

## 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

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#### 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