

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

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