

Master Syllabus

CAT 1741 - Residential Electrical Systems

Division: Science, Mathematics and Engineering

Department: Civil Engineering Technology

Credit Hour Total: 3.0

Lecture Hrs: 1.0 **Lab Hrs:** 4.0

Date Revised: February 2014

Course Description:

Basic safety procedures, use of power and hand tools, electrical circuit theory and basics of residential wiring observing the National Electric Code (NEC). One classroom, four lab hours per week.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency

Course Outcomes:

Tool use

Safely use hand tools, power tools and electrical test equipment.

Assessment Method: Behavioral observations

Performance Criteria: Receive at least 70% of available points on hands-on assessment.

Electrical blueprints

Read electrical blueprints.

Assessment Method: Locally developed exams

Performance Criteria: 70% or better on all exams

National Electric Code

Install basic electrical systems in accordance with the National Electric Code.

Assessment Method: Behavioral observations

Performance Criteria: At least 70% of available points on hands-on assessment.

Outline:

Electrical safety
Use of hand and power tools
Blueprint reading
Electrical circuits
Introduction to NEC
Raceways, boxes and fittings
Residential, commercial and industrial wiring techniques