

MECHATRONICS AND INDUSTRIAL AUTOMATION CERTIFICATE

Division: Science/Engineering/Mathematics

PROGRAM CODE: 1C43497N

The certificate in Mechatronics and Industrial Automation is designed to prepare students for employment as entry-level industrial automation technicians. The program prepares students for careers in the design, operation, and maintenance of industrial automation systems focusing on the local industries that utilize these technologies, such as food production, petroleum production, fabrication, and logistics. This program focuses on the application of electronics and computer technology to industrial automation systems, including instrumentation and control, industrial robotics, and process control systems. Significant emphasis is placed on project-based learning facilitated by significant laboratory work. To earn a certificate, complete the required courses as listed with a minimum grade of "C". At least 50% of all course work must be completed at Cypress College.

Code	Title	Units
ENGT 103 C	Introduction to Embedded Systems	3
ENGT 105 C	Instrumentation and Process Control	3
ENGT 107 C	Electricity and Electronics	3
ENGT 109 C	Industrial Design and Graphics	4
ENGT 115 C	Electric Motors and Controls	3
ENGT 120 C	Mechanical Systems	3
ENGT 125 C	Hydraulic and Pneumatic Systems	3
ENGT 150 C	Digital Fundamentals and PLC Programming	4
ENGT 160 C	Industrial Data Network and HMI	3
Total Units		29

Program Student Learning Outcomes:

OUTCOME 1: Understand an automated system's structure and the role of different components in a fully integrated system.

OUTCOME 2: Demonstrate a deep understanding of an automated manufacturing platform and automation industry, including design, operation, preventative maintenance, troubleshooting, repair, and integration.

OUTCOME 3: Apply problem-solving skills in designing an automated system and product development.

https://www.curricunet.com/Cypress/reports/program_report.cfm?programs_id=1055