

ELECTRICAL & COMPUTER ENGINEERING, MS

for the degree of Master of Science in Electrical and Computer Engineering

Applicants with a bachelor's degree may apply to the MS program or to the direct PhD (<http://catalog.illinois.edu/graduate/engineering/electrical-computer-engineering-phd/>) program.

Opportunity exists for specializing in i) biomechanics via the Biomechanics (<http://catalog.illinois.edu/graduate/engineering/concentration/biomechanics/>) optional graduate concentration, ii) cancer nanotechnology via the Cancer Nanotechnology (<http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/>) optional graduate concentration, and iii) computational science and engineering via the Computational Science & Engineering (<http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/>) optional graduate concentration.

Department Research

Research interests of the Electrical and Computer Engineering faculty include the broad areas of study described in the graduate programs section and more. Many faculty members hold affiliate status with other departments, and a number of faculty members from other departments hold affiliate status with the department. In addition, some faculty hold appointments in the Beckman Institute for Advanced Science and Technology, the Coordinated Science Laboratory, the Materials Research Laboratory, and the Micro and Nanotechnology Laboratory. All these affiliations provide opportunities for graduate student appointments to conduct research. For a detailed list of current research interests of the faculty, visit the department's research website (<https://ece.illinois.edu/research/>).

There are numerous interdisciplinary programs, laboratories, and centers for research within the department. These are described at the department's research centers website (<https://ece.illinois.edu/research/centers.asp>).

for the degree of Master of Science in Electrical and Computer Engineering

For additional details and requirements refer to the department's Graduate Study Manual (<https://ece.illinois.edu/academics/grad/overview/msphd-manual.asp>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook/>).

Required Courses:	Required Hours
Thesis research – ECE 599 (min/max applied toward degree)	8
ECE Colloquium – ECE 500 (registration for 0 hours every term while in residence)	0
Elective courses (subject to Other Requirements and Conditions below)	24
Total hours	32

Other Requirements and Conditions

Requirement	Description
Credit in ECE 415, ECE 445, ECE 590, ECE 596, PHYS 404, PHYS 435, PHYS 436, and STAT 400 does not count toward the degree.	
12 credit hours must be 500-level ECE courses other than ECE 590, ECE 596, ECE 597, and ECE 599.	
No course used to fulfill any degree requirement may be taken using the "Credit/No Credit" option.	
A maximum of 4 hours of ECE 597 (or other individual study) may be applied toward the elective coursework requirement.	
There is no final examination for the M.S. degree.	
M.S. thesis deposit	
Minimum GPA:	3.0

for the degree of Master of Science in Electrical and Computer Engineering

We expect each graduate student to achieve at least five of the following outcomes:

1. To be able to identify technical challenges, and formulate problems in Electrical and Computer Engineering.
2. To be able to apply theoretical and/or experimental methods to solve problems in Electrical and Computer Engineering.
3. To have in-depth knowledge of at least one sub-area within Electrical and Computer Engineering.
4. To be able to effectively communicate findings to peers in written and oral form.
5. To be able to teach topics in Electrical and Computer Engineering at the university level.
6. To have broad understanding of the scope of research in Electrical and Computer Engineering.
7. To be able to function as an engineer.

Admission Requirements

Admission for the spring semester is possible, in addition to the usual fall semester admissions.

Applicants must have completed an electrical engineering curriculum or a computer engineering curriculum substantially equivalent to those of the University of Illinois at Urbana-Champaign. Graduates of curricula in the physical sciences, mathematics, and computer science may be admitted if they are judged to have the necessary background to profit from graduate work in electrical and computer engineering. A minimum grade point average of 3.00 (A = 4.00) for the last two years of undergraduate study is required. However, because of space limitations, applicants with GPAs below 3.50 are rarely admitted. All applicants must submit scores from the general test of the Graduate Record Examination (GRE) (<http://www.ets.org/>).

All applicants whose native language is not English are required to submit TOEFL (<http://www.toefl.org/>) or International English Language Testing System (IELTS) (<http://www.ielts.org/>) scores as evidence of English proficiency. Minimum admission requirements (<https://>

grad.illinois.edu/admissions/instructions/04c/) are set by the Graduate College.

Financial Aid

Fellowships, research assistantships, and teaching assistantships (all of which include tuition and partial fee waivers) are available for the majority of students who are admitted to the MS and PhD programs. International applicants generally are not awarded teaching assistantships, but are eligible for the other forms of financial aid.

All applicants, regardless of US citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 5 is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (<https://citl.illinois.edu/citl-101/teaching-learning/grad-academy-for-college-teaching/>) conducted prior to the start of the semester and register for ECE 590TL.

for the degree of Master of Science in Electrical and Computer Engineering

Other Graduate Programs in the Department of Electrical & Computer Engineering

- degrees:
- Electrical & Computer Engineering, MEng (<http://catalog.illinois.edu/graduate/engineering/electrical-computer-engineering-meng/>)
- Electrical & Computer Engineering, PhD (<http://catalog.illinois.edu/graduate/engineering/electrical-computer-engineering-phd/>)
 - optional concentrations:
 - Biomechanics (<http://catalog.illinois.edu/graduate/engineering/concentration/biomechanics/>)
 - Cancer Nanotechnology (<http://catalog.illinois.edu/graduate/engineering/concentration/cancer-nanotechnology/>)
 - Computational Science and Engineering (<http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/>)

The Department of Electrical & Computer Engineering (ECE) offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy in Electrical & Computer Engineering and a Master of Engineering in Electrical & Computer Engineering. Virtually every specialty within electrical and computer engineering is represented with courses and research opportunities in the following areas: applied computational theory; bioengineering, acoustics, and biomedical imaging; communications; computer-aided design and testing; computer systems, computer vision and robotics; decision and control; electromagnetic fields; optics, lasers, and plasmas; integrated circuits; microelectro-mechanical systems; mobile computing and communication; optoelectronics; power and energy systems; power electronics; remote sensing and propagation; semiconductor materials and devices, semiconductor physics and computational electronics; signal, image, and speech processing.

for the degree of Master of Science in Electrical and Computer Engineering

Department Head: Bruce Hajek (b-hajek@illinois.edu)
Director of Graduate Studies: Michael L Oelze (oeelze@illinois.edu)
Electrical and Computer Engineering website (<http://ece.illinois.edu>)
ECE Program website
Electrical and Computer Engineering faculty
2120 Electrical and Computer Engineering Bldg, 306 N Wright St, Urbana, IL 61801
(217) 300-2414

Grainger College of Engineering

Grainger College of Engineering website (<https://grainger.illinois.edu/>)

Admissions

Contact: Jennifer Merry (merry@illinois.edu)
Applicant email (ece-grad-apps@illinois.edu)
Electrical and Computer Engineering Admissions & Requirements (<https://ece.illinois.edu/admissions/graduate/admissions-requirements-and-process/>)
Graduate College Admissions & Requirements (<https://grad.illinois.edu/admissions/apply/>)