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.

We are among a handful of 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.

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, to serving as a commissioner in the US Nuclear Regulatory Commission, to piloting the space shuttle, to designing and deploying Mars landers, our alumni are saving this planet and exploring the rest.

Our department is known for its impressive array of nation- and world-leading fusion research facilities, and for its collaborations with even larger facilities around the world. Students routinely complete their research on some of most important facilities in the world, including DIII-D and W/7-X.

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## DEGREES OFFERED

**BS**
- Engineering Mechanics (+Aerospace Engineering option)
- Engineering Physics
- Nuclear Engineering

**MS**
- Engineering Mechanics – Aerospace option
- Engineering Mechanics
- Nuclear Engineering and Engineering Physics

**PhD**
- Engineering Mechanics
- Nuclear Engineering and Engineering Physics

## STARTING SALARIES* |

<table>
<thead>
<tr>
<th>Degree</th>
<th>Undergraduate</th>
<th>Graduate</th>
<th>Doctoral</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$66,000+</strong></td>
<td>$78,000+</td>
<td>$99,000+</td>
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</tr>
</tbody>
</table>

*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.

### MECHANICS OF MATERIALS
Emphasizes study of force, stress, deformation, and motion as applied to engineering materials, structures, and fluids. Research includes shape memory alloys, nano-structured films, biomaterials, bone and soft tissue, geo-materials, space structures, viscoelastic liquids, and fiber-reinforced composites.

## RESEARCH AREAS

- Aerospace & Dynamics
- Fusion Science and Technology
- Mechanics of Materials
- Nuclear Systems Engineering
- Advanced Detection and Measurement

## DEPARTMENT CHAIR

**Paul Wilson**
Professor of Nuclear Engineering

(608) 263-0807
chair@ep.wisc.edu

## RESEARCH FACILITIES

- Center for Plasma Theory and Computation
- Fusion Technology Institute
- Institute for Nuclear Energy Systems
- Materials Research Science and Engineering Center
- Materials Science Center
- Max Carbon Radiation Science Center / 1 TRIGA Type Nuclear Reactor
- Pegasus Plasma Experiment
- Wisconsin Shock Tube

## AVERAGE ANNUAL RESEARCH FUNDING

**$22m+**