ELECTRICAL POWER AND HAND TOOLS AND EQUIPMENT IN CONSTRUCTION
Course Syllabus

Course Number: CNST-0773
OCAS Code: None
Course Length: 30 Hours
Career Cluster: Architecture and Construction
Career Pathway: Construction
Career Major(s): Commercial Electrician’s Assistant, Electrical Assistant-Entry Level

Pre-requisite(s):

Course Description: This course covers the safe use, operations, and maintenance of power tools and hand tools used in construction.

Textbooks:


Instructor-created materials

Course Objectives:

A. Operate Hand Tools and Portable Electrical Equipment.
   1. Identify hand tools commonly used in the electrical trade.
   2. Follow specific safety procedures for electrical hand tools.
   3. Follow specific safety procedures for operation of portable electrical equipment.
   4. Use hand tools to perform various electrical procedures.
   5. Demonstrate correct methods of repairing, cleaning, and caring for electrical hand tools.

B. Operate Specialty Equipment.
   1. Identify electrical stationary equipment used in the electrical trade.
   2. Follow specific safety procedures for operation of electrical stationary equipment.
   3. Use stationary equipment to perform various electrical procedures.
   4. Demonstrate correct methods of repairing, cleaning, and caring for electrical stationary equipment.
   5. Identify types of test equipment.
   6. Perform test procedures to detect voltage of an electrical circuit.
   7. Perform test procedures to detect continuity of an electrical circuit.
   8. Perform test procedures to detect ampacity of an electrical circuit.

C. Complete an Introduction to Hand Tools.
   1. Recognize and identify some of the basic hand tools used in the construction trade.
   2. Use hand tools safely.
   3. Describe the basic procedures for taking care of hand tools.

D. Complete an Introduction to Power Tools.
   1. Identify power tools commonly used in the construction trades.
2. Use power tools safely.¹
3. Explain how to maintain power tools properly.¹

¹ NCCER objective
All unmarked objectives are TTC instructor developed.

Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures: 1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/ College Credit: The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility: The student must maintain a grade point average of 2.0 or better.