

# Electrical Engineering Technology A.A.S. (EET)

This program prepares students to obtain entry-level employment in the electrical or electronics industries. Graduates are expected to be qualified for such jobs as technical investigator, electronics technician, quality control technician, engineering aide, and customer engineer.

## Upon successful completion of this program, graduates will be able to:

- connect components into basic electrical circuits and use multimeters to verify circuit operation.
- show how the different configurations of capacitance, inductance, and resistance affect the instantaneous voltages and resultant instantaneous currents.
- connect digital circuits common to computers, such as logic gates, flip flops, counters, and arithmetic circuits, into functioning circuits.
- use the instruction set to write assembly language programs to control the operation of the microprocessor.
- construct and experimentally verify the operation of standard electronic circuits, such as power supplies, amplifiers, and oscillators.
- use electrophysical sensors to measure such conditions as light, heat, pressure, and motion to control and operate power devices.
- set up a programmable logic controller to control manufacturing operations.
- use operational amplifiers as a component in a variety of circuits, such as amplifiers, regulators, and active filters.
- apply knowledge of sensing systems to obtain data for a robot to perform specific tasks.
- write programs to control robot functions.
- explain the methods used to transmit and receive radio waves containing intelligence pulse, tone, voice, and coded signals.
- demonstrate a working knowledge of engineering mathematics and engineering physics by properly performing physics laboratory projects and by mathematically evaluating the results.
- write technical reports and develop charts, graphs, and schematics that describe and illustrate the operating characteristics of electrical circuits.

First Semester		Credits
BGT 110	Fundamentals of Technology	3
ELE 120	DC Circuits	4
ELE 130	Digital Fundamentals	4
ENG 105	Research and Composition	3
MAT 191	Calculus and Analytic Geometry I	4
		<b>18</b>

Second Semester		Credits
ELE 165	AC Circuits	4
ELE 175	Introduction to Microprocessors	4
MAT 196	Calculus and Analytic Geometry II	4
PHY 201*	Introduction to Physics I	4
Elective	Social Science/Humanities	3
		<b>19</b>

Third Semester		Credits
EGR 213	Statics	3
ELE 210	Electronic Circuits	4
ELE 215	Industrial Electronics	2
ELE 235	Programmable Controllers	2
PHY 202*	Introduction to Physics II	4
		<b>15</b>

Fourth Semester		Credits
ELE 275	Integrated Circuits	4
ELE 255	Telecommunications	3
BGT 240	Industrial Automation	3
ENG 107*	Writing in the Workplace	3
Elective	Social Science/Humanities	3
		<b>16</b>

**Credit Total 68**

Students enrolling in this program must have completed high school Algebra III and Trigonometry or its equivalents (e.g., MAT 160 and MAT 165). It is also recommended that students have completed one year of a high school laboratory science (chemistry or physics preferred).

\*Students planning to transfer to a four-year college or university should substitute PHY 210/215 for PHY 201/202 and ENG 106 for ENG 107.

Some four-year colleges and universities require that ENG 111 be completed prior to transfer with junior-year standing.

**Prior Learning Assessment:** Previous job training, certificates and work experience that may qualify for college credit (*see academic advisor*).

**Gateway Courses:** Based on placement testing in reading, writing and math, these prerequisite courses may have to be taken before placement in College English or Mathematics beginning the first semester and concurrently.

RSS 099	Basic Skills Reading	3
RSS 100	Critical Reading	3
ENG 099	Basic Skills Writing	3
ENG 100	Fundamentals of Writing	3
MAT 090	Mathematical Literacy	6
ESL 251	English for Academic Purpose	6
		<i>(Required for ESL students only.)</i>

Please note, taking gateway courses will increase your time for completion.