



Industrial Electronics Technology (Associate Degree in Applied Science)

Program Start Date: Fall or spring terms

Minimum Program Length: 74 academic weeks; 5 terms day; 74 credits

Curriculum Code: 35362

Program Description

Industrial electronics technology students study electrical and electronic theory. They learn to repair, install and maintain all types of electrical and electronic equipment used in industry.

Practical Experience

Students gain experience using test equipment, operating motor controllers and electronic motors and building electronic circuits. They work with microprocessors, programmable logic controllers and electronic drive systems. Students use computers to solve a number of problems related to electronics and industrial electronic controls.

Professional Opportunities

Electronic technician, plant electrician, biomedical repair technician, electronic equipment repairer, computer maintenance technician.

Unique Aspects

There is an opportunity to obtain national certification through the National Center for Construction Education and Research (NCCER) in an assortment of modules related to the field of industrial electricity/electronics.

EEDA Career Cluster:

Manufacturing; Transportation, Distribution & Logistics; Science, Technology, Engineering & Mathematics

Course Requirements

Credits	Course Title	Course Code
1	College Orientation	COL 101*
3	Professional Communications	ENG 165
3	Contemporary Mathematics	MAT 155
3	Algebra, Geometry, Trigonometry	MAT 170
3	Humanities/Fine Arts General Education Course	ART 101, 107, 108, ENG 102, 201, 202, 205, 206, 208, 209, 228, 235, 238, FRE 102, GER 102, HSS 101, MUS 105, PHI 101, 110, REL 101, 104, 105, 201, SPA 102, 201, 202, SPC 212, THE 101
3	Social/Behavioral Sciences General Education Course	ANT 101, ECO 201, 210, 211, GEO 101, 102, HIS 101, 102, 104, 105, 112, 115, 201, 202, 205, HSS 205, PSC 201, 215, 220, PSY 103, 201, 203, 212, 214, SOC 101, 102, 205
3	Automation Networks - Ethernet	AMT 209
2	Industrial Computer Techniques	EEM 107
4	AC/DC Circuits I	EEM 117
4	AC/DC Circuits II	EEM 118
3	Schematics Analysis	EEM 123



Credits	Course Title	Course Code
3	Control Circuits	EEM 145
4	Motor Control I	EEM 151
4	Motor Control II	EEM 152
3	Introduction to Process Control	EEM 162
3	Electronic Devices I	EEM 201
3	Electronic Devices II	EEM 202
3	AC Machines	EEM 211
3	DC/AC Drives	EEM 221
3	Digital Circuits	EEM 231
4	Basic Microprocessors	EEM 240
3	Programmable Controllers	EEM 251
3	Programmable Controllers Applications	EEM 252
3	Technical Troubleshooting	EEM 275
74	TOTAL CREDITS	

*Or COL 103 *College Skills*.

NOTE: Students who place into two or more developmental areas are required to take COL 103 in place of COL 101.

Semester Display

First Semester

Course Code	Course Title	Credit Hours
COL 101	College Orientation	1
EEM 117	AC/DC Circuits I	4
EEM 151	Motor Controls I	4
MAT 155	Contemporary Math	3
EEM 162	Introduction to Process Control	3
EEM 107	Industrial Computer Techniques	2

Second Semester

Course Code	Course Title	Credit Hours
EEM 118	AC/DC Circuits II	4
EEM 152	Motor Controls II	4
MAT 170	Algebra Trigonometry	3
EEM 211	AC Machines	3

Third Semester

Course Code	Course Title	Credit Hours
EEM 201	Electronic Devices I	3
EEM 145	Control Circuits	3
EEM 251	Programmable Controllers	3
ENG 165	Professional Communications	3



Fourth Semester

Course Code	Course Title	Credit Hours
EEM 202	Electronic Devices II	3
EEM 221	DC/AC Drives	3
EEM 231	Digital Circuits I	3
EEM 252	Programmable Controller Applications	3
	Social/Behavioral Sciences General Education Course	3

Fifth Semester

Course Code	Course Title	Credit Hours
EEM 123	Schematic Analysis	3
EEM 240	Basic Microprocessors	4
EEM 275	Technical Troubleshooting	3
AMT 209	Automation Networks - Ethernet	3
	Humanities/Fine Arts General Education Course	3
	Total Credits	74

Program Learning Outcomes

Students will be able to:

1. Apply the knowledge, techniques, skills, and modern tools to industrial engineering technology activities.
2. Conduct standard tests and measurements.
3. Apply knowledge of mathematics, science, engineering and technology to electrical engineering challenges that require limited application of principles but extensive practical knowledge.
4. Function effectively as a member of a technical team.
5. Demonstrate the ability to conduct, analyze and interpret electrical experiments.
6. Demonstrate the ability to speak publicly, listen actively, and respond effectively.