Computer Engineering, BS

for the degree of Bachelor of Science in Computer Engineering

Electrical & Computer Engineering Website (https://ece.illinois.edu)
Electrical & Computer Engineering Faculty (https://ece.illinois.edu/about/directory/faculty/)
The Grainger College of Engineering Admissions (https://grainger.illinois.edu/admissions/)
The Grainger College of Engineering (https://grainger.illinois.edu/)
Current Program Educational Objectives (https://ece.illinois.edu/academics/educational-objectives/)

Computer Engineering is a blooming discipline focused on the development of vital computing technologies that range from chips to computers to networks to programming tools and key algorithms. Fundamentally, Computer Engineering addresses the problem of building scalable, trustworthy computing systems and applications, and the faculty’s interests span a broad spectrum of issues pertinent to this theme. Computer engineering has taken the lead in revolutionizing many science and engineering disciplines with parallel computing, from chips to clouds to planet-scale critical infrastructures, and has defined new standards of security, privacy, and dependability for systems ranging from small circuits to the electric power grids of many nations. Students need a broad and sound set of mathematical and computing skills and are well-served by a flexible curriculum that enables them to pursue topics of interest among the many subdisciplines in computing.

The computer engineering core curriculum focuses on fundamental computer engineering knowledge: circuits, systems, electromagnetics, computer systems, electronics for information processing and communication, and computer science. The rich set of ECE elective courses permits students to concentrate in any sub-discipline of computer engineering including hardware systems; cyberphysical systems; foundations and theory; software and languages; algorithms and mathematical tools; trust, reliability, security; networking, mobile and distributed computing; big data analytics and systems; AI, machine learning, robotics, cybernetics.

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