

ASSOCIATE OF APPLIED SCIENCE DEGREE (731)

# Electrical Engineering Technology

**Purpose:** This program is designed to prepare graduates for a broad range of electrical engineering technology careers. The curriculum provides the theoretical foundation and hands-on practice in a wide range of subjects, including electronic circuits and devices, computer hardware and software, power and machines, programmable logic controllers, computer networks, and telecommunications.

**Occupational Objectives:** Electrical Engineering Technicians assist engineers and other personnel to identify and solve problems with electrical equipment and systems found in industrial or commercial plants and laboratories. Job tasks may include:

- Evaluating and documenting performance of developmental parts or systems.
- Electrical and electronic component assembly.
- Using hand tools and measuring instruments.
- Calibration, maintenance, troubleshooting and repair of electrical instruments or testing equipment.
- Preparing technical reports and documents.
- Analyzing and interpreting test information to resolve design-related problems.

**Admission Requirements:** Applicants must meet the general requirements for admission to the college.

Developmental courses are required for students with deficiencies in English and mathematics.

Students who do not place above Algebra II (MTH 4) and into College-level mathematics (MTH 115-116), on the placement test will be required to take developmental courses.

Students who do not place into college-level English on the placement test will be required to take developmental courses (i.e., ENG 1, ENG 3, ENG 4, ENG 7).

**Program Requirements:** It is strongly recommended that students take ENG 111 in the first semester of coursework.

As a result of an articulation agreement with Old Dominion University, students receiving an Associate of Applied Science (AAS) degree in Electrical Engineering Technology may earn a baccalaureate degree (BS) in Engineering Technology on the Virginia Western Community College campus in Roanoke.

**CURRICULUM AND OTHER REQUIREMENTS**

<b>GENERAL EDUCATION CORE COURSES</b>		<b>CREDITS</b>
CST 100	Principles of Public Speaking (or CST 105)	3
ENG 111*	College Composition I	3
HLT/PED <sup>4</sup>	Health or Physical Education	2
MTH 115-116*	Technical Mathematics I-II	6
PHY 201*	General College Physics I	4
SDV 101	Orientation to Engineering and Engineering Technology	1
E <sup>1</sup>	Humanities/Fine Arts Elective	3
E <sup>2</sup>	Social Science Elective	3

**ELECTRICAL ENGINEERING TECHNOLOGY & RELATED COURSES**

EGR 216*	Computer Methods in Engineering and Technology	3
ELE 147*	Electrical Power & Control Systems	3
ELE 239*	Programmable Controllers	3
ETR 113-114*	DC and AC Fundamentals I-II	8
ETR 250*	Solid State Circuits	4
ETR 280*	Introduction to Digital Logic Circuits and Computers	4
ETR 285	Fundamentals of Microcomputer Repair	4
TEL 150-151*	Internetworking I-II	8
E <sup>3</sup>	Technical Electives	3
<b>Total Minimum Credits for Degree</b>		<b>65</b>

<sup>1</sup> Any three credit 100 or 200 level ART, ENG, FRE, HUM, MUS, PHI, REL or SPA elective may be used, except ENG 111, ENG 112 or ENG 210. CST 130, 131, 132 or 136 may also be used. Students intending to transfer should contact the four-year college and choose a humanities course from the "Approved List of Transfer Courses" that is recommended by their transfer institution.

<sup>2</sup> Any 100 or 200 level social science elective may be used. Students intending to transfer should contact the four-year college and choose a social science course from the "Approved List of Transfer Courses" that is recommended by their transfer institution.

<sup>3</sup> Students should choose from DRF 201, GIS 200, PHY 202, or TEL 250.

<sup>4</sup> Two credits of Health (HLT) or Physical Education (PED) are required of all students. Consult approved Health courses in the Description of Courses for selection. Veterans with an honorable discharge will be awarded HLT/PED credit based on military service.

\* This course has a prerequisite. Prerequisites for all courses are listed in the course description section at the back of the catalog.

## ASSOCIATE OF APPLIED SCIENCE DEGREE (731)

**Electrical Engineering Technology cont'd****SUGGESTED SCHEDULE****FIRST YEAR****FALL**

EGR 216

ENG 111

ETR 113

MTH 115

SDV 101

TEL 150

**SPRING**

ELE 147

ETR 114

MTH 116

TEL 151

Humanities/Fine Arts

**SECOND YEAR****FALL**

ETR 250

ETR 280

PHY 201

Social Science Elective

**SPRING**

CST 100 or CST 105

ELE 239

ETR 285

HLT/PED

Technical Elective