

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

968-06

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

TRANSFER GUIDELINES: Although this program is not designed as a transfer program, it does include many courses which will transfer into engineering technology programs at select four-year institutions. This allows students who eventually develop a desire to transfer the opportunity to transfer about two-thirds or more of the credit earned. How much credit is actually transferable depends on the transfer institution selected. Students should work closely with an advisor if and when they develop an interest in transferring.

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 111	Materials for 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
EGR 216	Computer Methods in Engineering And Technology	3
ELE 134	Practical Electricity II	3
ENG 112/ 115	College Composition II <u>or</u> Technical Writing	3
MEC 112	Processes of Industry	3
MTH	Approved Math Elective ¹	3
Total		18
Third Semester		
EGR 206	Engineering Economics	3
ELE 159	Electrical Motors	3
PED/HLT	Physical Education <u>or</u> Health Humanities Elective ²	1 3
	Social Science Elective ²	3
	Technical Elective ³	3
Total		16
Fourth Semester		
ELE 135/ 137	National Electrical Code-Residential <u>or</u> National Electrical Code- Industrial	3
ELE 156	Electrical Control Systems	3
IND 145	Introduction to Metrology Social Science Elective ²	3 3
	Technical Elective ³	3
Total		15
Program Total		65

¹ Approved higher level math courses include: MTH 120/MTH 158, MTH 158/163, MTH 163/164, MTH 163/271, MTH 271/272, MTH 173/174. Students should meet with program faculty.

² Students may select social science and humanities electives from list of approved electives on page 42.

³ An approved list of technical electives is available on page 44.