

## **Executive Summary:**

The Pennsylvania State University's Department of Mechanical and Nuclear Engineering is committed to maintaining its rich history by strengthening its prominent nuclear engineering program. This proposal describes a plan to create two graduate fellowships in nuclear engineering utilizing funds from the U.S. Nuclear Regulatory Commission's (NRC) Nuclear Education Program Fellowship Grant Program. Each fellowship will be for a four year period with each individual fellowship award beginning in Fall 2009 semester and continuing through the Spring 2013 semester. This amount is approximately equivalent to our graduate research assistant support and will provide the fellows with full tuition and fees coverage. Recipients will be selected based on prior academic performance as demonstrated in their application to graduate school. Consideration will also be given to minorities and women to encourage them to enter our nuclear engineering graduate program.

Our Department contains both mechanical and nuclear engineering programs with separate and distinct degree programs in each of the two areas. Penn State offers the Master of Science (thesis and non-thesis options), the Master of Engineering and the Doctor of Philosophy degrees in nuclear engineering. There are currently 43 graduate students enrolled in nuclear engineering at Penn State University Park. In addition, there are over 136 students taking courses through our nuclear engineering distance learning program, with 70 students seeking a master of engineering degree. Distance graduate students do not receive any financial aid. Of the 43 on-campus nuclear engineering graduate students, 49% are doctoral students and 70% are U.S. citizens.

Our graduate program's size, coupled with our strong curriculum in nuclear power, means each year Penn State produces a large number of new engineers that enter the nuclear power workforce. Last year Penn State awarded 16 Masters and 12 PhD degrees in nuclear engineering. Our MS, MEng and PhD graduates are highly recruited by all sectors associated with nuclear power, including vendors, utilities, national laboratories, academia, and government agencies.

These new fellowships will attract academically strong students to continue in or to enter studies in nuclear engineering. We are confident that the recipients of these fellowships will become the future leaders in nuclear science and engineering.