

# Industrial Electricity/Electronics Technology



Engineering • Manufacturing • Industrial Technology

The associate of applied science degree with specialization in industrial electricity/electronics technology is designed to provide the theory and application of principles, procedures and components that technicians encounter in modern industrial environments. Subject matter ranges from fundamental electrical, electronic and digital theory to process control of automated systems. The program also stresses effective oral and written communication as well as related mathematics and science.

The program is supported by application of theoretical concepts via laboratory exercises in modern, well-equipped facilities. The emphasis of the program is to provide students with the knowledge and skills needed to function effectively in the increasingly technical environment of modern industry.

Electrical apprentices will find this program to be an attractive way to utilize the credits they have earned while pursuing their journeyman status to complete an associate of applied science degree. Other individuals who are working in industrial-electrical/electronics environments will also find it to be a meaningful path to an associate of applied science degree. Graduates of this program will be prepared for entry-level employment in the following areas:

- Industrial electrician
- Electromechanical technician
- Industrial sales technician
- Field service technician
- Automated systems technician

It should be noted that many of the specialty courses from the program are available only in the evening. They are offered on a sequential basis, which will make completion of the program exceed two calendar years. Check with the Industrial Technology Division Office for further information.

In addition to completion of the required general education courses, students desiring the program designation on their transcript must complete the required core and specialized courses.

Credits

## Required General Education Courses 21

ENGL 101 (Written and Oral Communication) or ENGL 151 (English Composition I) .....	3
<sup>1</sup> MATH .....	6
POLSC 151 (Introduction to Political Science) .....	3
<sup>2</sup> SPCH 151 or Social Science/Humanities Elective .....	3
<sup>3</sup> PHY 101, 151, or CHEM 150 or 151 .....	4
<sup>4</sup> Computer Skills Elective .....	2

## Required Core Courses 42

<b>1st Semester</b>	
† ELEC 125 (Fundamentals of Electricity) .....	3
† MECH 131 (Introduction to Automated Manufacturing) .....	3
<b>2nd Semester</b>	
† ELEC 132 (Electronics I) .....	4
† ELEC 135 (Digital Electronic Logic) .....	4
ELEC 141 (Industrial Automation and Process Control) .....	3
(even-numbered years)	
<b>3rd Semester</b>	
ELEC 126 (DC Motors and Controls) .....	2
ELEC 130 (Introduction to Programmable Logic Controllers) .....	2
ELEC 133 (Circuit Analysis) .....	4
ELEC 137 (Microprocessors) .....	4
<b>4th Semester</b>	
ELEC 144 (PC-Based Data Acquisition and Control) .....	2
ELEC 214 (National Electrical Code) .....	2
ELEC 211 (Medium Voltage Power Distribution Systems) .....	3
ELEC 136 (Instrumentation) .....	3
ELEC 128 (AC Motors and Controls) .....	3
(odd-numbered years)	

## Total Degree Requirements 63

- † Tech Prep course. See page 14.
- <sup>1</sup> See page 37 for specific Industrial Technology Division mathematics requirements for the associate of applied science degree.
- <sup>2</sup> See the social science/humanities alternatives listed on page 37.
- <sup>3</sup> Industrial electricity/electronics students are strongly encouraged to take PHY 101 or 151.
- <sup>4</sup> See the computer skills alternatives listed on page 38. Students who pass the computer skills assessment test may substitute CIS 208 (PC Operating Systems - 3 credit hours).