

Common Course Numbering System

Your current Institution is CCCS

Searching Current Courses For Spring 2015

Course: ELT 252

Title: Motors & Controls

Long Title: Motors & Controls

Course Description: Enables the student to study, construct, test, and evaluate basic industrial control systems, including AC/DC motors, stepper motors, power sources, generators, tachometers, line diagrams and logic functions. Covers safety standards and preventive maintenance. 68 contact hours.

Min Credit: 3

Max Credit:

Origin Notes:

FRCC

STANDARD COMPETENCIES:

- I. Describe the cause and effect of electrical shock.
- II. Review and practice measures to prevent electrical shock.
- III. List and observe special precautions necessary when dealing with motors and controllers.
- IV. Explain the construction and uses of industrial switching components (manually operated switches, mechanically operated switches, solenoids, electromagnetic relays, solid-state relays).
- V. Understand the design and installation of industrial power supplies (linear voltage regulators, switching voltage regulators, emergency power supplies, and three-phase power supplies).
- VI. Test and analyze the characteristics of AC and DC motors (series motor, compound motor, shunt motor, universal motor, induction motor, synchronous motor, and stepper motor).
- VII. Test and analyze the characteristics of armature current, field current, and load characteristics (series generators, shunt generators, separately excited generators, and generator regulators).
- VIII. Recognize and analyze the effects of series field troubles on motor current and R.P.M.
- IX. Recognize and analyze the effects of shunt motors (open field, shorted field).
- X. Diagnose troubles in field control circuits and armature circuits.

TOPICAL OUTLINE:

- I. SAFETY
- II. BASIC CONTROL SYSTEMS
- III. INDUSTRIAL POWER SUPPLIES

- IV. ALTERNATING AND DIRECT CURRENT MOTORS
- V. DIRECT CURRENT GENERATORS
- VI. TROUBLESHOOTING MOTORS AND MOTOR CONTROLS

Course Offered At:

Front Range Community College FRCC
Northeastern Junior College NJC
Pueblo Community College PCC
Pikes Peak Community College PPCC

RELEASE: 8.5.3

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