ELECTRICAL & COMPUTER ENGINEERING, MENG

for the degree of Master of Engineering in Electrical & Computer Engineering (on campus and online)

The MEng in Electrical & Computer Engineering is a professionally-oriented degree intended for students interested in extending the depth and/or breadth of their technical knowledge in Electrical and Computer Engineering or in a subfield thereof and is most appropriate for students who intend to enter the professional workforce after completing the degree.

Admission Requirements
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, due to space limitations, applicants with GPAs below 3.50 are less likely to be 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
Students in the MEng in Electrical and Computer Engineering program are not eligible for Board of Trustees (BOT) tuition-waiver generating assistantships at the University of Illinois.

Other Graduate Programs in the Department of Electrical & Computer Engineering

degrees:

- Electrical & Computer Engineering, MS (http://catalog.illinois.edu/graduate/engineering/electrical-computer-engineering-ms/)
  - 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/)

- 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.

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

This degree program can be completed either on campus or online; the requirements are listed below:

Information listed in this catalog is current as of 08/2022
### Required Courses

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Required Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 500—registration (0 hours) every term while in residence</td>
<td>0</td>
</tr>
<tr>
<td>500-level courses, including 8 hours of ECE 500-level courses and up to 4 hours of non-ECE 500-level courses (subject to Other Requirements and Conditions below)</td>
<td>12</td>
</tr>
<tr>
<td>Professional Development: ECE 596 Master's Project supervised by ECE (or affiliate) graduate faculty or course(s) in leadership, entrepreneurship, or other business-related topic approved by ECE Director of Graduate Studies</td>
<td>4</td>
</tr>
<tr>
<td>Elective courses (subject to Other Requirements and Conditions below)</td>
<td>16</td>
</tr>
<tr>
<td>Total credit hours for the degree</td>
<td>32</td>
</tr>
</tbody>
</table>

### Other Requirements and Conditions (may overlap)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
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<tbody>
<tr>
<td>A minimum of 12 credit hours of coursework at the 500-level must be applied toward the degree, including at least 8 hours of ECE coursework. Up to 4 hours of ECE 596 and/or ECE 597 (or other individual study) may be applied toward this degree requirement. Up to 4 hours of non-ECE 500-level course(s) from approved list or as approved by the ECE Director of Graduate Studies may be applied toward this degree requirement. Coursework must include at least 18 credit hours of ECE courses; 15 of these hours must be from no more than 3 different focus areas. The ECE Graduate Committee maintains the focus area course lists. Credit in ECE 415, 445, 590, PHYS 404, 405, 435, 436, and STAT 400 do not count toward the degree. No course used to fulfill any degree requirement may be taken using the &quot;Credit/No Credit&quot; option. This degree option is non-thesis only.</td>
<td>Minimum program GPA: 3.0</td>
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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.

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