

# EET 221 - INDUSTRIAL CONTROLS

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## Course Description

This course studies control circuits, electrical schematics and line diagrams. Motor circuits utilizing motor starters, contactors, timers and counters are used to demonstrate control circuitry. Industrial control devices are examined, including solid-state control devices, electro-mechanical relays, proximity sensors, photoelectric sensing devices and programmable logic controllers. Group 2 course.

## Credit Hours

3

## Contact Hours

4

## Lecture Hours

2

## Lab Hours

2

## Required Prerequisites

EET 103 or ELE 105 or MNG 234 or MNG 235

## Course Learning Outcomes

### Knowledge:

- Read electrical schematics.
- Identify types of timers and counters.
- Use motor circuits.
- Describe industrial controls.
- Describe advanced control devices.

### Application:

- Read electrical schematics and line diagrams.
- Design motor control circuits.
- Examine industrial control devices.
- Basic knowledge of Industrial control device operation.

### Integration:

- Demonstrate competencies using basic circuitry functions in the industrial complex.
- Demonstrate a fundamental mastery of wiring circuits to run various industrial equipment.

### Human Dimension:

- Recognize their skills as applying throughout industry.
- Appreciate that the complexity of wiring is not common knowledge of others.

### Caring - Civic Learning:

- Value the expertise required to wire and operate the sometimes complex system of industrial controls.

### Learning How to Learn:

- Transfer their skills to real-world applications.