



MONROE COUNTY
COMMUNITY COLLEGE

Course Outcome Summary

Required Program Core Course

NUET 230

Nuclear Plant Systems 2

Course Information

Division	Applied Science and Engineering Technology
Contact Hours	60
Theory	45
Lab Hours	30
Total Credits	3.0

Prerequisites: NUET 100, NUET 130

Course Description

This course is a continuation of Nuclear Plant Systems 1. The course will examine chemistry control systems, electrical power generation systems, emergency and backup systems. Systems specific to Pressurized Water Reactors (PWR) will be introduced. Operating issues will continue to be examined and related to plant systems and drawings. This course will reinforce the practice of using drawings to support the planning of maintenance activities and methods of tagging energy sources to protect personnel during maintenance.

This course is a required core course for students pursuing an AAS in Nuclear Engineering Technology

Program Outcomes Addressed by this Course:

Upon successful completion of this course, students should be able to:

- A. Describe and apply the culture of safety, continuous improvement, and peer checking
- B. Explain the requirement for documentation, formal procedures, and recordkeeping for nuclear related activities
- C. Describe the main systems in a nuclear power plant, and how they are used in power generation
- D. Identify typical power plant components and explain their function
- E. Describe different sources of radiation, their effects on organic matter, methods of detection, and shielding
- G. Recognize assumptions and limits of analysis to the application of technology, including social and ethical implications
- H. Recognize the need to engage in lifelong learning, and to perform research or conduct investigations to continuously upgrade knowledge and skills
- I. Communicate effectively, and work as part of a team



Course Outcomes

In order to evidence success in this course, the students will be able to:

1. Describe the overall design of the nuclear power plant in terms of the plant systems and their interaction.

Applies To Program Outcome

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2. Interpret the various types of drawings used by nuclear plant operators and maintenance personnel.

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3. State the purpose of a typical plant system and its importance to plant safety.

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4. Explain safety system responses and capabilities relative to accident scenarios.

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5. Use drawings in the context of working on or operating the equipment in various plant systems.

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6. Describe the scope of typical activities that occur during outages and refueling.

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7. Describe requirements for testing and operation of equipment after completion of electrical and mechanical work.

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- G. Recognize assumptions and limits of analysis to the application of technology, including social and ethical implications
- H. Recognize the need to engage in lifelong learning, and to perform research or conduct investigations to continuously upgrade knowledge and skills
- I. Communicate effectively, and work as part of a team

Date Updated: October 10, 2019
By: MJ Dubois