ENGINEERING: Plasma Engineering, MENG

for the degree of Master of Engineering in Engineering, Plasma Engineering Concentration (on campus & online)

department head: Rizwan Uddin (rizwan@illinois.edu)
overview of admissions & requirements: https://plasmameng.engineering.illinois.edu/admissions/
overview of grad college admissions & requirements: https://grad.illinois.edu/admissions/apply (https://grad.illinois.edu/admissions/apply/)
department website: http://npre.illinois.edu (https://npre.illinois.edu/)
program website: https://plasmameng.engineering.illinois.edu/
college website: https://grainger.illinois.edu/
contact: Amy McCullough (amccull2@illinois.edu)
address: 403 A-2 Engineering Hall, 1308 W Green St, Urbana, IL 61801
phone: (217) 300-2378
email: plasma-meng@illinois.edu

The MEng in Engineering, Plasma Engineering Concentration is a professionally-oriented degree program for students whose primary intent is a career in industry or government. This degree differs from the Master of Science degree in that it is a terminal degree and not a pathway to a doctoral program. Other concentrations under the MEng in Engineering major include Aerospace Systems Engineering (http://catalog.illinois.edu/graduate/engineering/engineering-meng/aerospace-systems/), Autonomy and Robotics (http://catalog.illinois.edu/graduate/engineering-meng/autonomy-robotics/), Energy Systems (http://catalog.illinois.edu/graduate/engineering-meng/energy-systems/), and Railway Engineering (http://catalog.illinois.edu/graduate/engineering-meng/railway/).

Admission Requirements

Students with bachelor’s or master’s degrees in engineering or related fields will be considered for admission if they have a grade point average of at least 3.00 (A = 4.00) for the last two years of undergraduate study. Admission is possible for the spring term, but most admissions are for the fall term. Full details of admission requirements are on the Plasma Engineering Concentration website (https://plasmameng.engineering.illinois.edu/).

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 concentrations under the MEng in Engineering major are not eligible for Board of Trustees (BOT) tuition-waiver generating assistantships at the University of Illinois.

Other Graduate Programs in the Department of Nuclear, Plasma & Radiological Engineering

degrees:

Nuclear, Plasma, & Radiological Engineering, MS (http://catalog.illinois.edu/graduate/engineering/nuclear-plasma-radiological-engineering-ms/)
optional concentrations:
- Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)
- Nuclear, Plasma, & Radiological Engineering, PhD (http://catalog.illinois.edu/graduate/engineering/nuclear-plasma-radiological-engineering-phd/)
optional concentrations:
- Computational Science & Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)

concentrations:

Energy Systems (http://catalog.illinois.edu/graduate/engineering/engineering-meng/energy-systems/)
available for:
- Engineering, MENG (http://catalog.illinois.edu/graduate/engineering-engineering-meng/)

The Department of Nuclear, Plasma & Radiological Engineering (NPRE) offers programs leading to degrees of Master of Science and Doctor of Philosophy in Nuclear, Plasma & Radiological Engineering, as well as Master of Engineering in Engineering with a Concentration in Energy Systems or a Concentration in Plasma Engineering. The Master of Science and Doctor of Philosophy degree programs are centered around three theme areas:

- nuclear power engineering
- fusion and plasma science and engineering
- radiological engineering and medical physics

Advanced course work and active research programs are offered in all of these areas.

Opportunity also exists for specializing in energy and sustainability engineering via the

Energy and Sustainability Engineering (EaSE) Graduate Certificate Option (https://energysystemsmeng.engineering.illinois.edu/graduate-certificate-option/)

for the degree of Master of Engineering, Major in Engineering, Plasma Engineering Concentration (on campus & online)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPRE 421</td>
<td>Plasma and Fusion Science</td>
<td>3</td>
</tr>
<tr>
<td>NPRE 423</td>
<td>Plasma Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>NPRE 429</td>
<td>Plasma Engineering</td>
<td>3</td>
</tr>
<tr>
<td>NPRE 527</td>
<td>Plasma Technology of Gaseous Electronics</td>
<td>4</td>
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<tr>
<td>Must complete one of the following courses:</td>
<td></td>
<td></td>
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<tr>
<td>NPRE 481</td>
<td>Writing on Technol &amp; Security</td>
<td>3 or 4</td>
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<tr>
<td>ENG 573</td>
<td>Capstone Project</td>
<td>1 to 8</td>
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</table>

Information listed in this catalog is current as of 12/2021
NPRE 523, Plasma Waves  
NPRE 526, Plasma-Materials Interactions

**Additional Coursework**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective Courses to be selected with approval of an advisor</td>
<td>12</td>
</tr>
<tr>
<td>Professional Development Courses from approved list</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Hours**  

32

**Other Requirements and Conditions (may overlap):**

- A minimum of 20 credit hours must be taken from the University of Illinois Urbana-Champaign campus.
- A minimum of 12 500-level credit hours, with a minimum of 8 hours of NPRE 500-level coursework.
- No courses used to fulfill any degree requirements may be taken using the "Credit/No Credit" option.

Minumum GPA: 3.0