

CERTIFICATE
PROGRAM

**ADVANCED
MANUFACTURING/
INTEGRATED
SYSTEMS
TECHNOLOGY
(AM/IST)
MECHATRONICS**



The Community College of Allegheny County's certificate program in Advanced Manufacturing Technology Mechatronics presents opportunity for both manufacturers and individuals to enhance existing skills or learn new skills primarily through online classes.

The CCAC Advanced Manufacturing/Integrated Systems Technology (AM/IST) Mechatronics program prepares students by providing the knowledge and skills needed in fast-paced, high-tech IST occupations. Manufacturers can maximize their employee potential by registering them for customized training that fit their specific needs. Individuals can earn a certificate to boost existing skills or learn new ones for better positioning in a fast-paced, high-tech IST occupation.

Students will have the unique opportunity to obtain most of the skills necessary for this program through the distance learning aspect. The AM/IST Mechatronics certificate program primarily runs through online classes with the hands-on skills taught at the AM/IST Center of Excellence lab at the CCAC West Hills center. Students receive this education on state-of-the-art equipment used in today's industrial settings, guided by expert instructors who blend theory and information with practical "real world" simulation techniques.

CCAC & You: Partners for a Skilled Workforce

As a manufacturer are you searching for skilled employees with knowledge of electrical, electronic and mechanical systems? Becoming less competitive because you can't find skilled workers who are trained to operate, troubleshoot and maintain your high-tech equipment? The AM/IST Center for Excellence can help.

Workers who have developed advanced manufacturing skills through AM/IST Mechatronics training are your company's solution to a more productive and profitable workplace. AM/IST workforce training graduates acquire entry level knowledge of operating, troubleshooting and maintaining the high-tech equipment found in your manufacturing facility. Participants of this training program:

- learn industry-driven skills by completing an intense training program.
- must demonstrate troubleshooting skills on IST industry-designed equipment.

AM/IST Mechatronics Certificate Program

The AM/IST Mechatronics certificate program will provide skills and knowledge in the areas of advanced manufacturing that include hydraulics, pneumatics, mechanical systems, electrical systems and programmable logic control systems. Students will learn a subset of the skills needed for system operation, troubleshooting and repair. The curriculum is based on the national set of skill standards developed through industry and college cooperation. Typical job titles are industrial machinery mechanic, field service technician, engineering assistant or quality technician.

Program objectives include:

- Students will demonstrate knowledge of industry standards for safety and compliance.
- Students will troubleshoot equipment and processes within an industrial setting to effect repair.
- Students will diagnose, repair and maintain equipment and processes common to industry.
- Students will demonstrate the use of quality standards necessary for maintaining and repairing equipment.

Certificate Requirements

First Semester

		Credits
EET179	Electric Power Distribution	3
MET170	Fluid Power Systems	4
EET103	Introduction to Electronics	3
SET105	Technical Computing	3

Second Semester

RBT235	Programmable Logic Controls	4
EET245	Electric Motor Control	3
MET181	Mechanical Systems	3
	Technical Elective	3

Minimum Credits to Graduate: 26



CCAC's AM/IST Mechatronics program will train students for the following careers:

- Electrical Control Circuiting
- Residential/Commercial Wiring
- Electrical Motor Control
- Industrial Electrical Wiring
- Industrial Power Distribution
- Programming Controls
- Hydraulics
- Pneumatics
- Pneumatics Maintenance
- Piping Systems
- Electro-Fluid Power
- Electronic Sensors
- Basic Mechanical Drives
- Light Duty V-Belt and Chain Drives
- Heavy Duty V-Belt Drives

For more information on the Mechatronics program, visit www.ccac.edu, search keywords "integrated systems" or contact:

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For more information on the Advanced Manufacturing Technology Mechatronics program or to pre-register call the Keystone Community Education Council at (814) 678-5069.

CCAC Nondiscrimination Policy

The college does not discriminate based upon race, color, religion, national origin, ancestry or place of birth, sex, gender identity or expression, sexual orientation, disability, marital status, familial status, veteran status, age or use of a guide or support animal because of blindness, deafness or physical disability of any individual. Questions may be emailed to diversity@ccac.edu.

Individuals with disabilities who are requesting accommodations should contact the Supportive Services for Students with Disabilities office at 412.469.6215. This publication is available in alternate formats. Call the Supportive Services for Students with Disabilities office at 412.469.6215.

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