Lane Community College SM

2011 - 2012
Career and Technical Programs

Advanced Technology Division
541.463.5380

lanecc.edu

Electronic Technology

Two-Year Associate of Applied Science Degree

Purpose To provide graduates with the basic principles of electronic theory and the associated lab skills needed for successful work in the electronics industry. A graduate qualifies for entry-level employment as an electronic engineering technician, electronic production technician, electronic instrument technician, industrial electronic technician, or for employment in the military.

Learning Outcomes The graduate will:

- learn systematic methods of problem solving
- demonstrate the ability to operate electronic test equipment such as digital oscilloscopes, DMM, power supplies and function generators
- demonstrate the ability to generate and read schematic drawings and apply that knowledge to understand the operation of a physical circuit.
- construct, modify, and test operational multistage digital or analog circuits.
- examine defective circuits, investigate possible causes of the defect, and determine how to troubleshoot and repair the circuit.
- follow the flow of an automated manufacturing process, recognize the transducers used to monitor a process and, using programmable controllers (PLCs), ladder logic, and robotics, create, test and troubleshoot an automated process.
- demonstrate the ability to use a microcontroller and PBASIC software to control electronic circuits
- assemble and troubleshoot a personal computer.
- access library, computing, and communications services and obtain information and data from regional, national, and international networks.

Employment Trends Statewide, 82 annual openings for electronic technicians are projected in Oregon and 3 openings are projected annually in Lane County. Workers must have postsecondary training to gain the necessary skills for this occupation. Those with an associate degree have a competitive advantage in this labor market.

Wages Statewide average, $23 hourly, $47,500 annually ($50,000+ with experience). Lane County, $27 hourly, $56,000 annually.

Costs in Addition to Tuition and Registration Fees (estimate)*

Books	$2,250
Tools	$ 200
Fees	$ 350
Total	$2,800

* Subject to change without notice.

Prerequisites Minimum placement score of 68 in Reading OR completion of RD 080 OR prior college. A high school diploma or equivalent is recommended for all applicants to this program. Recommend MTH 060 Beginning Algebra skills prior to entry into the program.

Admission Information Contact Advanced Technology Division or see *lanecc.edu/advtech/ET/index.htm*

Cooperative Education (Co-op) Co-op offers students college credit and a grade for on-the-job work experience related to their educational and career goals. Through Co-op students connect theory and practice, develop skills, expand career knowledge, and make contacts for the future. Work schedules and work sites vary. Contact Marv Clemons, Electronics Co-op Coordinator, Bldg. 8, Rm. 111, 541.463.3158, *clemonsm@lanecc.edu*.

First Year	**Fall**
ET 121 Shop Practices *,D,G	2
ET 129 Electrical Theory 1 *,D,G	4
MTH 065 Elementary Algebra *,D,G or higher level mathematics	4
CS 120 Concepts of Computing: Information Processing or higher computer science course	4
PE/Health requirement D,R	3
Total Credits	17
	Winter
ET 130 Electrical Theory 2 *,D,G	4
ET 145 Semiconductor Devices 1 *,D,G	4
ET 151 Digital Electronics 1 *,D,G	4
MTH 095 Intermediate Algebra *,D or higher level mathematics	5
Total Credits	17
	Spring
ET 131 Electrical Theory 3 *,D,G	4
ET 146 Semiconductor Devices 2 *,D,G	4
ET 152 Digital Electronics 2 *,D,G	4
WR 121 Introduction to Academic Writing *,D	4
Total Credits	16

Electronic Technology

Second Year	**Fall**
ET 229 Motors *,D,G	4
ET 234 Programmable Controllers *,D,G	4
ET 239 Microprocessor Applications *,D,G	4
ET247 Linear Circuits 1	4
Total Credits	16
	Winter
ET 232 Process Control Systems *,D,G	4
ET 241 Electro-Mechanical Troubleshooting*,D,G	4
ENGR 280E Cooperative Education: Electronic Technology D,G	3
Human Relations requirement R	3
Total Credits	14
	Spring
ET 201 Industrial Instrumentation *,D,G	4
ET 281 Radiotelephone *,D,G	4
ET 287 Microcomputer Hardware *,D,G	4
WR 227 Technical Writing *	4
Total Credits	15

Standard footnotes:
* Prerequisite required
B Must be passed with grade of "B" or better to use as a prerequisite
D Degree or certificate requirement; must be passed with grade of "C-" or better
G Must be taken for a grade, not P/NP; major requirement
R Required for AAS degree