Information Systems and Technology MS

The Master of Science in Information Systems and Technology (MSIST) is designed to provide the technical and managerial knowledge to work successfully in design, development, and leadership roles related to information technology (IT). Students have opportunities to gain skills in application development, business intelligence, cybersecurity, cloud computing, fintech, and other emerging areas that impact organizational IT strategies.

The program is designed for students and professionals with diverse undergraduate backgrounds including business, information systems and technology, computer science, engineering, and other disciplines. MSIST students interact extensively with their peers as well as with industry executives in a carefully curated academic environment to gain a well-rounded perspective on the role of IT in contemporary organizations. Flexible class schedules (day and evening, weekends, 8 or 16 week sessions) and course delivery formats (face-to-face, blended, and online) enable students to balance school, work, and life.

The MSIST program provides students with flexible pathways to complete the degree by combining two graduate certificates and taking two additional courses toward the MSIST degree.

The Master of Science in IS program is designed to provide the technical and managerial knowledge to operate successfully in careers associated with the design, development and management of computer-based information, telecommunications, and Internet applications. The program accommodates students with undergraduate degrees specializing in IS, business, and computer science, as well as students with undergraduate degrees outside business.

Admission Requirements

Applicants must meet the general graduate admission requirements of the Graduate School, described in the UMSL Bulletin, and the College of Business Administration. Students are considered for admission to the graduate program in Information Systems and Technology only after they have formally applied for admission through the Graduate School. Applications may be completed on-line.

In addition to Graduate School admission requirements, the following requirements apply for the MSIST program.

Applicants must have an undergraduate degree with a minimum cumulative GPA of 3.0. Students whose GPAs are between 2.75 and 2.9 may be admitted under a restricted status within the terms specified by the Graduate School.

Applicants must have foundational knowledge of data analysis and computer programming. This requirement can be fulfilled by providing evidence of prior coursework, training, or professional experience.

Applicants may also join the program without this background and complete the following coursework.

- Students without a background in data analysis could take SCMA 5300 as a graduate student to fulfill this requirement.
- Students without a background in computer programming can take INFSYS 6805 as a graduate student to fulfill this requirement.
- Non-native speakers of English must provide evidence of English language competency by submitting an official TOEFL or IELTS score. The minimum TOEFL score for graduate admission is 79 iBT. The minimum IELTS score is 6.0.

Degree Requirements

Candidates for the Master of Science in Information Systems and Technology must meet all Graduate School requirements including, but not limited to, requirements on admissions, enrollment, course policies, and academic standing as listed in the University Bulletin.

The program requires a total of 30 hours for students with either business or non-business undergraduate degrees.

All students will complete:

- INFSYS 5800 (3 hours)
- The requirements for two of the certificates listed (24 hours):
  - Graduate Certificate in Enterprise Systems Development
  - Graduate Certificate in Information Security Management and Auditing
  - Graduate Certificate in Information Systems and Technology
  - Graduate Certificate in Business Intelligence
  - Graduate Certificate in Cybersecurity
- One elective course from the list below or from the certificates above (3 hours). Courses may also be substituted with other courses upon approval from the Department Chair:

Course Number	Title	Hours
Cybersecurity Courses		
INFSYS 6836	Management of Data Networks and Security	3
INFSYS 6858	Advanced Cybersecurity Concepts	3
INFSYS 6864	Applied Cryptography for Business Applications	3
INFSYS 6888	Capstone in Information Security	3
Information Systems and Technology Management		
INFSYS 6838	Business Processes: Design, Management and Integration	3
INFSYS 6847	Project Management	3
Experiential Learning, Research, and Emerging Topics		
INFSYS 5890	Graduate Internship in Information Systems	1
INFSYS 5899	Individual Research in Information Systems	1
INFSYS 6891	Seminar in Information Systems	3

Learning Outcomes

Upon completion of the program, graduates should be able to:

- Evaluate and implement effective IS leadership principles and strategy.
- Prioritize and propose managerial practices to develop and deploy technological innovations that produce business advantage.
- Explain best practices in systems analysis and design.

- Support and improve current best practices in application development, business intelligence, cybersecurity, and legacy systems.
- Exhibit specialized leadership and technical expertise.