Course Title: Basic Electrical Wiring

Instructor:

Course web page:

Course Description:

Presentation of the theory of residential electric circuits and hands-on practice. Appropriate for electrical apprentices, and homeowners wishing to modify or better understand their home electrical system. Class includes both lecture and labs. Obtain knowledge in electrical safety, electrical circuits and devices, and learn how to wire common residential applications, including overhead fan and 3-way circuits. Appropriate materials, methods, and tools will be covered. There will be an introduction to the National Electric Code and its layout.

Suggested Course Prerequisite(s):

Materials Needed:

Course Objectives:
1. Explain proper materials, tools, and safety measures for installing residential wiring.
2. Understand the layout and use of the NEC and the elements of a residential electrical system.
3. Explain the proper installation of wiring devices, grounding, use of arc fault and ground fault devices, and circuit sizing.

Certification Notes:

Next course recommendation:

Instructor Notes:

Textbook(s): 2014 National Electric Code

Lesson Plan – by week or session
Session 1: Basic Electrical Theory and Math,
Electrical Safety

Session 2: Electrical Circuits
Electrical tools

Session 3: Electrical Conductors
Materials Labs - wire, junction boxes and outlets

Session 4: Understanding Alternating current
Residential power systems overview

Session 5: Residential circuits
Materials Lab – Breaker panels and breakers

Session 6: Application Lab – Breakers and outlets, GFI
Session 7: Lighting types and characteristics
   Application lab – lights and switches

Session 8: Application lab – installing and repairing fluorescent lights
   Application lab - Adding outlets to a finished wall

Session 9: Installing ceiling fans
   Conduit and boxes

Session 10: Materials Lab - conduit and electric cables
   National Electric Code layout
   Critique

Course Sessions: listed are a guideline to indicate all topics that will be covered during your course. Do not plan your personal calendar based on these sessions. Your instructor will give you a calendar for your class that will indicate specific topics, assignments, and days.

Method of Evaluation: Unless otherwise stated, course completion is evaluated on the basis of attendance. Students must be in attendance 90% of the class time in order to be considered a successful completer of the course.

Students must be in attendance 90% of each course in a certificate series for successful completion and to earn a certificate as specified.

Students must complete all courses (core and no. of elective courses needed) to complete a certificate series within two years from start date of the first course taken.

Americans with Disabilities Act: Collin College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal opportunity. It is the student’s responsibility to contact the ACCESS office, SCC-G200 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current Collin Student Handbook for additional information.
http://www.collin.edu/studentresources/personal/studenthandbook.aspx