ELECTRICAL ENGINEERING

The DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE (EECS) has a well-earned reputation for excellence exemplified by its internationally renowned faculty, advanced research capabilities, and the considerable resources of a great university.

In close collaboration across disciplines, faculty and students transform bold new ideas into groundbreaking results in electronic circuits, solid-state electronics, electromagnetics, optics, lasers, controls, digital signal processing, communications, and networks. The ever-evolving curriculum seamlessly spans the broad disciplines of electrical engineering and computer science.

UNDERGRADUATE STUDY

PROGRAMS OF STUDY

- Bachelor of science in electrical engineering
  - Areas of specialization include:
    - Circuits and electronics
    - Solid-state engineering
    - Electromagnetics and photonics
    - Systems
  - Bachelor of arts in computing and information systems through the Weinberg College of Arts and Sciences
  - Combined BS/MS option, through which students to earn both degrees simultaneously

EXAMPLE COURSES

EECS 100 Electrons, Photons and Bits: Adventures in Electrical and Computer Engineering
EECS 221 Fundamentals of Circuits
EECS 346 Microprocessor System Design
EECS 379 Introduction to Lasers and Fiber Optics
EECS 384 Solid State Electronic Devices

OUTSIDE THE CLASSROOM

UNDERGRADUATE RESEARCH
- Working on exciting research projects alongside graduate students and faculty members helps build a solid foundation of experience.

JOBS AND INTERNSHIPS
- The EECS Jobs Board points students and alumni to new tech-related opportunities through the McCormickConnect database.

ETA KAPPA NU, ELECTRICAL AND COMPUTER ENGINEERING HONOR SOCIETY
- The student honor society of the Institute of Electrical and Electronics Engineers (IEEE) encourages and recognizes excellence through a variety of service programs and leadership training.

IEEE–NU
- This student chapter of the IEEE strives to embody the Institute’s ideals, bringing together students with shared interests in technology to develop professional and technical skills.

GRADUATE STUDY

PROGRAMS OF STUDY

- Master of science in electrical engineering
- PhD in electrical engineering
"I HAD TO THINK LIKE A COMPUTER AND A HUMAN AT THE SAME TIME. I LOVED THE CREATIVITY OF IT."

MAGAN OMAR - ELECTRICAL ENGINEERING

RESEARCH AREAS
- Solid-state devices
- Quantum electronics
- Fiber optics
- Lasers
- Digital signal processing
- Communication systems and networks

CAREERS IN ELECTRICAL ENGINEERING

WHAT’S NEXT?
Electrical engineers pursue careers in many areas of commerce, industry, and academia, including:
- System design and specification
- Component design, research, and development
- University teaching and research
- Consulting, production, and quality control
- Sales
- Cost analysis
- Management

RECENT GRADUATE PLACEMENTS
- Avionics integration engineer at SpaceX
- Electrical engineer at Boeing
- RAN engineer at AT&T
- Engineer at Northrop Grumman
- Engineer at GE Energy
- Software engineer at Google
- Electrical engineering specialist at Shusaku Yamamoto
- Project engineer at ITW
- Investment analyst at Goldman Sachs

HOW YOU SPEND YOUR TIME IN THIS PROGRAM

BASED ON A SURVEY OF CURRENT STUDENTS.

- 3.3% Giving/preparing for presentations
- 19.4% Studying for/taking written exams
- 5.6% Group projects
- 42.2% Working on problem sets
- 6.1% Building things
- 12.8% Working in a Lab
- 10.6% Computer programming
ENVISION WHAT’S POSSIBLE

NORTHWESTERN ENGINEERING STUDENTS CONSTANTLY EXPLORE NEW PATHWAYS IN ELECTRICAL ENGINEERING. IMAGINE YOURSELF:

- Designing and analyzing electronic and optical technologies that can generate, communicate, and process information
- Exploring the intricacies of electronic circuits, solid-state electronics, electromagnetics, optics, lasers, controls, and digital signal processing
- Exercising your intellectual muscles by mastering new concepts and identifying new directions to respond to the needs of a rapidly changing world

FIND YOUR DIRECTION HERE

Northwestern
McCORMICK SCHOOL OF ENGINEERING

www.eecs.northwestern.edu