

## University of Florida

### **Executive Summary:**

The goal of the proposed Faculty Development Program is to provide the necessary funding to attract and retain highly qualified individuals to the University of Florida's Nuclear & Radiological Engineering (NRE) Department. This Program is especially important because of the large and increasing demand for such individuals across all sectors of the nuclear industry, and the limited number of individuals who can fit into an academic career. The continuing increase in student enrollment and attrition of faculty through retirement make it imperative to recruit high quality faculty into our Department and the current proposal will help to support 2 new faculty members who are planned to be hired into the NRE Department for the 2010-11 academic year.

The funding will enable the new faculty to initiate new programs which can contribute significantly to workforce training and breakthrough research in support of 'the design, construction, operation, and regulation of nuclear facilities and the safe handling of nuclear materials. The new faculty will expand NRE's activities in areas of development of nuclear fuels and materials that will be compatible with advanced nuclear energy systems, reactor safety, material damage and aging, advanced reactor control, advanced detection systems, and new experimental stations for research reactors. These activities also create the possibility of the development of research programs for the enhancement of the University of Florida Training Reactor (UFTR), our new initiative in the area of Fully-Digital Instrumentation and Control, enhancement of experimental capabilities of the UFTR, development of new computational methods and experimental tools for simulation of nuclear reactors, and establishment of new industry-sponsored research programs.