Development of a Nuclear Engineering Undergraduate Laboratory Course Utilizing Personnel and Physical Resources of the Ohio State University Nuclear Reactor Laboratory (OSU NRL)

Executive Summary

We propose that the PI and members of the Ohio State University Nuclear Reactor Laboratory (OSU NRL) staff develop and teach (once as a part of the course development process) an undergraduate nuclear engineering laboratory course utilizing the facilities of the OSU NRL, particularly the Ohio State University Research Reactor (OSURR). This course will broaden the educational opportunities for undergraduate students enrolled in the Nuclear Engineering (NE) Program's minor option by providing these undergraduate students with experience making measurements and performing experiments utilizing a nuclear reactor. Such a course is not currently available. It will enhance the students' learning beyond that which is available through classroom lectures and computer simulations. The outcome and benefits include better prepared and educated students entering the workforce as nuclear industry professionals.

The OSU NRL is an interdisciplinary research facility within the College of Engineering that is closely affiliated with the NE Program. It is a major asset of this program and the university as a whole. This project will further integrate the educational resources of the OSU NRL (both personnel and physical) with those of the NE Program. The Chairman of the Mechanical and Aeronautical Engineering (MAE) Department, of which the Nuclear Engineering Program is a part, has pledged to support offering this course on an annual basis and has agreed that this course will be listed among the courses that are in the MAE undergraduate program and, in particular, among the courses that are available to students in the Nuclear Engineering undergraduate minor program. This support establishes the sustainability of this course.

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