

AUTOMATION FUNDAMENTALS, CERTIFICATE OF ACHIEVEMENT

Banner Code: 1_CM_ELAF
Control Number: 41369
Not Financial Aid Eligible

The Automation Fundamentals Certificate courses provide students with the foundational skills training needed for a multitude of careers in Automation. This certificate creates a pathway into capstone career programs, either advanced certificates or AS degrees or BS degrees, in disciplines such as Electrical Technology, Industrial Electronics, Industrial Automation, Mechatronics, Robotics, Building Automation Systems, HVAC/R, and Water-Wastewater Technology. This certificate is transferrable between six partner colleges in Orange County that offer these career programs.

Program Outcomes

1. Students will be able to use fundamental electrical laws and mathematics to analyze AC and DC Circuits.
2. Students will be able to use diagnostic tools on industrial systems and 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.

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

Course	Title	Units
Required Courses		
ELEC A102	Safety, Maintenance, and Calibration	1
ELEC A111	D.C. Circuits	3
ELEC A112	A.C. Circuits	3
ELEC A131	Automation 1- Industrial Control Systems	4
Total Units		11

Program Sequence

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 A111	D.C. Circuits	3
ELEC A112	A.C. Circuits	3

Course	Title	Units
ELEC A102	Safety, Maintenance, and Calibration	1
ELEC A131	Automation 1- Industrial Control Systems	4
	Units	11
	Total Units	11