



**THE OHIO STATE UNIVERSITY**  
COLLEGE OF ENGINEERING

# **Risk and Reliability for Digital Instrumentation and Control Systems**

## **NUCLREN 8777**

### **Credit Hours:**

3.00 - 3.00

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### **Course Components:**

Lecture

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### **Course Description:**

Modeling of digital instrumentation systems used in nuclear power reactor systems for reliability, safety, risk, and security assessment.

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### **Prerequisites and Co-requisites:**

Prereq: 4505 (505) or MechEng 4505 (505), or permission of instructor.

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### **Course Goals / Objectives:**

- Be familiar with the state of the art in digital technology for current and future nuclear power plants
- Be exposed to risk-informed licensing
- Be familiar with the basic safety and risk modeling techniques in the context of digital-based systems
- Be familiar with the reliability quantification techniques for digital-based systems