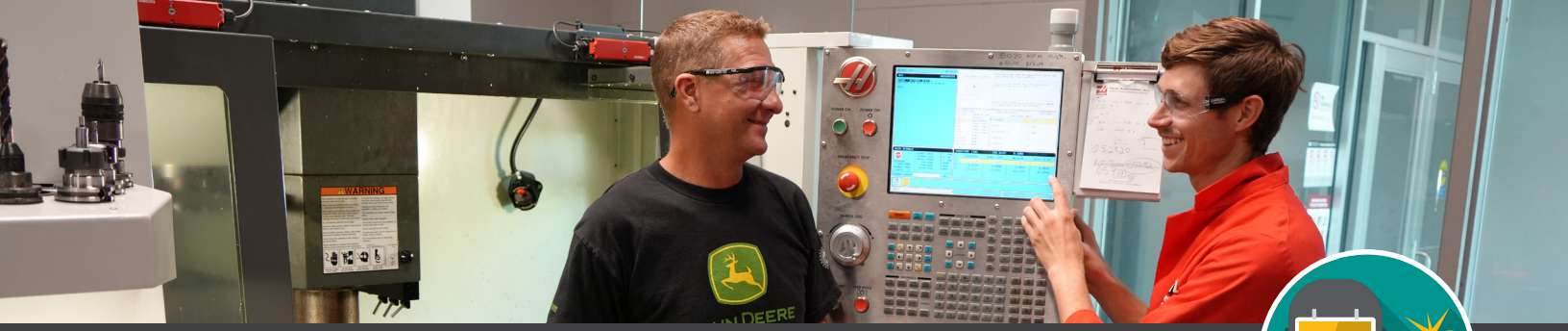

***GEAR UP FOR AN EXCITING CAREER IN ADVANCED MANUFACTURING***

Start your journey with Eastern Iowa Community Colleges'

# Advanced Manufacturing Academy

## ADVANCED MANUFACTURING IS...

- Important for every industry
- Fast-paced, hands-on work
- Results-driven
- In-demand for more skilled workers

## ADVANCED MANUFACTURING CAREERS PROVIDE...

- High paying salaries and great benefits
- Job security
- Growth and development
- An active lifestyle

## CAREERS IN ADVANCED MANUFACTURING

**CNC Machining (Computer Numerical Control)**
You'll set up and operate a variety of computer-controlled and mechanically-controlled machine tools to produce precision metal parts, instruments, and tools.

**Engineering Technology**
Is vital to manufacturing companies and includes industrial equipment repair, digital electronic equipment usage, maintenance strategies, and more.

**Environmental, Health and Safety**
Assist in the management, regulation, and compliance of hazardous materials and waste in organizations, thus protecting workers and the environment.

**Heating, Ventilation and Air Conditioning (HVAC)**
Repair, maintain, and install a wide variety of heating, air conditioning, refrigeration, and ventilation systems.

**Mechanical Design**
Aide engineers in design and development work by preparing detailed drawings depicting exact dimensions and specifications.

**Renewable Energy**
Technicians complete tasks such as electrical wiring, mechanical installation, site analysis, and troubleshooting.

**Welding**
Use a variety of welding tools and equipment to cut and join metals and other materials together. Welders read and interpret technical documents, adhere to safety standards, and have a strong attention to detail.



EASTERN IOWA COMMUNITY COLLEGES
CLINTON • MUSCATINE • SCOTT

THE Community's College

Learn more at eicc.edu/academies • Toll-free at 1-888-336-3907 • Email eiccinfo@eicc.edu

EASTERN IOWA COMMUNITY COLLEGES
CLINTON • MUSCATINE • SCOTT
THE Community's College

Certificate, Diploma and Associate in Applied Science Degree

# Advanced Manufacturing Academy

## DURING HIGH SCHOOL

**TERM 1: Fall, senior year of high school, 6 credits**

- ELE:101 Industrial Safety, 1 credit
- ELE:216 DC Circuit Analysis, 3 credits
- MAT:705 Industrial Math and Measurement I, 2 credits

**TERM 2: Spring, senior year of high school, 7 credits**

- ELE:217 AC Circuit Analysis, 3 credits
- IND:134 Print Reading, 2 credits
- MAT:706 Industrial Math and Measurement II, 2 credits

**AWARD: BASIC ELECTRICITY CERTIFICATE (13 CREDITS)**

## AFTER HIGH SCHOOL

**TERM 3: Fall, taken at the college, 15 credits**

- CSC:112 Computer Fundamentals for Technicians I/A, 2 credits
- CSC:113 Computer Fundamentals for Technicians I/B, 2 credits
- ELE:225 Electrical Motor Control & Power Distribution, 3 credits
- ELT:309 Digital Circuits, 3 credits
- ELT:312 Solid State Devices & Systems, 3 credits
- PHY:185 Conceptual Physics Fundamentals I, 2 credits

**AWARD: BASIC ELECTRONICS CERTIFICATE (27 CREDITS)**

**TERM 4: Spring, 13 credits**

- EGT:117 Fluid Power Fundamentals, 2 credits
- ELT:123 Programmable Logic Controllers, 3 credits
- ENG:107 Composition I: Technical Writing, 3 credits
- PHY:186 Conceptual Physics Fundamentals II, 2 credits
- **PICK ONE,** 3 credits each:
  - ECN:120
  - ECN:130
  - HUM:105
  - HUM:110
  - POL:111
  - PSY:111
  - SOC:110

**AWARD: ENGINEERING TECHNOLOGY ELECTROMECHANICAL DIPLOMA (35 CREDITS)**

*Continued in next column...*

**TERM 5: Summer, 7 credits**

- ELT:125 Advanced PLC, 3 credits
- IND:143 Motors and Drives, 3 credits
- MFG:505 Lean Manufacturing, 1 credit

## SELECT A TRACK

**TERM 6: Fall, AUTOMATION, credit varies**

- ATR:105 Industrial Robotics, 3 credits
- ATR:106 Motion Control, 3 credits
- ELT:177 Microcontrollers, 3 credits
- **PICK TWO:**
  - CHM:122 Intro to Gen Chem
  - EGT:145 Fluid Power Maintenance
  - EGT:137 Fluid Power Control
  - IND:136 Process Control I
  - IND:137 Process Control II

**OR**

**TERM 6: Fall, ELECTROMECHANICAL, credit varies**

- ATR:106 Motion Control, 3 credits
- EGT:145 Fluid Power Maintenance, 4 credits
- EGT:137 Fluid Power Control, 4 credits
- **PICK TWO:**
  - ATR:105 Industrial Robotics
  - CHM:122 Intro to Gen Chem
  - ELT:177 Microcontrollers
  - IND:136 Process Control I
  - IND:137 Process Control II

**OR**

**TERM 6: Fall, PROCESS CONTROL, credit varies**

- CHM:122 Introduction to General Chemistry, 4 credits
- IND:136 Process Control I, 3 credits
- IND:137 Process Control II, 3 credits
- **PICK TWO:**
  - ATR:105 Industrial Robotics
  - ATR:106 Motion Control
  - EGT:137 Fluid Power Control
  - EGT:145 Fluid Power Maintenance
  - ELT:177 Microcontrollers

**AWARD: ENGINEERING TECHNOLOGY AAS (62–64 CREDITS)**