

Revitalizing the Nuclear Safety Curriculum at Idaho State University (ISU): Phase 2

Executive Summary

Nuclear engineering faculty at Idaho State University (ISU) has taken a first step towards revitalization and expansion of nuclear safety instruction at ISU. Two elective courses relevant to nuclear safety have been created and were offered during academic year 2010-2011 as “Phase 1” of the revitalization. These courses address Methods of Nuclear Safety Analysis and Monte Carlo Methods. To round out a proposed Nuclear Safety Emphasis for Nuclear Engineering MS students at ISU, it is proposed to develop three additional courses under this “Phase 2” proposal: (1) *Nuclear Criticality Safety*, (2) *Probabilistic Risk Assessment* (the latter being a redesign and update of a course previously offered under the same name), and (3) *Nuclear Reliability and Systems Modeling and Simulation*.

The ultimate goal is to offer a suite of nuclear safety courses within the Idaho State University Nuclear Engineering program. Our long-range goal is to prepare our graduates to be competitive in nuclear safety principles and analysis methods when they leave the institution. The near-term objective is to develop and introduce into the graduate and undergraduate curriculum a nuclear safety specialization for engineering and health physics students. This “Phase 2” proposal will address that need. The benefit will be the education of students who will enter the workforce as well trained nuclear safety and nuclear criticality safety engineers. These engineers will have exposure to the NRC as well as DOE safety cultures and promote the safe use and implementation of nuclear technologies.

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