

RESIDENTIAL ELECTRICAL, CERTIFICATE OF COMPETENCY (ELT)

Effective: Spring 2017

This hands-on training program is designed to prepare individuals to become residential electricians who can work in new home construction as well as do maintenance and repairs in existing homes. Students learn safe, proper and efficient installation, troubleshooting and servicing of electricity and its associated equipment and wiring. The curriculum has been approved by the U.S. Department of Labor, Bureau of Apprenticeship and Training, for the 144 hours of classroom training required in an electrical apprenticeship program.

Program Outcomes

Upon successful completion of this program, students should be able to:

- Demonstrate knowledge of OSHA requirements for the electrical profession.
- Interpret and apply the National Electrical Code (NEC).
- Lay out electrical installations for residential uses.
- Install various electrical components, devices and circuits.
- Perform specified measurements and tests on current, voltage, resistance and efficiency of electrical motors, power panels, lighting circuits, electrical outlets, transformers, as well as electrical devices and circuits.
- Troubleshoot and electrical components, devices and circuits.

Full-Time Academic Plan

The College will award a certificate of competency to students who complete an approved credit-bearing career program that requires less than 30 credits. General education courses may not be required for programs that have less than 30 credits. The student must have a cumulative GPA of 2.0 or higher. At least six credit hours must be in courses that are awarded grade points.

First Semester		Hours
TME 115	Basic Technical Skills ¹	3
TCS 105	Workplace Safety	2
ELT 110	Introduction to Electricity	4
ELT 112	Electrical Code	2
ELT 114	Residential Wire	3
Hours		14
Second Semester		Hours
TCS 100	Construction Blueprint Reading ¹	3
ELT 116	Advanced Electrical Wire	3
ELT 118	Troubleshooting and Old Work Wiring	2
ELT 206	Commercial Wire	3
ELT 208	Solar Photovoltaic System Design and Installation	3
Hours		14
Total Hours		28

Notes

Students may take TCS 105 Workplace Safety and TCS 100 Construction Blueprint Reading in either semester. Select one for each semester.

Part-Time Academic Plan

Part-Time Evening Schedule

Students in the ELT program should begin with ELT 110 unless they are starting in a summer semester. If starting in the summer, students may begin with course(s) from the "any semester" list. Depending on the semester a student begins, semesters 3 and 4 will rotate as certain courses are only offered in the Fall or Spring semesters. Commercial Wiring is only offered in the Fall semesters while Troubleshooting and Solar are only offered in the Spring semesters.

Students with advising questions should speak to the Director of Technical Education @ 610-325-2819.

Code	Title	Hours
First Semester		
ELT 110	Introduction to Electricity	4
Any Semester Course *		
Second Semester		
ELT 114	Residential Wire	3
ELT 116	Advanced Electrical Wire	3
Third / Fourth Semester		
<i>Offered Fall Only</i>		
ELT 206	Commercial Wire	3
Any Semester Course *		
<i>Offered Spring Only</i>		
ELT 118	Troubleshooting and Old Work Wiring	2
ELT 208	Solar Photovoltaic System Design and Installation	3
Fifth Semester		
Any Semester Course *		
Any Semester Course *		
Any Semester Course Selection: *		
ELT 112	Electrical Code	2
TCS 100	Construction Blueprint Reading	3
TCS 105	Workplace Safety	2
TME 115	Basic Technical Skills	3
Total Hours		28

* *Any Semester Course* may be taken in any order.

Career