MASTER OF COMPUTING AND INFORMATION SYSTEMS

PROGRAM DIRECTOR

John Sullins  
307A Meshel Hall  
(330) 941-1806  
john@cis.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.

FACULTY RESEARCH INTERESTS

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

Bonita Sharif, Ph.D., Assistant 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

ADMISSION REQUIREMENTS

In addition to the minimum School of Graduate Studies and Research admission requirements, students must also have previous courses in information systems equivalent to CSIS 1590 Survey of Computer Science and Information Systems, previous courses in computer programming equivalent to CSIS 2610 Programming and Problem Solving and CSIS 3700 Data Structures and Objects, previous courses in databases equivalent to CSIS 3722 Development of Databases, and previous courses in networking equivalent to either CSIS 3723 Networking Concepts and Administration or CSIS 3783 Cisco Networking Academy II. In addition, technical communication skills equivalent to INFO 3704 Business Communications are required. 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.
Degree Requirements

A minimum of 33 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. A core of CSCI 6920, CSCI 6950, and either CSCI 6921, CSCI 6940, or CSCI 6951 is required of all students. Additionally, a minimum of 21 semester hours of graduate electives consisting of approved graduate and/or swing courses is also required. Up to nine semester hours may be taken in departments other than Computer Science and Information Systems. For graduation, the student must complete either a thesis (at least three semester hours of CSCI 6999) or a capstone project (at least three semester hours of CSCI 6990). This project is meant to explore and apply some area of computing and information systems and is subject to the approval of the major advisor.

The student’s course of study will be determined in conjunction with the student’s major advisor and, possibly, with an advisor from outside of the department, particularly if the student is interested in applying information systems to some other area. This course of study will be based on the student’s area of specialization, background interests, and career interests. It may also include graduate courses from other areas where appropriate. A cohesive individual curriculum program of approved elective courses will be developed in conjunction with the student’s major advisor after nine semester hours of core courses have been completed.