dean. Such students will generally be required to take

specified undergraduate and/or foundation courses, which will not count toward the master's degree.

Abdurrahman Arslanyilmaz, Ph.D., Associate Professor
Computer-based learning design; hazard detection in traffic simulation; computer-based and case-based learning

Alina Lazar, Ph.D., Professor
Applied machine learning; database mining; agent-based simulations, and parallel programming

Bonita Sharif, Ph.D., Associate Professor
Software engineering and visualization; eye tracking evaluation of software artifacts; UML layout techniques and quality measurement

John R. Sullins, Ph.D., Associate Professor
Artificial intelligence; game design; neural networks and expert systems

Feng Yu, Ph.D., Assistant Professor
NoSQL databases; big data systems; cloud computing

A minimum of 34 approved semester hours of credit (at least half of which must be at the 6900 level) is required for the Master of Computing and Information Systems.

Thesis Option

COURSE	TITLE	S.H.
Core		
At least half of the semester hours must be at the 6900 level		
CSCI 6901	Principles of Computer Programming	3
CSCI 6920	Theory and Practice of Information Systems	3
CSCI 6950	Advanced Database Design and Administration	3
CSCI 6997	Seminar in Computer and Information Systems (take in the first semester if possible but no later than the second semester)	1
Select one of the following:		3
CSCI 6921	Strategic Project and Change Planning	
CSCI 6940	Advanced Network Design and Administration	
CSCI 6951	Data Warehousing and Data Mining	
Electives		
Select a minimum of 15 s.h. of electives consisting of approved graduate and/or swing courses. Up to 9 s.h. may be taken in departments other than Computer Science and Information Systems.		15
Thesis		
CSCI 6999	Thesis	6
Total Semester Hours		34

Non-Thesis Option

COURSE	TITLE	S.H.
Core		
At least half of the semester hours must be at the 6900 level		
CSCI 6901	Principles of Computer Programming	3
CSCI 6920	Theory and Practice of Information Systems	3
CSCI 6950	Advanced Database Design and Administration	3
CSCI 6997	Seminar in Computer and Information Systems (take in the first semester if possible but no later than the second semester)	1
Select one of the following:		3
CSCI 6921	Strategic Project and Change Planning	
CSCI 6940	Advanced Network Design and Administration	
CSCI 6951	Data Warehousing and Data Mining	
Electives		

