COMPUTER 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 all aspects of computer engineering, including digital logic, electronic circuits, computer architecture, robotics, operating systems, and parallel computing. The ever-evolving curriculum seamlessly spans the broad disciplines of electrical engineering and computer science.

UNDERGRADUATE STUDY

PROGRAMS OF STUDY

- Bachelor of science in computer engineering

  Areas of specialization include:

  - High-performance computing
  - VLSI and computer-aided design
  - Embedded systems
  - Software

- Bachelor of arts in computing and information systems through the Weinberg College of Arts and Sciences

- Combined BS/MS option through which students can earn both degrees simultaneously

EXAMPLE COURSES

- EECS 205 Fundamentals of Computer Systems Software
- EECS 303 Advanced Digital Logic Design
- EECS 346 Microprocessor System Design
- EECS 361 Computer Architecture
- EECS 392 VLSI Systems Design Project

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.

GRADUATE STUDY

PROGRAMS OF STUDY

- Master of science in computer engineering
- PhD in computer engineering

RESEARCH AREAS

- Computer systems
- Computer architecture
- Distributed and parallel systems
- Computer networks
- Embedded systems and sensor networks
“MANY PEOPLE JUST LIKE TO JUMP IN AND START CODING, BUT I LIKE TO PLAY IT OUT IN MY HEAD. I’LL RUN SIMULATIONS AND DEBUG MENTALLY BEFORE I WRITE ANYTHING.”

LEE FAN \ MUSIC PERFORMANCE AND COMPUTER ENGINEERING

CAREERS IN COMPUTER ENGINEERING

WHAT’S NEXT?

Computer engineers can pursue career opportunities across a broad range of interests including:

- Design and management
- Microchips and computers
- Application-specific hardware/software systems
- Computer-aided design for digital systems, aerospace systems, defense systems, and networked systems

RECENT GRADUATE PLACEMENTS

- Electronics prototyping engineer at Boeing
- Developer at Adage Technologies
- Data scientist at Datascope Analytics
- In-vehicle systems engineer at Ford Motor Company
- Software engineer at Amazon
- Site reliability engineer at Google
- IT analyst at Johnson & Johnson
- Software development engineer at Microsoft
- Developer at Groupon
- CAD engineer at Intel

HOW YOU SPEND YOUR TIME IN THIS PROGRAM

BASED ON A SURVEY OF CURRENT STUDENTS.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giving/preparing for presentations</td>
<td>4.9%</td>
</tr>
<tr>
<td>Studying for/taking written exams</td>
<td>11.6%</td>
</tr>
<tr>
<td>Group projects</td>
<td>18.4%</td>
</tr>
<tr>
<td>Working on problem sets</td>
<td>18.7%</td>
</tr>
<tr>
<td>Building things</td>
<td>5.5%</td>
</tr>
<tr>
<td>Working in a Lab</td>
<td>5.1%</td>
</tr>
<tr>
<td>Computer programming</td>
<td>35.8%</td>
</tr>
</tbody>
</table>
NORTHWESTERN ENGINEERING STUDENTS CONSTANTLY EXPLORE NEW PATHWAYS IN COMPUTER ENGINEERING. IMAGINE YOURSELF:

- Learning how to design complex digital systems, including transistors, computer architecture, and embedded systems
- Working with state-of-the-art computer workstations and computer-controlled instruments
- Applying whole-brain thinking to computer engineering, computer science, and electrical engineering in creative, innovative ways
- Exploring the intricacies of circuit systems, robotics, microprocessors, and software systems

FIND YOUR DIRECTION HERE

Northwestern | MCCORMICK SCHOOL OF ENGINEERING

www.eecs.northwestern.edu