Our department is home to two unique fusion experiments, Pegasus-III and the Helically Symmetric eXperiment (HSX). Students have the opportunity to gain hands-on experience in large experimental teams, making them sought after by top national and international facilities.

Since the U.S. Department of Energy’s Nuclear Energy University Program began more than a decade ago, UW-Madison has been the largest recipient of research funding. Those research projects place us at the forefront of advanced reactor technology development and have led to collaborations with many companies developing novel reactor designs, including TerraPower, NuScale, General Atomics, Kairos, and Terrestrial Energy.

Our alumni have a long history in important technical leadership positions across multiple industries. Whether at the helm of the nation’s largest fleet of nuclear power plants, serving as commissioner in the US Nuclear Regulatory Commission, holding positions appointed by the president, or founding their own companies, our alumni are saving this planet and exploring the rest.

We are among a handful universities who still maintain a nuclear reactor, not only for research, but as a “classroom” for our nuclear engineering students. For them, watching a reactor pulse—the flash of light caused by ejecting a control rod and allowing the reactor to rapidly increase in power—is an exhilarating experience.

Undergraduate students licensed by the Nuclear Regulatory Commission to operate the UW nuclear reactor (as of 2024).

EP majors that go on to graduate school after completing their BS.

UW-Madison spinoff companies: Realta Fusion, Type One Energy, SHINE Technologies

<table>
<thead>
<tr>
<th>STUDENT ENROLLMENT</th>
<th>NATIONAL PUBLIC RANKING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>77</strong> UNDERGRADUATE Nuclear engineering</td>
<td><strong>2nd</strong> UNDERGRADUATE</td>
</tr>
<tr>
<td><strong>31</strong> UNDERGRADUATE Engineering physics</td>
<td></td>
</tr>
<tr>
<td><strong>78</strong> GRADUATE Nuclear engineering and engineering physics</td>
<td><strong>4th</strong> GRADUATE</td>
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</tbody>
</table>
DEGREES OFFERED

BS
- Engineering Physics
- Nuclear Engineering

MS
- Nuclear Engineering and Engineering Physics

PhD
- Nuclear Engineering and Engineering Physics

STARTING SALARIES*

$70,000+ 
UNDERGRADUATE

$98,000+ 
GRADUATE

*approximate per year

AREAS OF EMPHASIS IN THE GRADUATE PROGRAM

Nuclear systems engineering
Research in radiation transport and neutronics, materials science and engineering, and thermal-hydraulics, as well as risk analysis and systems integration studies for fission reactors, fusion systems, and medical applications of nuclear technology.

Plasma science and engineering
Emphasizes high temperature plasmas for fusion energy applications (both magnetic and inertial), low temperature plasmas for industrial applications, such as plasma processing and plasma aided manufacturing, and basic plasma physics.

RESEARCH AREAS

Experimental plasma physics
Plasma theory and computation
Nuclear and fusion materials
Nuclear systems engineering
Energy transitions, policy, and security

RESEARCH FACILITIES

Max Carbon Radiation Science Center
- UW Nuclear Reactor
- Ion Beam Laboratory
- Characterization Lab for Irradiated Materials

Pegasus-III Fusion Experiment

Helically Symmetric eXperiment (HSX)

Center for Plasma Theory and Computation

Institute for Nuclear Energy Systems

Nanoscale Imaging and Analysis Center

DEPARTMENT CHAIR

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Visit us on the web.