

# ELECTRONICS, ASSOCIATE OF ARTS DEGREE

Financial Aid Eligible  
Banner Code: 3\_AA\_ELEC  
Control Number: 19337

This sequence of classes is designed to give the student a solid foundation in Electronics using applied theory to solve practical applications utilizing the materials and forces of nature for the benefit of society. Students who successfully complete this sequence of classes will be able to pursue a bachelor's degree in Engineering or Engineering Technology or be employed as a skilled productive member of an Engineering team in Industry. Areas of interest in this program include theory and application of electric and electronic systems and components, including circuits, electro-magnetic fields, energy sources, communications devices, computers, and other components and devices powered by electricity. Design, assembly, installation, operation, maintenance, and repair of electronic equipment used in industry and manufacturing including the fabrication and assembly of related components. Design, development, testing, and maintenance of electro-mechanical and servo-mechanical devices and systems.

## Program Level Student Learning Outcomes

Upon completion of this program, students will be able to:

1. Design and build several of the most common circuits used in electronics technology.
2. Analyze operating and defective electronic circuits by interpreting data from a variety of test and measurement equipment.
3. Research and interpret basic electronic components using manufacturer's data manuals, library resources, and the Internet.

## Associate Degree Requirements

### Unit Requirement

Complete at least 60 units of acceptable college work with a minimum of 12 units completed in residence at Coastline. Earn an overall grade point average of 2.0 or higher from all colleges attended and a 2.0 or higher grade point average at Coastline.

\*Students must be in good academic standing (not on probation and/or disqualification) during the semester graduation is petitioned.

### Program of Study

Complete the required courses in one of the programs as detailed in the Requirements for the Major section of this catalog. All coursework must be completed with a grade of C or higher.

### General Education

Complete one of the three General Education options below (visit the General Education page for details (<https://catalog.cccd.edu/coastline/general-education/>)):

Option 1 – Coastline General Education: designed for students pursuing an Associate degree and who may or may not be planning to transfer to a four-year university. The degree is transferable to many colleges and universities.

Option 2—CSU GE Breadth: designed for students who are planning to transfer to a university in the CSU system. It may also be appropriate for transfer to some independent colleges and universities.

Option 3—IGETC: designed for students who are planning to transfer to a university in the CSU or UC system. It also may be appropriate for transfer to some independent colleges and universities.

## Global and Multicultural Studies Requirement

Complete at least 2.5 units from any Global and Multicultural Studies courses. See what courses fulfill the Global and Multicultural Studies Requirement (<https://catalog.cccd.edu/coastline/graduation-requirements/#globalandmulticulturalstudies>).

Course	Title	Units
<b>Required Core</b>		
Students will complete all of the following:		
ELEC C101	Introduction to Electronics with Computer Application	3
ELEC C102	DC Circuit Analysis	4
ELEC C103	AC Circuit Analysis	4
ELEC C104	Digital Computer Electronics	3
<b>Program Electives</b>		
Select a minimum of 10 units of the following:		10
ELEC C204	Semiconductor Devices and Circuits	
ELEC C210	Analog Electric Circuit Analysis	
ELEC C230	Advanced Digital Electronics	
ELEC C240	Microcomputer Systems and Assembly Programming	
ELEC C272	Electronic Manufacturing	
ELEC C280	Basic Electrical Machines	
ELEC C281	Work Based Learning	
or ELEC C282	Work Based Learning	
or ELEC C283	Work Based Learning	
or ELEC C284	Work Based Learning	
<b>Total Units</b>		<b>24</b>

Courses for a degree in Electronics at Coastline are offered through our Military/Contract Education Program with distance learning (online) delivery designed to meet the needs of our global military community. The class schedule and degree roadmap for this program can be found at <http://military.coastline.edu>. Students who wish to pursue a degree or certificate in Electronics who live in the local Orange County or nearby areas and are not eligible for enrollment in our Military/Contract Education Programs are encouraged to visit our sister college, Orange Coast College, the home college for Electronics. Information about their Electronics Program may be found at [www.orangecoastcollege.edu](http://www.orangecoastcollege.edu) (<http://www.orangecoastcollege.edu>).

Requirement	Units
Total Units for Major Preparation	24
Degree Option 1, 2, or 3	Varies
Electives to satisfy unit requirement	Varies
<b>Total Degree Units</b>	<b>60</b>