

# INDUSTRIAL CONTROLS AND AUTOMATION, CERTIFICATE

The **Industrial Controls and Automation certificate** combines electronics knowledge and electro-mechanical skills. The certificate incorporates hands-on learning where practice follows theory in the lab environment. This certificate meets the needs of an entry level technician position. The certificate requires 25 credits in the courses listed below.

For more information about Electronics Technology, please visit the program page (<http://www.cod.edu/electronics/>).

## Certificate Requirements

Field of Study Code: ELECT.CER.INDCA

Code	Title	Credits
<b>Program Requirements</b>		
ELECT 1100	Electricity and Electronics Fundamentals	3
ELECT 1101	Circuits I	3
ELECT 1141	Digital Fundamentals	3
ELECT 1151	Electronic Devices and Applications	4
ELMEC 1171	Introduction to Robotic Technology	3
ELMEC 1190	Intro to Programmable Logic Controllers	3
<b>Program Electives</b>		
Select six credits from the following (in addition to the courses listed above):		6
ELECT 2273	Embedded Systems & Microcontroller Programming	
ELMEC 1110	Motor & Generator Fundamentals	
ELMEC 2510	Process and Automation Controls	
ELMEC 2600	Motion Control: Motor Dr Application and Control	
<b>Total Credits</b>		<b>25</b>