ELECTRONICS AND COMPUTER ENGINEERING TECHNOLOGY

Certificate of Completion
#24171

This certificate program prepares individuals either for initial employment or for enhancement of existing skills in the electronics field, or for transfer into B.S. programs in Electronics Technology or Industrial Technology. Students are exposed to core topics such as components and circuits as well as coursework in advanced areas including microcontrollers and interfacing, communications, and industrial electronic controls.

Program Learning Outcomes

- Students will show evidence of demonstrating higher-level thought processes by relating specific tasks to more general principles.
- Students will employ polar and/or rectangular notation to determine the magnitude and phase shift of an unknown circuit parameter (voltage, current, impedance, and/or power).
- Students will apply knowledge of electronic principles to the areas of communications, industrial electronics, and microcontrollers.
- Students will demonstrate proper use of electronic test equipment and associate measurement results with circuit behaviors in the laboratory.
- Students will quantitatively determine unknown electrical parameters from given or measured values and use these results to assess or troubleshoot faults in circuit and system operation.
- Students will communicate, both verbally and in writing, knowledge of electrical concepts and their application to the observed behaviors of circuits and systems.
- Students will connect concepts learned in introductory courses to more general principles applicable in the employment context.

Review Student Learning Outcomes (SLOs) for this program.

Required Courses

Course Prefix	Course Name	Units
VOC EL11	Technical Applications in Microcomputers	
VOC EL12	Computer Simulation and Troubleshooting	
VOC EL50A	Electronic Circuits - Direct Current (DC)	
VOC EL50B	Electronic Circuits (AC)	
VOC EL51	Semiconductor Devices and Circuits	
VOC EL53	Communications Systems	
VOC EL54A	Industrial Electronics	
VOC EL54B	Industrial Electronic Systems	
VOC EL55	Microwave Communications	
VOC EL56	Digital Electronics	
VOC EL61	Electronic Assembly and Fabrication	
VOC EL74	Microcontroller Systems	
VOC TCH60	Customer Relations for the Technician	

Recommended Electives

Course Prefix	Course Name	Units
VOC EL62	Advanced Surface Mount Assembly and Rework	
VOC EL76	FCC General Radiotelephone Operator License Preparation	

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