INDUSTRIAL PLC TECHNICIAN, CERTIFICATE OF ACHIEVEMENT

Banner Code: 1_CN_ELIP
Control Number: 41431
Not Financial Aid Eligible

The Industrial PLC Technician Certificate is designed to provide students with the skills and knowledge required to work on the PLC-based industrial control systems commonly found in advanced manufacturing facilities. Students will gain hands-on experience with Siemens and Allen-Bradley controllers. Upon completion of this certificate, students will be able to troubleshoot PLC based systems, replace faulty electrical components, and program and commission systems.

Students must complete the Industrial Electronics Technician Certificate of Achievement (13-14 units) as a part of the required coursework.

Program Outcomes

1. Students will gain the basic knowledge required to take the CET (Certified Electronics Technician) exam.
2. Students will be able to work safely in accordance with NFPA 70E.
3. Students will acquire the skills necessary to connect to a PLC, diagnose system problems, backup a program, and restore a program to a controller.
4. Students will gain proficiency in reading and creating schematics, wiring diagrams, and ladder logic diagrams for advanced control systems.
5. Students will acquire hands-on skills working with HMIs, SCADA, and industrial communication protocols.

Review Graduation Requirements (https://catalog.cccd.edu/orange-coast/graduation-requirements/certificates/#achievementtext).

Required Prerequisite

Industrial Electronics Technician Certificate of Achievement (13-14 units)

Course	Title	Units
Required Courses		
ELEC A100	Electronic Problem Solving	3-4
or MATH A115	College Algebra	
or MATH A120	Trigonometry	
ELEC A111	D.C. Circuits	3
ELEC A112	A.C. Circuits	3
ELEC A131	Automation 1- Industrial Control Systems	4
Total Units		**13-14**

Required Courses

Course	Title	Units
Required Courses		
ELEC A232	Automation 2 - Programmable Logic Controller	4
ELEC A233	Automation 3 - Industrial Networks, HMI, and SCADA	4
ELEC A102	Safety, Maintenance, and Calibration	1
ELEC A103	Computer Hardware Configuration & Diagnostics	3
or ELEC A290	Electronic Troubleshooting	
Total Units		**12**

Requirement	Units
Prerequisite Requirements	13-14
Required Courses	12
Total Units	25-26

These sequences at Orange Coast College are curriculum maps for students to finish all requirements for the certificate. There may be advisories, prerequisites, or time requirements that students need to consider before following these maps. **Students are advised to meet with an Orange Coast College Counselor for alternate sequencing.**

Course	Title	Units
Year 1		
Semester 1		
ELEC A100 or MATH A115 or MATH A120	Electronic Problem Solving or College Algebra or Trigonometry	3-4
ELEC A111	D.C. Circuits	3
	Units	**6-7**
Semester 2		
ELEC A112	A.C. Circuits	3
ELEC A131	Automation 1- Industrial Control Systems	4
	Units	**7**
Year 2		
Semester 1		
ELEC A232	Automation 2 - Programmable Logic Controller	4
ELEC A233	Automation 3 - Industrial Networks, HMI, and SCADA	4
	Units	**8**
Semester 2		
ELEC A102	Safety, Maintenance, and Calibration	1
ELEC A103 or ELEC A290	Computer Hardware Configuration & Diagnostics or Electronic Troubleshooting	3
	Units	**4**
	Total Units	**25-26**