

**Electronics Engineering Technology
(A40200)**

Official Program Description registered with the NC Community College System:

The Electronics Engineering Technology curriculum prepares individuals to become technicians who design, build, install, test, troubleshoot, repair, and modify developmental and production electronic components, equipment, and systems such as industrial/computer controls, manufacturing systems, communication systems, and power electronic systems.

A broad-based core of courses, including basic electricity, solid-state fundamentals, digital concepts, and microprocessors, ensures the student will develop the skills necessary to perform entry-level tasks. Emphasis is placed on developing the student's ability to analyze and troubleshoot electronic systems.

Graduates should qualify for employment as engineering assistants or electronic technicians with job titles such as electronics engineering technician, field service technician, instrumentation technician, maintenance technician, electronic tester, electronic systems integrator, bench technician, and production control technician.

Program Learning Outcomes

Upon successful completion of the Electronics Engineering Technology program, the student will be able to:

- Construct and analyze basic and advanced electronic devices and circuits that pertain to the principles of Electronics Engineering.
- Apply the fundamental and advanced principles of electronic devices and circuits in their ability to design, test, and troubleshoot on the sub-system and system level.
- Anticipate and utilize the appropriate laboratory testing equipment such as the power supply, oscilloscope, function generator, curve tracer, and digital multimeter to measure, compare, and explain experimental circuit results.
- Demonstrate critical reasoning and problem solving abilities through the use of simulation software for designing and troubleshooting practice.

Degree Awarded

The Associate in Applied Science Degree-Electronics Engineering Technology is awarded by the College upon completion of this program.

Note

Students are required to purchase electronic materials which will cost approximately \$150. These materials are purchased over a two year period. The materials list is available by calling an Electronics Engineering Technology instructor at (919) 735-5151, ext. 357.

For More Information

The Electronics Engineering Technology program is in the Applied Technology Division. For more information, call (919) 735-5151, ext. 357 or visit us at our web site at <http://www.waynecc.edu>.

Admissions

- A high school diploma or equivalent is required.
- A placement test in English, mathematics, reading and computer skills are required to determine entry-level courses that match individual needs.

First Step to Enroll:

Call the Admissions and Records Office at (919) 735-5151, ext. 238.

	Contact Hours	Semester Credit Hours
FIRST SEMESTER		
ACA 111 College Student Success.....	1	1
EGR 110 Intro to Engineering Tech.....	3	2
ELC 125 Diagrams and Schematics.....	3	2

ELC 127 Software for Technicians.....	4	2
ELC 131 DC/AC Circuit Analysis	7	5
ENG 111 Expository Writing	3	3
		15

SECOND SEMESTER

ELC 120 Intro to Wiring	4	3
ELN 133 Digital Electronics	6	4
ELN 137 Electr Devices and Circuits.....	7	5
MAT 121 Algebra/Trigonometry I	4	3
	OR	
MAT 171 Precalculus Algebra	3	3
	Humanities/Fine Arts Elective..	3
		18

SUMMER TERM

ENG 114 Professional Research & Writing	3	3
PCI 162 Instrumentation Controls.....	5	3
	Social/Behavioral Science Elective 3	3
		9

THIRD SEMESTER

ELC 128 Intro to PLC.....	5	3
ELN 231 Industrial Controls.....	5	3
HYD 110 Hydraulics/Pneumatics I	5	3
	*Technical Elective.....	3-6 3-4
	** Professional Elective.....	3-5 2-3
		14-16

FOURTH SEMESTER

ATR 280 Robotic Fundamentals.....	5	4
HYD 121 Hydraulics/Pneumatis II	4	2
PCI 264 Process Control with PLCs	6	4
	*Technical Elective.....	3-5 2-3
	** Professional Elective.....	3-6 3-4
		15-17

Total Credit Hours 71-75

*Technical Electives - Select 5-7 semester credit hours from the following:

BIO 110 Principles of Biology	6	4
CHM 131 Introduction to Chemistry.....	3	3
CHM 131A Introduction to Chemistry Lab..	3	1
COE 111 Co-op Work Experience I.....	10	1
COE 112 Co-op Work Experience II.....	20	2
DFT 111 Technical Drafting I	4	2
MAT 122 Algebra/Trigonometry II	4	3
MAT 172 Precalculus Trigonometry	3	3
PHY 131 Physics-Mechanics	5	4

**Professional Electives - Select 5-7 semester credit hours from the following:

DFT 151 CAD I	5	3
ISC 112 Industrial Safety	2	2
ISC 222 Project Planning/Control	3	2
MNT 165 Mechanical Industrial Sys	4	2
NET 113 Home Automation Systems	4	3
NET 125 Networking Basics	5	3
NET 126 Routing Basics	5	3