

## Master Syllabus

### EET 1166 - Industrial Machine Wiring

**Division:** Science, Mathematics and Engineering

**Department:** Electronics Engineering Technology

**Credit Hour Total:** 3.0

**Lecture Hrs:** 2.0 **Lab Hrs:** 2.0

**Prerequisite(s):** EET 1120

**Date Revised:** September 2015

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### Course Description:

Elementary industrial machine wiring principles; schematics, panel layouts, assembly, wiring techniques and equipment used in automated industry; standards for safe operation of equipment and protection of personnel with emphasis given to hands-on work and actual wiring of panels. Two classroom, two lab hours per week.

### General Education Outcomes:

- Critical Thinking/Problem Solving Competency

### Course Outcomes:

#### Electrical circuit wiring

Wire the electrical circuit of an industrial machine according to standard practices.

**Assessment Method:** Performance appraisals

**Performance Criteria:**

100% compliance with all code and safety requirements.

#### Electrical enclosure assembly

Assemble the electrical enclosures according to standard practices using a layout diagram.

**Assessment Method:** Performance appraisals

**Performance Criteria:**

100% compliance with code and safety requirements.

#### Purpose of components

Operate the industrial machine properly and explain the purpose of all the components of the machine and safety features incorporated in the design of the machine.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% correct responses on exam.

**Assessment Method:** Performance appraisals

**Performance Criteria:**

Machine operation within tolerances of specifications.

#### Electrical circuit diagrams

Prepare a wiring diagram for wiring an industrial machine to code.

**Assessment Method:** Performance appraisals

**Performance Criteria:**

Score 17 of a possible 25 points on a 5x 5 rubric.

#### Elementary industrial machine

Diagram the electrical enclosure layouts of an elementary industrial machine so that the electrical enclosure assemblies can be constructed to standard practices.

**Assessment Method:** Performance appraisals

**Performance Criteria:**

100% compliance with all code and safety requirements.

### Outline:

Safety

Diagrams, instruction, nameplates

Grounding and bonding techniques

Overview of NEC

Protection, location, materials, methods

Installation of system components and wiring practices

Troubleshooting system