

AAS in Technical Studies - Electrician Technology Concentration

CIP Code

47.9999

Overview

A.A.S. in Technical Studies – Electrician Technology Concentration (47.9999)

DIVISION: Technical Studies

DEPARTMENT: Electrician Technology

Program Coordinator: Ronnie Lester ronnielester@cltcc.edu

Program Description

The purpose of this program is to provide a basic core of specialized instruction and practical shop experience to prepare students for employment in electrical trades.

Students who complete the basic core may choose any of the specialty areas. Specialty areas prepare the graduate as an Industrial Electrician, Marine Electrician, or Commercial Electrician.

The Industrial Electrician course will prepare individuals to install, troubleshoot, and repair wiring, electrical equipment, and other electrical devices used in the industrial environment, such as motors (AC and DC drives), transformers, control systems, instruments, PLC's, and lighting systems.

The Marine Electricity program prepares individuals to install and repair wiring fixtures, and equipment for electrical services aboard ships and in shipyard facilities. Marine wiring methods and equipment will also be covered.

The Commercial Electricity program generally prepares individuals to install, maintain, troubleshoot, and repair electrical devices, components, and equipment that are utilized in residential and commercial electrical systems. Students have two options to complete this diploma: by course work, or by employment in a work- based course with an electrical contractor.

Student Learning Outcomes

1. Demonstrate fundamental knowledge of electrical safety, calculations, and DC/AC electrical circuitry.
2. Identify various types of conductors, connections, boxes, parts of a breaker panel and service entrance, switches, and installation devices of residential service.
3. Install and troubleshoot single pole, receptacle circuits, and breaker panels.
4. Demonstrate modern techniques and skills with motor control applications to include installation and troubleshooting of motors, reversing starters, and VFD.

Degree

Associate of Applied Science in Technical Studies – Electrician Technology Concentration (47.9999)

Diploma

TD – Electrician Technology (46.0302)

Exit Points

CTC – Electrician Helper (46.0302)

CTS – Residential Electrician (46.0302)

Degree Requirements

Curriculum (Click to Download Curriculum)

Courseno	Title	Lecture	Lab	TotalCreditHrs	TotalClockHrs
ELEC 1010	NCCER Core	1	1	2	45
ELEC 1120	Basic Electricity	2	4	6	150
ELEC 1210	Residential Wiring	2	4	6	150

	CTC-Electrician Helper (46.0302)	5	9	14	345
ELEC 2460	Technical Math for Electricians	2		2	30
ELEC 1220	Electrical Raceways	0	3	3	90
ELEC 1230	National Electrical Code	1	2	3	75
ELEC 1311	Residential Wiring Installation	1	5	6	165
ELEC 1430	Blueprinting Interpretation	1	2	3	75
	CTS-Residential Electrician (46.0302)	10	21	31	780
CPTR	Introduction to Computers	1	1	2	45
ELEC 1330	Generators/Motors & Transformers Operations	1	2	3	75
ELEC 1440	Motor Control	1	3	4	105
ELEC 2720	Intro to Programmable Logical Control	1	2	3	75
JOBS 2450	Job Seeking Skills	2	0	2	30
	TD-Electrician Technology (46.0302)	16	29	45	1110
General Education					
ENGL 1010	English Composition I	3	0	3	45
MATH XXXX	College Algebra or Contemporary Math	3	0	3	45
	Social Science Elective	3	0	3	45
	Natural Science Elective	3	0	3	45
	Humanities Elective	3	0	3	45
	AAS in Technical Studies - Electrician Technology Concentration (47.9999)	31	30	60	1335