

Course Development on Nuclear Engineering

Executive Summary

With energy demands rising and concerns over climate change increasing, one of few available means of producing large amounts of carbon-free energy is nuclear, and there is a clear need to have a pipeline of well-qualified students for the U.S. Nuclear Regulatory Commission (NRC) and the nuclear industry.

In this project, two new courses in the area of nuclear engineering are proposed: *Fluid Mechanics in Nuclear Applications* and *Reliability and Risk*. These two new courses are built on a current NRC curriculum grant in which two nuclear energy electives are developed. With the two existing courses to engage students in the nuclear field and the two proposed courses to deepen their knowledge, a Nuclear Certificate will be proposed. The certificate program will raise the profile of the nuclear field on this campus and will give students an edge to compete for jobs in the nuclear industry which offers satisfying and lucrative careers.

The nuclear curriculum grant is intended to build capability in both faculty and students in a university without a nuclear engineering program. Courses developed will be disseminated, making the proposed project a potentially high-impact project.