CORE SKILLSETS AND COURSES

- **Computer Systems**
  - Computer components and operations;
  - Computer architecture and networking;
  - Computer operating systems

- **Data and Information**
  - Probability and statistics; Signal processing; Analog and digital communication

- **Learning and Control**
  - Time and frequency domains; Feedback control; Digital control; Machine Learning

- **Image Science and Vision**
  - Computer graphics; Machine vision; Image processing

- **Circuits and Electronics**
  - Analog and digital circuit; Circuit analysis, simulation, and design; Microelectronics; Integrated circuits, VLSI

- **Energy and Power**
  - Electromagnetic fields and waves; Power grid; Renewable sources; Electric machines

- **Design and Teamwork**
  - Embedded control; Engineering design; Multidisciplinary capstone design

CONCENTRATION AREAS

- Intelligent Systems and Machine Learning
- Computer Networks
- Communications and Information
- Control, Robotics, and Automation
- Graphics and Vision
- Computer Hardware Systems
- Microelectronics
- Photonics, Optics, Optoelectronics
- Energy and Power Systems

ABOUT ELECTRICAL, COMPUTER, AND SYSTEMS ENGINEERING

Founded in 1907, one of the first Electrical Engineering programs in U.S.

**Students**
- 776 - Undergraduates
- 49 - Masters
- 98 - Doctoral

**Ranked 38th (EE) 40th (CSE) in 2019 U.S. News & World Report Graduate Rankings**

**Degrees Offered**
- Electrical Engineering (B.S., M.S., M.Eng., Ph.D.)
- Computer Systems Engineering (B.S., M.S., M.Eng., Ph.D.)
- Minors in Electrical Engineering, Computer Systems Engineering

**Dual major opportunities**
- Computer Science, Mechanical Engineering, Biomedical Engineering, Applied Physics

**Undergraduate opportunities**
- Undergraduate Research Projects, Internship, Co-op, Study Abroad

**Graduate Student Support**
- Almost all doctoral students received financial assistance

RESEARCH AREAS

- AI and Machine Learning
- Communication and Networking
- Computer Hardware Systems
- Control, Robotics, Automation
- Electronics and Photonics
- Computer Vision Systems
- Power Electronics & Systems

AFFILIATED RESEARCH CENTERS

- Center for Materials, Device, and Systems (CMDIS) cmdis.rpi.edu
- Center for Automation Technologies and Systems (CATS) cats.rpi.edu
- Center for Future Energy Systems (CFES) cfes.rpi.edu
- NSF Engineering Research Center for Light Enabled Systems and Applications (LESA) lesa.rpi.edu
- NSF Engineering Research Center for Ultra-Wide-Area Resilient Electric Energy Transmission (CURENT)
- Cognitive and Immersive Systems Lab (CISL), cisl.rpi.edu
- Center for Initiatives in Pre-College Education (CIPCE) cipce.rpi.edu

CONTACT US

John Wen, Department Head
info@ecse.rpi.edu  •  (518) 276-6316

FACULTY

- 28 Tenured/Tenure-Tracked
- 7 Lecturers and Prof of Practice
- 7 IEEE Fellows, 6 NSF CAREER Awards
- 12M annual research expenditure

STAFF

- 5 Technical Support Staff
- 6 Administrative Support Staff