ELECTRO-MECHANICAL SYSTEMS TECHNOLOGY CERTIFICATE

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This certificate prepares students to meet the demands of a career in electro-mechanical technology combining electrical circuits and mechanical technology. The program prepares students to operate, test, and maintain modern integrated electro-mechanical systems. In addition to quality classroom and laboratory instruction, students will gain real-world experiences through internship opportunities.

Technicians use state-of-the-art measuring and diagnostic equipment. While engineering principles, mathematics, and physics provide a theoretical base, practical (hands-on) experience is also important. Technicians will learn to design, build, and troubleshoot electronic circuits on their own. Those interested in the Electro-Mechanical Systems Technology certificate should have an aptitude for mathematics, science, and technical work

Electro-Mechanical Systems Major

Technical Standards
See here for details.

Code	Title	Hours
Math Elective		
Minimum 3 Credits		
MTH 1210	Mathematics I	3
MTH 1370	College Algebra	4
MTH 1430	Trigonometry	3
Drafting Elective		
Minimum 3 Credits		
MET 1000	Engineering Graphics with AutoCAD	3
MET 1010	Blueprint Reading and Sketching	3
Electrical Elective		
Minimum 6 Credits		
EET 1110	Circuit Analysis I	3
EET 1120	Circuit Analysis II	3
Fluid Power Elective		
Minimum 3 Credits		
MET 2310	Fluid Power	3
Mechanical Elective		
Minimum 6 Credits		
AMT 1100	Welding and Fabrication	3
MET 1020	Material Science	3
MET 1110	Manufacturing Processes	3
MET 1130	Statics	3
MET 2210	Strength of Materials	3
Manufacturing Automation Elective		
Minimum 9 Credits		
CPT 1120	Introduction to VB Programming	3
CPT 1250	Computer Applications in the Workplace	3
EET 1330	Digital Circuits	4
EET 2030	Motor Controls	3
EET 2200	Panel Wiring and Arc Flash Safety	3
EET 2900	Electric Codes and Application	2
EET 2911	Programmable Logic Controllers	3
ENV 1300	OSHA Regulations and Safety	3
FMS 2110	Basic Robotics and Mechatronics	3
FMS 2130	Industrial Mechatronics and Robotics	3
FMS 2210	CAM/CNC Machining I	3
FMS 2220	CAM/CNC Machining II	3
FMS 2340	Numerical Control Concepts	2
IMT 2170	Industrial Motor Drives	2
IMT 2260	Industrial Electronic Controls	3
MET 2440	Computer Aided Design	3
Total Hours		**30**