COMMERCIAL WIRING METHODS I
Course Syllabus

Course Number: CNST-0775A  
OHLAP Credit: No
OCAS Code: None
Course Length: 60 Hours
Career Cluster: Architecture and Construction
Career Pathway: Construction
Career Major(s): Commercial Electrician’s Assistant

Pre-requisite(s): This course covers the circuits used in wiring commercial premises including service entry and branch circuit installation, load distribution, device installation, grounding, over-current devices, conduit bending and installation, panels and switchboards, and hazardous locations.

Course Description:
This course covers the circuits used in wiring commercial premises including service entry and branch circuit installation, load distribution, device installation, grounding, over-current devices, conduit bending and installation, panels and switchboards, and hazardous locations.

Textbooks:  
Instructor-created materials

Course Objectives: 

A. Perform Basic Commercial Installations.
   1. Complete a commercial project including these various pipe bends on EMT and rigid conduits using bending tools:
      a. 90° bend
      b. back to back
      c. box offset
      d. 4’ offset
      e. three-point saddle
      f. four-point saddle
      g. 90° PVC
   2. Install EMT conduit.
   3. Pull wire through conduit.
   4. Install various metal boxes.
   5. Install various commercial electrical components.
   6. Install three wire AC circuits.
   7. Complete jobs sheets related to basic commercial wiring.

B. Electric Lighting (NCCER)
   1. Explain how the human eye works.¹
   2. Describe the characteristics of light.¹
   3. Recognize the different kinds of lamps and explain the advantages and disadvantages of each type:¹
      a. Incandescent¹
      b. Halogen¹
      c. Fluorescent¹
      d. High-intensity discharge (HID)
   4. Properly select and install lamps into lighting fixtures.¹
5. Recognize and install various types of lighting fixtures:¹
   a. Surface-mounted¹
   b. Recessed¹
   c. Suspended¹
   d. Track-mounted¹

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.