

Collin College - Continuing Education

COURSE SYLLABUS

COURSE INFORMATION

Course Number: JRNY 7495

Course Title: Basic Electrical Wiring

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): N/A

Course Resources: National Electric Code

Student Learning Outcomes:

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: N/A

Refund Policy: Please refer to www.collin.edu/ce/inforegistrar.html for our refund policy. No refunds after the start time of the first class.

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-D140 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current *Collin Student Handbook* for additional information.

Course Sessions: Listed are guidelines 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.

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, GFIs
- 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

Method of Evaluation: Unless otherwise stated, course completion is evaluated on the basis of attendance. Students must be in attendance 90% of each course in a certificate series for successful completion and to earn a certificate as specified.