

ELECTRONICS TECHNOLOGY

The Electronics Engineering Technology Program at Orange Coast College prepares students for employment and career advancement in the diverse fields and industries that apply electrical and electronic technologies.

The program trains students from a broad range of skill levels. Some of these students will embark on career paths; others will earn career advancement skills. These students include High School juniors, seniors and graduates, post-secondary re-entry, assemblers and operators seeking a Certificate of Achievement, technicians earning an Associates of Science, Technologist, Engineers, Scientist and project management professionals seeking or with earned Baccalaureate, Graduate and Post-Doctoral degrees.

The EET student that earns a certificate of achievement inculcates life-long learning as a necessary career skill. Therefore, the EET program at OCC encourages all students to earn an associate of science degree and or transfer to the four year universities for advanced degrees.

The EET graduate is prepared to confidently take third party certification exams recognized nationally and globally recognized by these diverse industry sectors the certifications include but are not limited to:

- CompTia, Certified A+ Technician**
- International Systems Automation Society, Certified Control Systems Technician**
- ETA-International, Certified Electronics Technicians**
- ETA-I, Biomedical Electronics Technician – BMD**
- FCC, General Radio Operators License**
- IPC J-STD 001 Electronic Assembler Workmanship Certification**
- IPC J-STD 001 Electronic Soldering Workmanship Certification**

Program Outcomes

Students successfully completing the Electronics Technology Program at Orange Coast College will be able to compete for employment opportunities and take third party certification exams that are recognized nationally and globally. The employment outlook in Orange County and surrounding continues to be excellent. Employment opportunities also exist in many related fields, such as computer networking, communication systems, automation & motor control, heating, ventilation and air conditioning, avionics, biomedical instrumentation, and engineering. Orange Coast College offers individual certificates of Specialization and Achievement in the specialized service areas of maintenance, assemblers, engineering tech, computer hardware, automation & motor controls, and communication.

ELECTRONICS MAINTENANCE

CERTIFICATE OF SPECIALIZATION

These core courses prepare students for entry-level employment in industry sectors that require skills in the basic fundamentals of electricity, electronics, schematic reading, assembly and test instruments used to manufacture, maintain and operate electronic and electrical systems. These core courses make up the foundation for the certificates of achievement offered by the Electronics Technology Program.

Required Courses			
Course			Units
Elec Problem Solving	ELEC	A047*	(3)
Intro to Digital Logic	ELEC	A135	(3.5)
Intro to Basic Computer Installation	ELEC	A146	(3)
D.C. Circuits	ELEC	A150	(3)
A.C. Circuits	ELEC	A155	(3)
Total:			(15.5)

*A basic college math course in algebra and trigonometry may be substituted.

ELECTRONICS ASSEMBLER

CERTIFICATE OF ACHIEVEMENT

This option prepares the student for employment as an electronic assembler and Quality Assurance inspector. These courses develop a foundation in electronics that is well recognized by all electronic manufacture and service industries. These courses develop diagnostic skills and prepare the student for employment as a level 1 (systems) Diagnostic Technician. Upon completion of the required courses the student is encouraged to take the CEA (Certified Electronics Assembler) exam administered by a third party agency well recognized by the electronics industry.

Course			Units
Electronics Maintenance Core			(15.5)
Electronic Laboratory	ELEC	A170	(1)
Total:			(16.5)

ELECTRONICS ENGINEERING TECHNICIAN

CERTIFICATE OF ACHIEVEMENT

This option prepares the student to perform level 3 technician diagnostics: troubleshooting and repair at level 1 (systems), level 2 (sub assembly), and level 3 (component). Students completing this course of study will be successful in any electronic related field. Upon completion the student is encouraged to take the CET (Certified Electronics Technician) exam administered by a third party agency well recognized by the electronics industry.

Course			Units
Electronics Maintenance Core			(15.5)
Electronic Laboratory	ELEC	A170	(1)
Applied Digital Circuits	ELEC	A245	(4)
Automation II Semiconductor Motor Control Circuits	ELEC	A260	(4)
Subtotal:			(24.5)

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Select three (3) units from the following:

G.R.O.L. & Avionics Rules & Regulations	AMT	A188	(1.5)
Computer Use in Technology	CHT	A100	(3)
Computer Installation & Repair Automation 1-	ELEC	A246	(3)
Programmable Logic controllers	ELEC	A253	(4)
Electronic Troubleshooting	ELEC	A290	(3)

Total: (27.5-28.5)

ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

ELECTRONICS COMPUTER HARDWARE TECHNICIAN

CERTIFICATE OF ACHIEVEMENT

This certificate option develops level 2 (sub assembly) technician skills. The student will learn how to install, configure, modify, diagnose, and repair computer systems. Upon completion the student is encouraged to take the "A+" Computer Hardware Technician exam administered by a third party agency well recognized by the electronics industry.

Course

Electronics Maintenance Core			(15.5)
Applied Digital Circuits	ELEC	A245	(4)
Computer Installation & Repair	ELEC	A246	(3)

Total: (22.5)

Suggested electives:

Computer Use in Technology	CHT	A100	(3)
Intro to Computer Appl	CIS	A100	(3)
Intro to Computer Info Systems	CIS	A111	(3)

AUTOMATION AND MOTOR CONTROL

CERTIFICATE OF ACHIEVEMENT

This certificate option develops level 2 (sub assembly) technician skills. The student will learn how to install, configure, modify, diagnose, and repair automation control systems. This field includes robotic assembly, automated inventory control, and hearing ventilation and air conditioning systems.

Course

Electronics Maintenance Core			(15.5)
Automation 1- Programmable Logic Control	ELEC	A253	(4)

Subtotal: (19.5)

Select three (3) units from the following:

Computer Installation & Repair	ELEC	A246	(3)
Automation II Semiconductor Motor Control Circuits	ELEC	A260	(4)
Internship Academy – Level 2	ITRN	A392	(3)

Total: (25-26)

ELECTRONIC COMMUNICATIONS TECHNICIAN

CERTIFICATE OF ACHIEVEMENT

This certificate option develops level 2 (sub assembly), technician skills. The student will learn how to install, calibrate, modify, diagnose, and repair Radio Frequency (RF) systems. Upon completion the student is encouraged to take the General Radio Operator License (GROL) Technician exam administered by the Federal Communications Commission (FCC).

Course

Electronics Maintenance Core			(15.5)
G.R.O.L. & Avionics Rules & Regulations	AMT	A188	(1.5)
Communications systems	ELEC	A215	(3)
Automation II Semiconductor Motor Control Circuits	ELEC	A260	(4)

Subtotal: (24)

Select three (3) units from the following:

Computer Installation & Repair	ELEC	A246	(3)
Electronic Troubleshooting	ELEC	A290	(3)
Internship Academy – Level 2	ITRN	A392	(3)

Total: (27)