

# INDUSTRIAL SYSTEMS TECHNOLOGY

Industrial Systems Technology combines mechanical skill and electronic skill with programming to prepare students to work in today's highly automated manufacturing facilities. This hands-on program focuses on teaching you the practical skills you will need in the real world. You will learn about motors that run conveyor belts, the sensors that trigger different actions, robots that carry out tasks, and the controllers that put it all together. We focus on operations, optimization, maintenance, troubleshooting, repair, and energy efficiency.

## Career Opportunities with Local Industries:

- ◆ Power Generation (hydro, cogeneration, wind, solar, etc.)
- ◆ Data Center Operations and Engineering (e.g., Facebook, Google, Amazon, etc.)
- ◆ Food Processing Industry Maintenance Mechanics and Personnel
- ◆ Wood Products Industry Maintenance

### Other Career Opportunities:

Aerospace Development, Chemical Industries, Defense, Robotics, affecting a wide variety of industries and manufacturing processes

## Estimated Salary

\$40,000 - \$70,000 a year

## Degree

Associate of Applied Science (AAS) in Industrial Systems Technology (92 credits)

## Certificates

Data Center Operations (42 credits)

Industrial Automation (39 credits)

Maintenance (34 credits)

Welding (37 credits)

## Course Delivery

Online with hands-on training at BMCC's Workforce Training Center in Boardman and other locations. Start any term!



LEARN MORE ◆ [www.bluecc.edu/IST](http://www.bluecc.edu/IST)

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## Industrial Systems Technology AAS

### Year 1

#### Term 1: Fall

Intro to Industrial Systems Technology  
Mechanical Drive Systems  
Electrical Fundamentals for Non-Electricians  
Industrial Shop Practices  
Preventative Maintenance Management

#### Term 2: Winter

Print Reading for Welders  
Bearing & Lubrication Systems  
Programmable Logic Controllers I  
Technical Math for Industrial Systems Techs  
Basic Gas and Arc Welding or  
Metals and Welding

#### Term 3: Spring

Human Communication  
Industrial Print Reading  
Industrial Safety  
Industrial Pneumatic Systems  
Programmable Logic Controllers II

### Year 2

#### Term 4: Fall

Introduction to Business Computing or  
Concepts of Computing  
Computer Aided Drafting  
Industrial Hydraulic Systems  
Automated Material Handling

#### Term 5: Winter

Pre-Employment Seminar  
Rigging and Lifting  
Electric Motor and Controls Troubleshooting  
Pumps & Valves  
Elements of the Essay

#### Term 6: Spring

Physical Science/Energy  
Process Control and Instrumentation  
Capstone Project I



## Career Pathways Certificates

### CPC Industrial Systems Technology: Data Center Operations

Preventative Maintenance Management  
Mechanical Drive Systems  
Industrial Hydraulic Systems  
Bearing and Lubrication Systems  
Electric Motor and Controls Troubleshooting  
Programmable Logic Controllers I  
Pumps and Valves  
HVAC System Controls  
Data Center Operations and Engineering  
Elements of the Essay

### CPC Industrial Systems Technology: Maintenance

Rigging and Lifting  
Bearing and Lubrication Systems  
Programmable Logic Controllers I  
Industrial Hydraulic Systems  
Pumps and Valves  
Industrial Pneumatic Systems  
Mechanical Drive Systems

### CPC Industrial Systems Technology: Industrial Automation

Industrial Hydraulic Systems  
Mechanical Drive Systems  
Bearing and Lubrication Systems  
Electric Motor and Controls Troubleshooting  
Programmable Logic Controllers I  
Programmable Logic Controllers II  
Automated Material Handling  
Process Control and Instrumentation

### CPC Industrial Systems Technology: Welding

Mechanical Drive Systems  
Industrial Hydraulic Systems  
Print Reading for Welders  
Programmable Logic Controllers I  
Data Center Operations and Engineering  
Metals and Welding or Basic Gas and Arc Welding  
TIG Welding

### Note: In addition to the courses detailed, all CPC Programs also include:

Introduction to Industrial Systems Technology, Industrial Safety,  
Preventative Maint. Mgt., Industrial Print Reading, Electrical  
Fundamentals for Non-Electricians, and Industrial Shop Practices