

## Common Course Numbering System

Your current Institution is CCCS

### Searching Current Courses For Spring 2015

**Course:** EIC 125  
**Title:** Electrical Principles and Appl  
**Long Title:** Electrical Principles and Applied Calculations  
**Course Description:** Provide the fundamental principles that are involved with all electrical calculations and operations as well as practical applications of various concepts.  
**Min Credit:** 3  
**Max Credit:** 3

**Course Notes:** Entered new course 4/9/09 s@  
**Origin Notes:** TSJC

#### STANDARD COMPETENCIES:

- I. Demonstrate the science of numbers and their operations, the relations between them, including space configurations, structure, and measurement of various electrical systems.
- II. Identify the systemic treatment of magnitude, relationships between figures and forms, and relations between quantities expressed symbolically in an electrical circuit.
- III. Use the computation of electrical principals and various concepts in applying technical calculations.

#### TOPICAL OUTLINE:

- I. Whole numbers, fractions, decimals, rational numbering, and percents in the measurement and installation of electrical equipment.
- II. Integers and their use in AC sign waves and rotating vectors associated with electrical work.
- III. Engineering notation using exponents to represent various quantities of electrical measurement.
- IV. Logarithms in solving various power problems.
- V. Conversion factors and measurements in solving various power problems.
- VI. Algebraic expressions and relationships critical to the electrical industry.
- VII. Ratios, rate and proportions, particularly as they apply to input and output voltages of a transformer.
- VIII. Cartesian plane representations of electrical circuitry and expressions.
- IX. Plane geometry principles of angles, polygons, and circles in installing electrical cable in conduit runs.

- X Three-dimensional figures using solid geometry principles in solving electrical installation problems.
- XI. Trigonometry as related to conduit bending, power-factor correction or AC circuits.
- XII. Vectors in determining the magnitude, direction and physical quantity of electrical phasors.
- XIII. Electrical circuit design using binary, octal, and hexadecimal number systems.
- XIV. Boolean algebra in laying the foundation for designing and analyzing electrical switching and relay circuits.

**Course Offered At:**

**Red Rocks Community College RRCC  
Trinidad State Junior College TSJC**

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