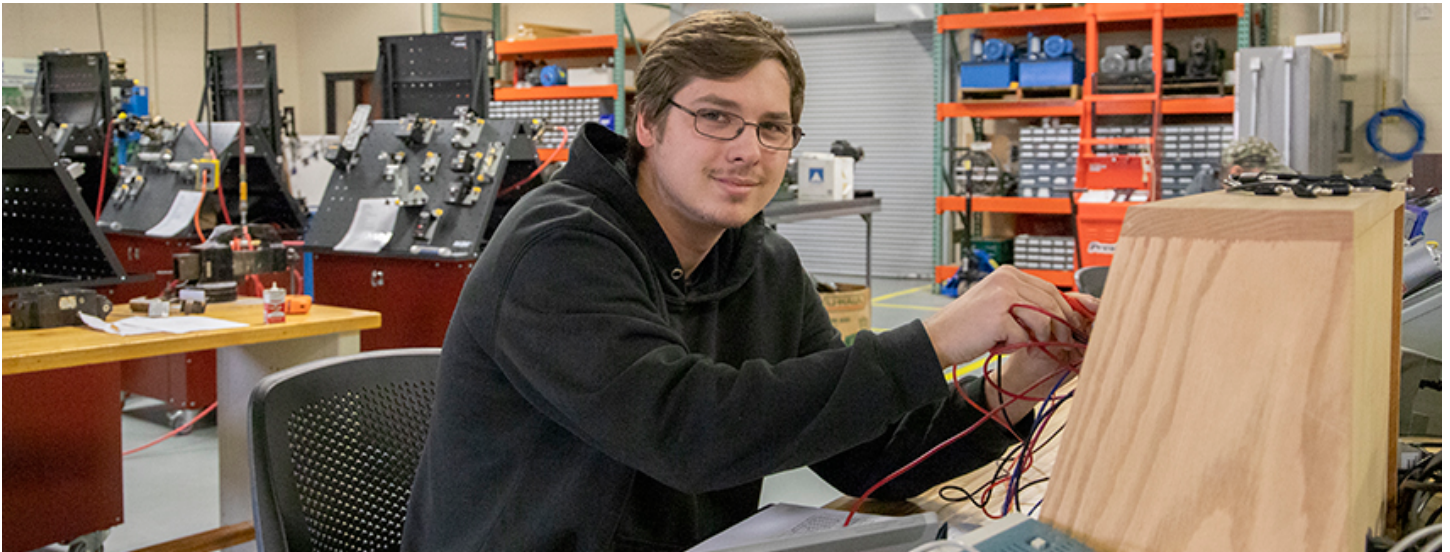


ELECTRO-MECHANICAL TECHNOLOGY



Associate of Applied Science Degree
10-620-1

Students who complete the Electro-Mechanical Technology associate's degree will be ready to install, maintain, and repair integrated machine systems. This associate's degree program includes coursework in basic mechanics, fluid power, welding, industrial electrical systems, automation controls, and integrated manufacturing systems. Potential career opportunities include maintenance technician, automation technician, installation technician, field service technician, and related professions in the field of mechatronics.

Upon successful completion of this program, students will be able to:

- Perform work safely (TSA)
- Troubleshoot electrical and mechanical systems and devices Integrates safety protocol. (TSA)
- Repair electrical and mechanical systems (TSA)
- Communicate Technical Information (TSA)
- Integrate electrical and mechanical systems and devices (TSA)
- Operate power and hand tools and standard test equipment
- Diagnose a fault condition in a component or system
- Modify systems and components.
- Interpret specifications of schematics and procedure documentation

Graduates Have Found Employment As

- Maintenance Technician
- Automation Technician
- Installation Technician
- Field Service Technician
- Medical Electronics Technician
- Pharmaceutical Process Technician
- Electronics Process Technician

- Robotics Technician
- Programmable Controller Program/Technician
- Field Service Technician
- Electronic Service Technician
- Maintenance Service Technician
- Fluid Power Technician
- Machine Repair Technician
- CNC Service Technician

View the entire course listing (<http://catalog.blackhawk.edu/courses/>).

Semester 1		Credits
804-113	College Technical Mathematics 1A	3
620-902	Mechanics of Learning for Industrial Technologies	1
449-300	Safety for General Industry	1
620-903	Troubleshooting Integrated Manufacturing Systems 1	1
421-310	Print Reading for Manufacturing	1
421-110	Interpreting Schematics for Manufacturing	1
620-146	Basic Mechanics	1
620-147	Basic Principles of Preventive Maintenance	1
620-116	Fluid Power 1: Basic Pneumatics	1
620-904	Fluid Power 3: Intermediate Pneumatics	1
620-101	Fundamentals of DC Circuits 1	1
620-102	Fundamentals of DC Circuits 2	1
620-109	Relay Logic	1

620-124	Programmable Logic Controllers - PLCs	1	620-915 or 620-998 <i>and</i> 620-999	Troubleshooting Integrated Manufacturing Systems 2 or Work-Based Learning 3: Maintenance Troubleshooting <i>and</i> Work-Based Learning 4: Integration	2
Credits		16			
Semester 2					
804-114	College Technical Mathematics 1B	2			
801-136	English Composition 1	3			
620-113	Fundamentals of AC Circuits 1	1	623-622	Lean Manufacturing	1
620-114	Fundamentals of AC Circuits 2	1	809-198	Introduction to Psychology	3
620-117	Fluid Power 2: Basic Hydraulics	1	Credits		14
620-906	Fluid Power 4: Intermediate Hydraulics	1	Total Credits		60
620-111	Programming Fundamentals 1	1			
620-112	Programming Fundamentals 2	1			
620-121	Programmable Automation Controllers (PACs) 1	1			
620-122	Programmable Automation Controllers (PACs) 2	1			
620-134	Sensors	1			
620-106	Electric Motors 1	1			
Credits		15			
Semester 3					
801-197	Technical Reporting	3			
809-196	Introduction to Sociology	3			
620-168	Lathe Operations for Industrial Technicians	1			
620-169	Milling Operations for Industrial Technicians	1			
620-166	Conveyor Systems	1			
620-907	Fluid Power 5: Advanced Hydraulics	1			
620-126	Robotics 1	1			
620-175	Servomechanisms 1	1			
442-318	Introduction to Welding	1			
442-336	Shielded Metal Arc Welding 1	1			
620-107	Variable Speed Drives 1	1			
Credits		15			
Semester 4					
620-170	Valves, Gaskets and Seals	1			
620-171 or 620-996 <i>and</i> 620-997	Human Relations in the Industrial Setting Internship or Work-Based Learning 1: Equipment Operation <i>and</i> Work-Based Learning 2: Preventive Maintenance	2			
620-172	Machine Setup & Installation	1			
620-174	Mechanical Power Transmission	1			
620-177	Bearings and Shafts	1			
620-178	Pump Repair and Maintenance	1			
620-908	Maintenance Management	1			