

**NUCLEAR POWER PLANT SYSTEMS AND SECURITY:
A GRADUATE ENGINEERING COURSE**

Charles T. Poston

Dr. Mark A. Prelas, Thesis Supervisor

ABSTRACT

With nuclear power poised to begin a significant expansion within the United States, it has become increasingly important to provide engineering students with the knowledge needed to become productive members of the nuclear workforce. Such an education is already provided at the Nuclear Science and Engineering Institute (NSEI) at the University of Missouri-Columbia.

To compliment the courses being taught at the NSEI, a new class was created with the goal of providing students with an understanding of the security and safety systems present at nuclear power plants. A strong emphasis was also placed on providing the supplemental knowledge needed to better grasp the concepts in other nuclear engineering courses.

A secondary goal of the new class was to provide a largely non-technical introduction to safety and security issues at nuclear power plants for students from any academic background.