

ENGINEERING TECHNOLOGY: ELECTRICAL AND ELECTRONIC ENGINEERING TECHNICIAN (CERT)

CERTIFICATE OF ACHIEVEMENT

Cerritos College "Electrical and Electronics Engineering Technician" program provides a foundation in industrial electrical and electronics technology. Students learn principles of design, production and troubleshooting/maintenance of modern industrial electrical and electronics systems. Students learn about principles of electricity and electronics as applied to industrial systems, microcontroller systems, industrial robotics and mechatronics, industrial motor control, PLC/HMI technology and industrial maintenance systems. Graduate of this program find their job in a variety of industrial positions in maintenance, manufacturing, design and research and development.

Program Student Learning Outcomes

- Student apply principles of engineering technology to design and troubleshoot industrial electrical, electronics and mechatronics systems.
- Student design industrial electrical and electronics systems
- Student troubleshoot industrial electrical and electronics systems
- Student design, install and maintain industrial flexible robotics/mechatronics systems.
- Student integrates electrical/electronic systems with mechanical counterpart
- Student design electronics schematics and printed circuit board using contemporary CAD/ eCAD software.

Program Requirements

Code Number	Course Title	Units
Major Core Requirements		
ET 101	Principles of Engineering Technology	3.0
ET 103	Industrial Process Control	2.0
ET 105	Industrial Motor Control	2.0
ENGT 103	Introduction to Engineering Design Using Inventor	3.0
Additional Required Electives		
ET 102	Electronics for Engineering Technologists	3.0
MATH 140	Trigonometry	3.0
MTT 111	Programmable Logic Controllers In Automated Manufacturing	3.0
MTT 112	Variable Frequency Drives in Automated Manufacturing	3.0
MTT 180	Robotics for Computer Numerically Controlled Machines	3.0
Total Units		25

Recommended Electives

Code Number	Course Title	Units
ENGT 100	Soft Skills for Manufacturing, Technology and Engineering Professionals	3.0
ENGT 102	Arduino for Internet of Things (IoT) and Embedded Systems Design	2.0
ENGT 104	Principles of Aerospace Design Technology	4.0
ENGT 105	Product Design, Development, and Prototype Fabrication	2.0
ENGT 106	Introduction to Drone Technology	4.0
ENGT 153	Machine Design Applications Using Solid Modeling	3.0
ENGT 237	Statics and Strength of Materials Using Simulation	3.0
ENGT 258	Tools and Fixtures Applications Using Solid Modeling	4.0
ENGT 260	Advanced Modeling Using SolidWorks	4.0
ENGT 261	SolidWorks for Sustainable Design	4.0
ENGT 262	SolidWorks for Weldments Design	4.0
ENGT 263	SolidWorks for Industrial Mold Tools Design	4.0