

Graduate Programs in

Information Technology and Management

COLLEGE OF COMPUTING AT ILLINOIS TECH

The College of Computing prepares students to become innovators, entrepreneurs, and leaders of the future. Programs and courses provide a blend of theoretical content and practical applications that utilize a hands-on, reality-based approach to education. The degree and certificate programs offer a distinctive experience where students work on cutting-edge, industry-sponsored projects, allowing them to apply what they learn in class to solve real-life problems. Our faculty and students are making significant contributions to the profession, working in areas of high-impact innovation including information technology, and cyber forensics and security, among others. Our central Chicago location provides graduate students access to a diverse range of opportunities to conduct research and explore professional and cultural pursuits.

Degrees Offered

Master of Information Technology and Management

Master of Science Information Technology and Management

Master of Science Applied Cybersecurity and Digital Forensics

Master of Cyber Forensics and Security

Certificates

- Advanced Software Development
- Cyber Security Management
- Cyber Security Technologies
- Data Management and Analytics
- Information Technology Innovation, Leadership, and Entrepreneurship
- System Administration
- Systems Analysis
- Web Design and Application Development

Degree Program Curricula

Master of Information Technology and Management

The Master of Information Technology and Management requires a minimum of 30 credit hours.

Nine specialization options are available:

- Computer and Information Security
- Data Analytics and Management
- Information Technology Infrastructure
- IT Management and Entrepreneurship
- Management Information Systems
- Smart Technology and Innovation
- Software Development
- Systems Analysis
- Web Design and Application Development

The degree requires a minimum of 10 courses:

- Five required core courses
- Elective courses may be selected with adviser approval
- No thesis required

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

- Deliver optimal technical and policy technology solutions for the problems of business, industry, government, nonprofit organizations, and individuals in each student's particular area of focus.
- Work with, lead, and manage teams in an enterprise environment to collaboratively arrive at optimal technology solutions.
- Manage and deploy information resources applicable to each student's particular area of focus in an enterprise setting.

ILLINOIS TECH

Degree Program Curricula *(continued)*

Master of Science Information Technology and Management

The Master of Science Information Technology and Management is intended to focus on research to lead to advanced studies in computing through the Ph.D. level as well as careers in research. Coursework covers advanced topics in software development, system technology, and business development. Complete the program with the option of a thesis or a master's project. A minimum of 32 credits is required to complete the program.

Research Focus and Strengths

The College of Computing operates and administers more than 400 computers and servers to support teaching, learning, and research. Ten laboratories include a networking/network security and computer forensics facility. The security/forensics laboratory, as well as the general-use laboratories, provide additional facilities for student projects and applied research, some of which is undertaken in conjunction with industry partners.

The Center for Cyber Security and Forensics Education (C²SAFE) is a multi-disciplinary center within the College of Computing that has enabled Illinois Tech to earn the designation as a National Center of Academic Excellence in Cyber Defense Education by the National Security Agency and the Department of Homeland Security. The center supports cyber security research and education, and coordinates activities with various local and governmental agencies, and professional organizations.

Student Insight

"I really appreciate the flexibility of my course options. There are many electives that allow me to pursue courses that interest me. I also like the mindset of the instructors and our academic advisors at Illinois Tech, who allow us to study what we like most. Working on real-life technology projects in class is also great."

—Quentin Bayart
Master of Information Technology and Management '17

Representative Courses

Data Mining and Machine Learning (ITMD 522)

Data mining is a useful tool to uncover patterns and underlying relationships in large data by using data analytics and knowledge discovery techniques. Machine learning algorithms additionally learn from the data and make predictions or decisions by different optimization

methods. This course is a graduate level survey of concepts, principles and techniques related to data mining and machine learning. Students will be familiar with data preprocessing skills and the popular data mining and machine learning techniques, including the supervised learning (regressions and classification) and unsupervised learning (clustering and association rules analysis), as well as semi-supervised learning and ensemble learning. Students will also learn the related applications, including text mining/NLP, Web mining, information retrieval and recommender systems. Students will learn R and Python programming for data mining and machine learning and be able to handle real-world data or applications.

Process Engineering for Information Technology Managers (ITMM 572)

This course will provide students with the knowledge and skills to define, model, measure and improve business processes. The course will focus on re-engineering processes through the application of technology to achieve significant and measurable improvement. The course will explore the latest industry standards and students will use state-of-the-art software tools for hands-on experiential learning.

Admission Requirements

- **GRE:** Masters: 300 (combined quantitative and verbal), 151 quantitative, and 3.0 analytical writing.
Master of Science: 305 (combined quantitative and verbal), 151 quantitative, and 3.0 analytical writing
- **GPA:** 3.0/4.0

Prerequisites

Program prerequisites may be found at <http://bulletin.iit.edu/graduate/colleges/computing/information-technology-management/#admissionstext>

Contact

If you have questions regarding admission to Illinois Tech, contact Graduate Admissions at grad.admission@iit.edu.

Learn more about application fee waivers, and how to schedule a campus tour and meet with faculty, at <https://www.iit.edu/admissions-aid/visit-and-tour>.

For more information about the Information Technology and Management program, including additional program and course requirements, visit <https://www.iit.edu/itm>.