



## NPRE 2016-17 Overview

### Three Paths

Students choose from three concentrations:

- Plasma and Fusion Science and Engineering
- Power, Safety and the Environment
- Radiological, Medical and Instrument Applications

### Enrollment, Fall 2016

142 Undergraduates - NPRE

91 Graduate Students - NPRE

24 Graduate Students - Master of Energy Systems

### Degrees Granted

(August 2015-May 2016)

36 Bachelor of Science Degrees

11 Master of Science Degrees

8 Master of Engineering Degrees

5 Doctor of Philosophy Degrees

### Graduate Student Support, Fall 2016

(numbers represent students with multiple sources of support)

52 Research Assistants

15 Fellows

20 Teaching Assistants

### Faculty

16 FTE Faculty (8 Assistants, 3 Associates, 5 Full Professors)

2 Endowed Professorships

1 Research Professor

8 Affiliate Faculty

13 Adjunct Faculty

3 Emeritus

### Research Expenditures

\$5 million in FY 16

\$200,000 gift expenditures (research related)

## Major Research and Laboratory Facilities

- Beckman Institute, [beckman.illinois.edu](http://beckman.illinois.edu)
- Blue Waters Sustained Petascale Computing, [bluwaters.ncsa.illinois.edu](http://bluwaters.ncsa.illinois.edu)
- Center for Plasma-Material Interactions, [cpmi.illinois.edu](http://cpmi.illinois.edu)
- Functional X-ray Imaging Lab (FXIL)
- Hybrid Illinois Device for Research and Applications (HIDRA)
- Institute for Genomic Biology, [igb.illinois.edu](http://igb.illinois.edu)
- Micro and Nanotechnology Laboratory, [mntl.illinois.edu](http://mntl.illinois.edu)
- Multiphase Thermo-fluid Dynamics Laboratory
- National Center for Supercomputing Applications, [ncsa.illinois.edu](http://ncsa.illinois.edu)
- Radiation Surface Science and Engineering Laboratory [rssel.engineering.illinois.edu](http://rssel.engineering.illinois.edu)
- Seitz Materials Research Laboratory, [mrl.illinois.edu](http://mrl.illinois.edu)
- Virtual Education and Research Laboratory, [verl.npre.illinois.edu](http://verl.npre.illinois.edu)

## Instructional and Research Areas:

- Production, transport and interactions of radiation with matter
- Applications of nuclear processes
- Nuclear fission for power production, operations and control
- Reactor safety analysis
- Probabilistic risk analysis
- Plasma sciences, applied plasma physics, fusion
- Plasma modeling, code development
- Plasma/material interactions
- Engineering design for global social impact
- Radiation detection, advanced detector systems and analysis
- Radiological science, health physics, and medical applications
- Materials science, nuclear fuels and structural materials
- Global energy, arms control, disarmament and security
- Nuclear reactor thermal hydraulics
- Experimental two-phase flow and heat transfer
- Research, development of small modular reactors
- Reactor physics, kinetics, simulation
- Space propulsion, power systems
- Alternate energy systems, energy analysis
- Advanced nanostructured biointerfaces for regenerative medicine

