Computer Engineering at the University of Illinois
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- Computer engineering provides the fundamental knowledge, practical skills, professional attitude, and experience necessary to design, implement, and deploy computer hardware, software, and networks.
- Two roles:
  1) Undergraduate Degree Program (ranked number 2)
  2) Computer Engineering Specialization in EE

Computer Engineering Required Upperclass Courses

- CS 225: Data Structures and Software Principles
- ECE 229: Introduction to Electromagnetic Fields
- ECE 249: Digital Systems Laboratory
- ECE 291: Computer Engineering, II
- ECE 312: Computer Organization and Design
- ECE 340: Solid State Electronic Devices

Selected Electives - Computer Architecture/Digital Design

- ECE 311: Microcomputer Lab. Integrates topics from core courses. Extensive microprogramming, hardware design and debugging, interfacing experience.
- ECE/CS 362: Logic Design. Advanced techniques for design of combinational and sequential logic circuits.
- ECE 382: Large Scale Integrated Circuit Design. Emphasizes MOS LSI. Complements ECE 325.
- CS 333: Computer System Organization.
- ECE 371BW: Computer Networking Laboratory.

Selected Electives - Computer Systems/Software

- CS 321: Programming Languages and Compilers.
- CS 325: Programming Language Principles. Organizations of imperative and applicative languages, including object-oriented, functional, and logic programming languages. Programming in several languages.
- CS 311: Database Systems.
- CS 327: Software Engineering.
Selected Electives - Theory


Computer Engineering is a Growing Field!

- Over half of the incoming freshmen in ECE this year are computer engineers!

Freshmen Enrollment Trends  Total Enrollment Trends

Graduate Study is Also Important (UI Computer Engineering Ranked #2 in the Nation!)

Research Areas in Computer Engineering at UI:
- Computer Architecture
- Compilers & Operating Systems
- VLSI Design & Testing
- Computer-Aided Design
- Algorithms & Complexity
- Performance Evaluation
- Reliable Computing
- Parallel Processing
- Distributed Systems
- Computer Networks
- Mobile Computing
- Computer Vision
- Robotics