Master of Science in Information Technology

Electrical Engineering and Computer Science

The technological advances that have made our society what it is today are due largely to the efforts of electrical engineers, computer engineers, and computer scientists. Among these advances are radio, television, telephones, wireless and mobile communications, personal computers, workstations, mainframe computers, aircraft avionics, satellite electronics, automobile electronics, office machinery, medical electronic equipment, video games, electric power generation and distribution systems, telecommunications, computer networks (including the Internet), personal entertainment products, radar, defense electronics, artificial intelligence, and a variety of computer software.

Vision and Mission

The vision of the EECS department is to provide a stimulating and challenging intellectual environment.

• To have classes populated by outstanding students.
• To be world class in an increasing number of selected areas of research.
• To have faculty members with high visibility among their peers.

The mission of the EECS department is

• To educate the next generation of electrical engineers, computer engineers, and computer scientists.
• To discover, apply, and disseminate knowledge.
• To be an asset to the community and to society.

Admission

The Master of Science degree in Information Technology (M.S.I.T.) is designed for Information Technology (IT) professionals in the Kansas City area. Courses are offered in the evening on the Edwards Campus, which is conveniently located in Johnson County. The M.S.I.T. program is intended for students with a bachelor’s degree in information technology, computer science, computer information systems, computer engineering, or a related field for their advanced studies, or for those who seek additional academic studies for professional growth or career advancement. A student with good preparation in other fields of engineering, mathematics, business, or science may qualify by taking appropriate additional undergraduate courses. Such courses normally do not count toward the graduate degree. [https://eecs.drupal.ku.edu/deficiency-courses](https://eecs.drupal.ku.edu/deficiency-courses)

Applicants who hold an undergraduate degree in information technology, computer science, computer information systems, computer engineering, or related discipline are required to have a minimum of 2 years of professional work experience in IT. Applications without an undergraduate degree in a computer-related field must have 4 years of relevant professional work experience in IT. The professional work experience requirement may be waived for recent graduates with an undergraduate degree in IT. Applicants must be able to demonstrate knowledge of programming via experience or equivalent coursework in data structures and a modern programming language. For a technology-based degree requiring knowledge in probability, statistics, and advanced algebra, an applicant must be able to demonstrate sufficient mathematics aptitude via academic background and work history.

Unless the applicant’s native language is English or the applicant has received a baccalaureate degree or higher from an accredited U.S. institution of higher education, he or she must meet the department’s standard for the Test of English as a Foreign Language (TOEFL), which is higher than the general KU requirement.

Application Information & Deadlines

Fall Priority Deadline: December 15
Spring Priority Deadline: September 30

Applications will be accepted after the priority deadlines listed above, but these may no longer be considered for fellowships and assistantships. All application materials must be submitted by March 1 (fall semester admission) and October 1 (spring semester admission). Visit the Graduate Studies website (http://www.graduate.ku.edu) for the application procedure and fees.

International students and students who indicated English as a second language, are required to show proof of English proficiency for admission purposes and must check-in at the Applied English Center (http://www.aec.ku.edu) (AEC) upon arrival on campus for orientation. This process serves to confirm each student’s level of English proficiency and determine whether English courses will be included as a requirement of the student’s academic program. Note: Students who demonstrate English proficiency at the waiver level or who have earned a degree from one of the specified English-speaking countries listed in the policy (http://policy.ku.edu/graduate-studies/english-proficiency-international-students) are not required to check in at the AEC (see eligibility requirements on the Graduate Studies website (https://graduate.ku.edu/english-proficiency-requirements)).

Application Materials

• Application
• Statement of objectives and resume
• Official transcript
• Letters of recommendation
• TOEFL scores (international students)
• Financial statement (international students only)

All application materials should be submitted online (http://www.graduate.ku.edu).

Contact Information

Please contact the EECS Program Assistant at eecs.graduate@ku.edu or (785) 864-4487, to schedule a visit or with questions about the application process.

The University of Kansas
Department of Electrical Engineering and Computer Science
Graduate Office
Eaton Hall
1520 W. 15th Street, Suite 2001E
Lawrence, KS 66045-7605
M.S. Degree Requirements

Individuals completing the M.S.I.T. program are expected to understand fundamental principles and underlying technologies of IT. Individuals must

- Understand fundamental principles and underlying technologies of IT.
- Understand how to realize an IT infrastructure, from defining requirements, design, implementation, deployment, integration, and on through its lifecycle.
- Understand how to apply IT within an organizational context to increase productivity and competitiveness and to meet business goals.
- Understand the policy, security, privacy, ethical, and legal aspects of IT and its evolution and future trends.
- Have the ability to effectively communicate to affect technological decisions.

All M.S.I.T. students are required to choose a focus area as early in the graduate program as possible and identify a tenured/tenure track EECS faculty advisor who is interested in supervising their work. Students are required to take their courses from the focus area of their choice. To deviate from the core and elective courses defined for the M.S.I.T. program requires advisor concurrence, petition and approval of the EECS graduate committee, and for other EECS courses, permission of the instructor.

Associated Focus Areas

- Cyber Security
- IT Project Management
- Software Engineering

Central to the master’s program in Information Technology is the development of each student’s Plan of Study. The plan must be developed and approved by the graduate office during the first semester. The Plan of Study outlines all course work and the student’s advisor. It must include 5 core courses, 5 courses from the associated elective list and at least one semester of EECS 802 Electrical Engineering and Computer Science Colloquium and Seminar on Professional Issues. A current list of the areas and their requirements is available on the EECS website (http://eecs.ku.edu/current-students/graduate/masters). The faculty advisor who approves the plan verifies that courses selected meet the guidelines and are appropriate for the M.S.I.T. degree program. Modifications to the plan must be approved by the student’s advisor and resubmitted to the graduate office for approval.

Subject to the general restrictions on M.S. course work, a general oral examination must be taken in the last semester. It is conducted by the Graduate Director of Information Technology. The director determines if the oral presentation of research, and general knowledge of the discipline meet the department’s standards.