FY2021 Fellowship Awards

Academic Institution	Amount Awarded	Title of Proposal
Idaho State University	$394,695.00	Idaho State University and NRC Nuclear Science Fellowship Program
University of Alabama at Birmingham	$373,735.00	UAB Fellowship Program for Master's in Health Physics (MHP) Students
Clemson University	$400,000.00	U.S. N.R.C. Fellowship Education Grant at Clemson University
City University of New York (CUNY)	$399,168.00	Nuclear Energy Fellowship Program at City College of New York and Hunter College
University of Michigan	$400,000.00	Nuclear Engineering Fellowship Program at the University of Michigan
Worcester Polytechnic Institute	$399,942.00	WPI Nuclear Science and Engineering Graduate Fellowship Program
Colorado School of Mines	$400,000.00	Colorado School of Mines Nuclear Science and Engineering Fellowship Program
Pennsylvania State University	$400,000.00	Fellowship Grant for Nuclear Engineering Graduate Students at Pennsylvania State University
Oregon State University	$400,000.00	Oregon State University Nuclear Science Fellowship Program

Idaho State University and NRC Nuclear Science Fellowship Program

Executive Summary:

The objective of the Idaho State University (ISU)/NRC Nuclear Science Fellowship Program is to provide financial support and professional development opportunities to graduate students in nuclear engineering and health physics. ISU is requesting from NRC funds for at least two, single-year graduate fellowships given over the four-year award period. The awards are designed to go to Master's (M.S.) and/or Doctoral (Ph.D.) degree students, and will be distributed among students in the nuclear engineering and health physics programs. Professional development opportunities may include technical tours, participation in professional technical conferences and publication in technical, peer reviewed journals. In addition to the obvious financial benefits experienced by the fellows themselves, this fellowship program will benefit the broader nuclear industry by contributing to the education and development of successful graduates who enter the nuclear work force. Previous NRC fellowship awards to Idaho State have been successfully administered and have played a significant role in attracting and retaining students in nuclear science and engineering at the graduate level.

Principal Investigator: Mary Lou Dunzik-Gougar, mldg@isu.edu

UAB Fellowship Program for Master's in Health Physics (MHP) Students

Executive Summary:

The overall objective of the UAB Master's in Health Physics (MHP) program is to develop the next generation of health physicists that will have the knowledge needed to maintain the radiological safety aspect of the nuclear workforce. The UAB program is the only one of its kind in the state of Alabama, and one of only a handful across the US. UAB's School of Health Professions (SHP), and specifically the Department of Clinical and Diagnostic Sciences (CDS), is dedicated to critical programs that fulfill key national needs. SHP has embraced diversity initiatives, actively working towards increasing our minority student population. This project will provide fellowships to five (5) MHP students per year for four years, supporting a total of 20 students, with a goal of 50% of fellowship recipients representing women and minority groups. Fellowships will be advertised on the UAB website and used in part to assist in recruitment efforts. Each student will receive hands on mentoring, research opportunities, a unique supervised practice experience, partially funded tuition and fees, a textbook stipend, and travel to the Health Physics Society Annual Meeting or another appropriate meeting to present their research and network among industry professionals. Upon graduation, students are eligible to sit for Part I of the Certified Health Physics (CHP) exam administered by the American Board of Health Physics (ABHP).

Principal Investigator: Emily A. Caffrey, emilycaf@uab.edu

U.S. N.R.C. Fellowship Education Grant at Clemson University

Executive Summary:

Fellowships are requested to support an average of two graduate students per year in the nuclear environmental engineering and science (NEES) program within the Environmental Engineering and Earth Sciences Department at Clemson University. Fellowship students will pursue a course of study in either Environmental Health Physics (ABET-ANSAC accredited at MS level) or Environmental Radiochemistry. Fellowship selection will be made from a pool of students who are US citizens and awarded based on academic merit (> 3.3 GPA) with consideration given to financial need and the goal of promoting the participation of women and students from other underrepresented groups. Generally, different students will be funded from year to year depending on merit and need, with a total of 6 to 9 students supported over four years.

The NEES program is an academic program that was established in the early 1980's. The program focuses on the environmental aspects of nuclear technologies, including environmental health physics, radioecology, radioactive waste processing, environmental risk assessment, the nuclear fuel cycle, radiation detection and measurement, environmental radiochemistry, and environmental remediation. Since 2015, the average number of enrolled M.S. and Ph.D. students in our degree programs has been about 20 per year, with an average of 4-5 graduating per year. The continued success of the program demonstrates the strength of the interdisciplinary approach to education and research in the nuclear environmental sciences. This proposal is requesting a continuation of our current NRC fellowship grant that was awarded in 2018.

Principal Investigator: Nicole E. Martinez, nmarti3@clemson.edu

Nuclear Energy Fellowship Program at City College of New York and Hunter College

Executive Summary:

Objectives and Benefits: The Nuclear Energy Fellowship Program at City College of New York and Hunter College will recruit and train two Ph.D. students majoring in Mechanical Engineering and/or Chemical Engineering at City College of New York (CCNY) and two Master's students majoring in Radiochemistry at Hunter College (HC). The research projects to be undertaken will be selected from among the experimental and numerical investigations of thermal-hydraulics phenomena of interest to Light Water Reactors and Generation-IV reactors, and the radiochemistry projects in Tecnetium-99 and isotope production. This program will benefit the nuclear industry in securing highly skilled scientists and engineers for their workforce. As CCNY and HC are Minority and Hispanic Serving Institutions, the proposed Fellowship program will be able to provide minority students with the knowledge, experience and skills needed to pursue professional careers in the nuclear industry, National Laboratories, and government agencies.

