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## **Industrial Electrical Technology - CERT B**

**Semester-by-Semester Pathway** 

A Certificate is outlined coursework that is designed to prepare a student to head out into the workforce in a short timeframe or for career advancement. This certificate totals 33 credit hours. Consult with an advisor for more information. Not all courses are offered each semester.

- (**▶** ) are Systemwide Transfer Courses
- (★ ) are recommended for this degree pathway.

	Semester 1 - Fall				
Complete	Course ID	Course Title	Credit Hours	Notes	
	Required Courses				
	AE100	AC/DC Circuits	4.00	Fall, Spring	
	AE101	Digital Multimeter Principles	1.00	Fall, Spring	
	EE117	Conduit Fabrication	1.00	Fall, Spring	
	EE126	NEC Codeology	1.00	Fall, Spring	
	ME106	Industrial Fluid Power	3.00	Fall, Spring	
	TR120	Work Ethics	2.00	Fall, Spring, Summer	
	TR121	General Industrial Safety/OSHA10	1.00	Fall, Summer	
Electives					
	Industrial Electronics Technical Electives				
	Semester Total:				

Semester 2 - Spring					
Complete	Course ID	Course Title	Credit Hours	Notes	
	Required Courses				
	AE150	Programmable Logic Controls (PLCs)	3.00	Fall, Spring Prereq: AE100 AC/DC Circuits.	
	AE155	Electrical Maintenance	3.00	Fall, Spring Prereq: AE100 AC/DC Circuits.	
	ME110	Fundamentals of Motor Controls	3.00	Fall, Spring Prereq: AE100 AC/DC Circuits.	
	TR100	Technical Math	3.00	Fall, Spring	
Electives					
Industrial Electronics Technical Electives 3.00					
Semester Total: 15.00					

Semester 3 - Fall				
Complete	Course ID	Course Title	Credit Hours	Notes
Required Courses				

	AE200 Variable Frequency Drives and Electric Motors		3.00	Fall, Spring Prereq: ME110 Fundamentals of Motor Controls.	
Electives					
	Semester Total: 3.00				

**Total Credits: 33.00** 

<sup>\*</sup>Semester offerings reflect the current academic year.

Industrial Electronics Technical Electives				
Course ID	Course Title	Credit Hours	Notes	
AE205	Intermediate Programmable Logic Controllers	3.00	Fall, Spring Prereq: AE150 Programmable Logic Controllers.	
AE250	Distributed/Integrated Control Systems	3.00	Spring Prereq: AE200 Variable Frequency Drives & Electric Motors, or AE205 Industrial PLCs.	
AE252	Control Systems Development	3.00	Fall, Spring Prereq: AE200 Variable Frequency Drives & Electric Motors, or AE205 Industrial PLCs.	
AE255	Industrial Robotics	3.00	Fall, Spring Prereq: AE150 Programmable Logic Controllers.	
ME112	Heating System Fundamentals	3.00	Fall, Spring	
ME114	Renewable Energy Technology	3.00		
ME115	HVAC Fundamentals	4.00	Fall, Spring	
ME116	Commercial Refrigeration	4.00	Spring	
ME117	Commercial Heating and Air Conditioning	4.00	Spring Prereq: ME115 HVAC Fundamentals, and EE203 Instruments & Measurements, or ME116 Commercial Refrigeration.	
ME118	Renewable Energy Technology Systems Analysis	4.00	Prereq: ME114 Renewable Energy Technology, and AE155 Electrical Maintenance, and ME115 HVAC Fundamentals.	
ME124	Renewable Energy Technology Maintenance	4.00	Prereq: ME114 Renewable Energy Technology, and AE155 Electrical Maintenance, and ME115 HVAC Fundamentals.	
ME125	Engineering Technology Internship	3.00	Fall	
ME129	Mechanical Maintenance Skills	3.00	Fall, Spring	
ME131	EPA 608	1.00	Fall	
ME132	HVAC Load Calculations	1.00	Fall	
ME133	HVAC Duct Sizing	1.00	Fall	
ME134	HVAC Code Requirements	1.00	Fall	
ME140	Low Pressure Boilers	3.00	Spring	