



Department of Electrical and Computer Engineering

(<https://engineering.iit.edu/ece/about>) offers the **Master of Cybersecurity Engineering**. The program curriculum is taught by the world renowned and distinguished faculty members in the ECE Department. Rapid growth on the reliance of critical and personal information on cyber infrastructure has become more vulnerable to cyber threats and cyberattacks.

Illinois Tech's **Master of Cybersecurity Engineering** program will educate students with techniques, tools, analysis, policies and methodologies to solve complex cybersecurity problems of relevance to the engineering field. This program will prepare students with extensive knowledge in cybersecurity, cyber physical systems, cloud computing security, network engineering and cybersecurity for smart grid power systems, security vision systems, coding theory and wireless secure communications.

This program comprehensively addresses Internet of Things and cyber physical system, security laws, policies and data privacy, and civil infrastructures across a spectrum of engineering problems.

Our Chicago location provides students access to a range of opportunities to conduct research and explore professional and cultural pursuits.

Degrees Offered

Master of Cybersecurity Engineering (MCSE)

Research Focus and Strengths

The ECE Department has two research centers and 13 research laboratories. These research laboratories support work in Internet of Things, cyber-physical systems, embedded computing, cyber security, cloud computing, data mining, automation and robotics, machine vision and image processing, artificial intelligence and deep learning, computer-aided design, VLSI (very large-scale integration), SoC (system-on-chip) design, communications, computer networking, wireless networks, network security, medical imaging, signal processing, ultrasonic imaging and communications, microwave electronics, power systems, smart micro grids, power electronics, and electrification.

The Galvin Center for Electricity Innovation boasts Illinois Tech's microgrid technology, cyber-secured power distribution system, and sustainable energy. The Medical Imaging Research Center builds devices, software tools, and research algorithms for medical imaging application.

Degree Program Curricula

The Master of Cybersecurity Engineering requires a minimum of 30 credit hours. This degree requires a minimum of 10 courses:

- 5 Core Courses including 1-2 Law Elective Courses
- Elective courses may be selected with advisor approval.
- No thesis required.

Core Courses

- ECE 407/408 Introduction to Computer Networks
- ECE 442 Internet of Things and Cyber Physical Systems
- ECE 443 Introduction to Computer Security
- ECE 520 Information Theory and Applications
- ECE 541 Performance Evaluation of Computer Networks
- ECE 543 Computer Network Security
- ECE 545 Advanced Computer Networks
- ECE 546 Wireless Network Security
- ECE 586 Hardware Security and Advanced Computer Architectures

Elective Courses

• **Electrical and Computer Engineering Elective Courses:**

ECE 403, ECE 406, ECE 420, ECE 437, ECE 441, ECE 446, ECE 449, ECE 485, ECE 504, ECE 508, ECE 511, ECE 513, ECE 515, ECE 517, ECE 519, ECE 542, ECE 544, ECE 565, ECE 569, ECE 570, ECE 597

• **Chicago-Kent College of Law Elective Courses (select 1 or 2 courses):**

LAW 215, LAW 252, LAW 285, LAW 295, LAW 478, LAW 907, LAW 926

For additional information contact Ms. Joannette Catino: catino@iit.edu

Admission Requirements

Admission to the graduate program normally requires a Bachelor of Science degree in electrical, or computer engineering from an institution accredited by the Accreditation Board of Engineering and Technology (ABET). Students with a Bachelor of Science degree in engineering or science may apply for this program. Deficiency courses will be required for students who have not taken prerequisite or equivalent courses of the following: ECE 242 (Digital Computers and Computing), ECE 308 (Signal and Systems), and MATH 374 (Probability and Statistics). A student may demonstrate proficiency by successfully completing the courses or by demonstrating satisfactory performance in one or more special examination administered by the department.

- Cumulative undergraduate GPA 3.0/4.0
- International students may require GRE and TOEFL.

Please see the following link for more information:

<https://admissions.iit.edu/graduate/apply/gre-requirements>

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://admissions.iit.edu/graduate/visit>

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