NUET 4900 SPECIAL PROBLEMS (HUMAN PERFORMANCE)

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Office Hours: Mon 1:00-3:00 p.m., Wed 1:00-3:00 p.m.
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Course Description

Human performance fundamentals, the organization and the processes, the individual worker, the engineer, corrective action programs and root cause analysis, and case studies including TMI-2, Chernobyl, Davis-Besse, and Fukushima Daiichi.

Prerequisites: NUET 3910.

Course Objectives

By the end of the course, the students will be able to:

- Understand the causes of faulty human decision making and how to improve performance
- Apply previously acquired skills and concepts from Nuclear Fundamentals
- Understand concepts related to nuclear heat generation and removal, reactor safety

Program Outcomes

a. an appropriate mastery of the knowledge, techniques, skills and modern tools of their disciplines,
b. an ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology,
f. ability to identify, analyze and solve technical problems,
l. technical expertise in engineering materials, statics, dynamics, strength of materials, fluid power or fluid mechanics, thermodynamics and either electrical power or electronics.

Student Learning Outcomes

Upon completion of this course, students will be able to do the following, given appropriate parameters:

1. Understand and evaluate decision making error sources. (a, b, f)
2. Understand and explain techniques used to improve the decision making process. (a, b, f)
3. Calculate decay heat removal requirements. (a, b, f, l)
4. Perform calculations related to short and long-term storage requirements of radioactive materials. (a, b, f, l)

Required text


Grading Criteria

Homework Assignments /Short Quizzes 20%
Midterm Exam #1 25%
Midterm Exam #2 25%
Final Exam 30%
**Grade Distribution**

≥ 90% = A  
80 – 89.5% = B  
70 – 79.5% = C  
60 – 69.5% = D  
< 60% = F

**Disabilities Accommodation:**
The University of North Texas complies with Section 504 of the 1973 Rehabilitation Act and with the Americans with Disabilities Act of 1990. The University of North Texas provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please see the instructor and/or contact the Office of Disability Accommodation at 940-565-4323 during the first week of class.