

ELECTRICAL TECHNOLOGY, Associate in Applied Science Degree - 4750

Engineering, Trades & Computer Technologies Department

CIP Code: 46.0302

The Electrical Technology AAS Degree prepares students with the knowledge and skills needed for employment and advancement in the electrical field. Emphasis is placed on residential and commercial construction and maintenance applications. Curriculum course-work covers basic electrical theory, residential and commercial wiring, safety, the National Electrical Code, and blueprint reading. Students gain hands-on experience through laboratory exercises in the operation of electrical systems through fusion-splicing, mock wiring of commercial and residential systems. This program may be completed at the Harrisburg Campus through on-campus/in-person instruction.

Career Opportunities

Graduates find employment as general electricians, residential service technicians, commercial service technicians, electrical-equipment repair technicians, electrical system installers, maintenance technicians, work-team supervisors, electrical estimators, electrical system designers, and renewable energy technicians.

Competency Profile

This curriculum is designed to prepare students to:

- Demonstrate a variety of technical skills in the electrical field
- Recognize and practice safe and healthy work procedures
- Perform basic electrical mathematical calculations
- Properly and safely handle electrical tools and materials
- Read and interpret blueprints necessary for specified installations
- Interpret the National Electric Code and use it in specific applications
- Demonstrate procedures used in residential, commercial, and industrial electrical construction
- Wire complex motor and control circuits
- Install, maintain, and repair automated electrical systems
- Solve complex problems of circuit design and analysis
- Troubleshoot equipment and demonstrate proper repair procedures

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I (or)	3	ELOC 153 Fundamentals of Electricity	4	Program Electives**	17
ENGL 110 Foundations of Professional Writing	(3)	ELOC 157 Electrical Wiring I	4		
COMM 101 Effective Speaking (or)	3	ELOC 163 Electrical Wiring II	4		
COMM 203 Interpersonal Communication	(3)	ELOC 169 Low Voltage Cabling	3		
Humanities & Arts Core Elective	3	ELOC 171 Electrical Service	2		
Mathematics or Science Core Elective	3	ELOC 172 National Electrical Code	2		
Social & Behavioral Sciences Core Elective*	3	ELOC 175 Electrical System Troubleshooting	3		
First-Year Seminar Elective	1	GTEC 101 Safety: OSHA-30 & NFPA-70E	3		
Wellness Elective	1	GTEC 105 Customer Service	1		
	17		26		

*Students select from the following: ANTH 101, 205; COMM 253; GEOG 201, 230; HIST 102; PSYC 229; SOCI 201, 202, 203 or 205.

**Students select are to select their courses from the following: ARCH, BUSI, CAD, CIS, CNT, ELEC, ELOC, FIRE, GTEC, HVAC, IA or WELD.

RECOMMENDED SEQUENCE FOR A 15-WEEK SEMESTER

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ELOC 153	4	ELOC 169	3	COMM 101 or 203	3	Humanities/Arts Core Elective	3
ELOC 157	4	ELOC 171	2	ENGL 101 or 110	3	Social/Behavioral Science Core Elective*	3
ELOC 163	4	ELOC 172	2	Math/Science Core Elective	3	Program Electives**	7
GTEC 101	3	ELOC 175	3	Program Electives**	6	Wellness Elective	1
FYS Elective	1	GTEC 105	1				
		Program Elective**	4				

RECOMMENDED SEQUENCE FOR 7-WEEK SEMESTERS

Fall Semester I 1 st 7-Weeks		Fall Semester I 2 nd 7-Weeks		Spring Semester I 1 st 7-Weeks		Spring Semester I 2 nd 7-Weeks	
ELOC 153	4	ELOC 163	4	ELOC 171	2	ELOC 169	3
ELOC 157	4	GTEC 101	3	ELOC 172	2	GTEC 105	1
FYS Elective	1			ELOC 175	3	Program Elective**	4
Fall Semester II 1 st 7-Weeks		Fall Semester II 2 nd 7-Weeks		Spring Semester II 1 st 7-Weeks		Spring Semester II 2 nd 7-Weeks	
COMM 101 or 203	4	Math/Science Elective	3	Humanities/Arts Elective	3	Social/Behavioral Science Elective*	3
ENGL 101 or 110	4	Program Electives**	6	Wellness Elective	1	Program Electives**	7