

Associate of Applied Science Degree in General Engineering Technology: Industrial Electricity and Controls Technology Specialization

AREA: General Engineering Technology:
Industrial Electricity and Controls Technology
Specialization

DEGREE: Associate of Applied Science Degree

LENGTH: Four semesters (two-year) program

PURPOSE: This curriculum provides educational opportunities for those seeking employment in the many manufacturing industries and businesses, which need individuals trained in basic electrical applications, including the control of machinery and processes. It is also appropriate for those attempting to upgrade their knowledge or acquire practical skills. This program can also provide critical education components to apprenticeship programs of various types. This program is not intended for transfer.

OCCUPATIONAL OBJECTIVES: electrical apprentice, electrician, electrician's helper, industrial electrician, journeyman or other related positions

PROGRAM REQUIREMENTS: This program is designed to integrate basic industrial electricity courses, basic machinery control courses, basic engineering technology courses and general education courses. Students entering the program should have basic arithmetic skills and must be willing to advance their math skills through required math courses. Most students should start with MTH 120 (Introduction to Math), but may select a higher-level math if they are prepared for it. All entering students must take a math placement test to determine their math skill level. Many of the electrical and control courses require the use of mathematics, and it is important for students to start with their math courses as early as possible in the program. The basic intent of this program is to produce technically skilled graduates, with a broad technical background and a well-rounded general education foundation. All electives, including technical electives, must come from an approved list or be approved by one of the full-time faculty members teaching technical courses in the program.

Course#	Title	Credits
First Semester		
EGR 110	Engineering Graphics	3
ELE 133	Practical Electricity I	3
ENG 111	English Composition I	3
MEC 113	Materials and Processes of Industry	3
MTH	Approved math elective ¹	3
SDV 100	College Success Skills	1
Total		16
Second Semester		
CAD 241	Parametric Solid Modeling I	3
ELE 134	Practical Electricity II	3
ELE 159	Electrical Motors	3
ENG 115	Technical Writing	3
MTH	Approved math elective ¹	3
Total		15
Third Semester		
EGR 206	Engineering Economics	3
ELE 156*	Electrical Control Systems	3
	Approved programming/computer elective ²	3
	Approved social science elective ⁴	3
	Approved technical electives ³	6
Total		18
Fourth Semester		
ELE 135 or 137	National Electric Code	3
ETR 113	D.C. and A.C. Fundamentals I	3
PED/HLT	Physical education (or health)	2
	Approved humanities elective ⁵	3
	Approved social science elective ⁴	3
	Approved technical elective ³	3
Total		17
Program Total		66

¹ Approved math electives: MTH 120, or MTH 115 and 116, or MTH 163 and 164, or MTH 213 and 214 will fulfill the math requirements for the program. Developmental math courses may be required for students who need to build their math skills before taking any of the approved math electives. Students must take a math placement test to determine their math skill level. Most students will probably want to start with MTH 115 or MTH 120.

² Requires approval of program advisor.

³ Students should select social science electives from the list on page 43.

⁴ Students should select humanities electives from the list on page 42.

* Prerequisite for ELE 156 is ELE 159