

ELECTRONICS TECHNOLOGY
AAS DEGREE

The **Electronics Engineering Technology degree** is designed to provide the student with fundamentals of electricity and electronics, including digital electronics and microcomputers, specialized manufacturing electronics, industrial automation and electronic communications. This program emphasizes a hands-on approach to learning through projects.

Field of Study Code: ELECT.AAS

Program Requirements	32
Elect 1100 Electricity and Electronics Fundamentals	3
Elect 1101 Circuits I.....	3
Elect 1102 Circuits II.....	4
Elect 1120 Electronic Documentation and Fabrication	2
Elect 1141 Digital Fundamentals	3
Elect 1151 Electronic Devices and Applications.....	4
Elect 1161 Modern Communications	3
Elect 2273 Embedded Systems and Microcontroller Programming.....	3
Elmec 1106 Power Electricity and Rotating Machines	4
Elmec 2510 Process and Automation Controls.....	3

Program Electives	14
Select 14 credits from ELECT or ELMEC.	

General Education	18
Each candidate for an Associate in Applied Science (A.A.S.) degree shall satisfactorily complete 18 credits in General Education.	

Total Credits Required	64
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AAS DEGREE

The **Biomedical Engineering Technology degree** prepares students for careers as biomedical equipment technicians, (also known as biomedical engineering technicians) in hospitals, health agencies, businesses and industries that manufacture and maintain electronic and biomedical instrumentation equipment. This program prepares students to test, install, and maintain healthcare components such as rehabilitation and therapeutic products, medical imaging systems, and computer-based systems used in the biomedical technology field. This degree program requires 64 credits in program requirements, program electives and general education in the courses listed below.

Field of Study Code: ELECT.AAS.BIOMED

Program Requirements	33
Elect 1100 Electricity and Electronics Fundamentals	3
Elect 1101 Circuits I.....	3
Elect 1102 Circuits II.....	4
Elect 1141 Digital Fundamentals	3
Elect 1151 Electronic Devices and Applications	4
Elect 1221 Introduction to Biomedical Instrumentation Technology.....	3
Elect 2221 Biomedical Instrumentation Technology and Applications	3
Anat 1500 Survey of Human Anatomy and Physiology ...	4
Elmec 2510 Process and Automation Controls	3
Hlths 1110 Biomedical Terminology	3

Program Electives	13
Select 13 credits from the courses listed below. (In addition to the courses listed above.)	
Elect 1120 Electronic Documentation	2
Elect 1161 Modern Communications	3
Elect 1201 Renewable Energy Fundamentals.....	2
Elmec 1101 Survey of Automation	3
Elmec 1141 Hydraulics and Pneumatics	3
Elmec 1190 Introduction to Programmable Logic Controllers.....	3

General Education	18
(In addition to the courses listed above.)	

Total Credits Required	64
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CERTIFICATE

The **Electronics Technology certificate** provides the student with fundamentals of electricity and electronics, including digital electronics and microcomputers, specialized manufacturing electronics, industrial automation and electronic communications. This program emphasizes a hands-on approach to learning through projects to reinforce the theoretical material.

Field of Study Code: ELECT.CER

Total Credits Required	18
Elect 1100 Electricity and Electronics Fundamentals	3
Elect 1120 Electronic Documentation and Fabrication	2
Elect 1141 Digital Fundamentals	3
Elect 1151 Electronic Devices and Applications	4
Elect 1161 Modern Communications	3
Elect 2273 Embedded Systems and Microcontroller Programming	3

CERTIFICATE

The **Advanced Electronics Technology certificate** prepares students for an entry-level electronics and electricity technology position with basic skills and competencies in the field of analog and digital electrical and electronic devices. It provides students with fundamentals of electricity and electronics, including analog and digital circuits, microcomputers, and industrial automation.

Field of Study Code: ELECT.CER.ADVET

Total Credits Required	31
Elect 1100 Electricity and Electronics Fundamentals	3
Elect 1101 Circuits I.....	3
Elect 1120 Electronic Documentation and Fabrication	2
Elect 1141 Digital Fundamentals	3
Elect 1151 Electronic Devices and Applications.....	4
Elect 1161 Modern Communications	3
Elect 2273 Embedded Systems and Microcontroller Programming.....	3
Elmec 1106 Power Electricity and Rotating Machines	4
Elmec 2150 Process and Automation Controls.....	3
Elmec 2520 Industrial Control and Data Acquisition	3

CERTIFICATE

The **Industrial Controls and Automation certificate** combines electronics knowledge and electro-mechanical skills. The certificate incorporates hands-on learning where practice follows theory in the lab environment. This certificate meets the needs of an entry level technician position. The certificate requires 25 credits in the courses listed below.

Field of Study Code: ELECT.CER.INDCA

Total Credits Required	25
Program Requirements	19
Elect 1100 Electricity and Electronics Fundamentals	3
Elect 1101 Circuits I.....	3
Elect 1141 Digital Fundamentals	3
Elect 1151 Electronic Devices and Applications.....	4
Elmec 1171 Introduction to Robotic Technology	3
Elmec 1190 Introduction to Programmable Logic Controllers.....	3
Program Electives	6
Select six credits from the following courses. (In addition to the courses listed above.)	
Elect 2273 Embedded Systems and Microcontroller Programming	3
Elmec 1110 Motor and Generator Fundamentals	3
Elmec 2510 Process and Automation Controls.....	3
Elmec 2600 Motion Control: Motor Drive Application and Control	3

CERTIFICATE

The **Renewable Energy Technology certificate** is intended to train technicians in the field of electronics, electricity, mechanics, and computers related to the applications in the field of renewable and green energies. This certificate requires 14 credits in the courses listed below.

Field of Study Code: ELECT.CER.RENEW

Total Credits Required	14
Elect 1100 Electricity and Electronics Fundamentals	3
Elect 1201 Renewable Energy Fundamentals.....	2
Elect 2001 Green Energy Systems	3
Elmec 1140 Commercial and Industrial Wiring	3
Elmec 1150 National Electrical Code.....	3