Principal Investigator: Taehun Lee, thlee@ccny.cuny.edu

Nuclear Engineering Fellowship Program at the University of Michigan

Executive Summary:

The objective of this program is to provide support to starting graduate students at the MS and PhD level for up to three terms of financial support for MS students and up to 2 years of support for PhD students. The program will primarily support newly starting graduate students and, thus, is a strong recruiting tool to bring excellent students into graduate programs. In limited specific occasions, the funds might be used to help an outstanding student finish a degree. All program students would be mentored by faculty members whose work is in technical areas noted as critical to the Nuclear Regulatory Agency program objectives.

Principal Investigator: Todd Allen, traumich@umich.edu

WPI Nuclear Science and Engineering Graduate Fellowship Program

Executive Summary:

The Worcester Polytechnic Institute Nuclear Science and Engineering Program (NSE) requests support for a Graduate Fellowship whose recipient will participate in an enhanced education and research program described within. To maximize the impact of this NSE Graduate Fellowship Program, we propose an enhanced scholastic and research program with a goal of rotating this award among our NSE Research Assistants to maximize the effects of this program.

The WPI Program Director will oversee an application and selection process aimed to obtain the best and brightest recipients for this program. Candidates will be assessed based on their academic achievements, their commitment, and their interest in the nuclear field.

Prior to starting this fellowship, a candidate must sign an agreement to pursue at least 6 months of employment within the nuclear industry for each year or partial year of fellowship support. As a fellow, the student will pursue an enhanced project-based educational program designed to enhance the fellow's professional success and to increase his/her leadership potential in the nuclear energy field. These program elements have the additional benefit of helping maintain the student's interest in nuclear energy and better incorporating the student into the NSE professional community.

Principal Investigators: David C. Medich, dcmedich@wpi.edu

Colorado School of Mines Nuclear Science and Engineering Fellowship Program

Executive Summary:

Starting in the 2015/2016 academic year, the Colorado School of Mines (CSM) established a Nuclear Science and Engineering graduate fellowship program to increase graduate enrollment in our graduate nuclear engineering degree programs. The funding requested will add support for two additional graduate Fellows per year with the intention to attract top students to the Nuclear Science and Engineering (NSE) Program. Potential Fellows will be selected from the pool of NSE Program applicants and NSE faculty will mentor and advise the Fellows throughout the Fellows' time at CSM. Particular emphasis will be placed on encouraging and tracking the Fellows' academic and research progress. While predominantly aimed at Ph.D. candidates, outstanding M.S. students will also be considered.

Principal Investigator: Jeffrey King, kingjc@mines.edu

Fellowship Grant for Nuclear Engineering Graduate Students at Pennsylvania State University

Executive Summary:

The Ken and Mary Alice Lindquist Department of Nuclear Engineering at Penn State University is committed to maintaining its rich history by strengthening its prominent nuclear engineering program. This proposal describes a plan to create graduate fellowships in nuclear engineering utilizing funds from the U.S. Nuclear Regulatory Commission's (NRC) Nuclear Education Program Fellowship Grant Program. Both fellowships will be for a four-year period beginning in the Fall 2022 semester and continuing through the Spring 2026 semester. The total project cost is approximately equivalent to our graduate research assistant support and, with additional funds provided by Penn State's cost match, will provide two fellows with full four-year support with full tuition and fees coverage and majority funding in the summer.

Recipients will be selected based on prior academic performance as demonstrated in their application to graduate school and reviewed by the Nuclear Engineering Graduate Studies Committee. Consideration will also be given to underrepresented minorities and women to encourage them to enter the department's nuclear engineering graduate program.

Our department offers the Master of Science (M.S.) (thesis and non-thesis options), the Master of Engineering (M.Eng.), and the Doctor of Philosophy (Ph.D.) degrees in nuclear engineering. There are currently 66 resident graduate students enrolled in nuclear engineering at Penn State University Park. In addition, there are 56 students taking courses through our World Campus Masters of Engineering online program; these students do not receive any financial aid. Of the 66 on-campus nuclear engineering graduate students, 51 are Ph.D. students and 15 are M.S. students.

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. Over the last three years, Penn State awarded 29 Masters of Engineering, 14 Masters of Science, and 11 Doctor of Philosophy degrees in nuclear engineering. Our 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 U.S. 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 of nuclear science and engineering.

Principal Investigator: Jean Paul Allain, allain@psu.edu

Oregon State University Nuclear Science Fellowship Program

Executive Summary:

The School of Nuclear Science and Engineering (NSE) at Oregon State University (OSU) is submitting this proposal to request NRC funding to assist in the administration of fellowship awards to attract and retain highly-qualified graduate students within the disciplines surrounding nuclear science and engineering. The program will be administered by an Assistant Professor of nuclear engineering in NSE. The program will provide eight graduate students with tuition assistance and monthly stipends for a 12-month period during their pursuit of a graduate degree in a nuclear related discipline (nuclear engineering or radiation health physics). The program will focus on recruiting highly deserving students into the department and will incorporate metrics to track student performance and evaluate program effectiveness. The tenured and tenure-track faculty, as a part of the annual admission process, will jointly select recipients of the Oregon State University Nuclear Science and Engineering Fellowship Program.

Principal Investigator: Izabela Gutowska, izabela.gutowska@oregonstate.edu