

CCAC's IST Program: Your Workforce Solution

In as little as 10 months your company's IST workforce challenges could be resolved. We'll train your current workers or help you find new ones for existing vacancies. To find out more about the CCAC IST certification program, contact Reggie Overton at roverton@ccac.edu or 412.369.3748.

CCAC thanks the following foundations, organizations, and agencies for their support of the IST program:

- Benedum Foundation
- The Heinz Endowments
- Mellon Financial Corporation
- Richard King Mellon Foundation
- National Center for Integrated Systems Technology
- Allegheny County
- Three Rivers Workforce Investment Board
- Pennsylvania Department of Labor & Industry
- U.S. Department of Labor

Visit CCAC's Newest Center of Learning in North Fayette Township

CCAC
West Hills Center
1000 McKee Road
Oakdale, PA 15071
412.788.7500
www.ccac.edu

Our West Hills Center is a 150,000 square foot state-of-the-art facility nestled on 34 acres. The center is conveniently located in North Fayette Township at the Oakdale exit of routes 22 & 30, one mile west of Robinson Town Center. The West Hills Center specializes in service and trade instruction, professional and business training, as well as traditional college educational programs. This facility is equipped with modern classrooms, laboratories and high-bay areas for automotive, HVAC, welding, and other trade-related programs.



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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 trained to operate, troubleshoot, and maintain your high-tech equipment?
- concerned because current skilled employees are retiring?

Community College of Allegheny County can help.



CCAC & You: Partners for a Skilled Workforce

CCAC Offers Advanced Manufacturing Training Programs Covering:

- Programmable Logic Controllers
- Hydraulics and Pneumatics
- Electricity, Motor Controls, and Systems Technology
- Advanced Mechanical Systems

Workers who have developed advanced manufacturing skills through Integrated Systems Technology (IST) training are your company's solution to a more productive and profitable workplace. At CCAC, we cross-train existing and future employees in electrical, electronic, and mechanical systems. IST graduates acquire entry-level knowledge of operating, troubleshooting, and maintaining the high-tech equipment found in your manufacturing facility. Based at our newly created West Hills Center in North Fayette Township, CCAC's IST program offers:

- Hands-On Training
- Advanced Manufacturing Equipment
- Industry-Driven Curricula

Hands-On Training

CCAC's IST program offers hands-on education, guided by expert instructors who blend theory and information with practical "real world" simulation techniques. Through a series of assessments, program participants are asked to demonstrate specific skills they have learned. As an employer, you have access to documentation assessing a prospective employee's IST competency levels (with the student's consent).

Industry-Standard Equipment & Experience

CCAC's IST program participants:

- 1) learn industry-driven skills by completing an intense 10-week training program;
- 2) must demonstrate troubleshooting skills on IST industry-designed equipment; and
- 3) are interviewed and tested by CCAC program instructors.

All program participants receive a certificate upon successful completion of the IST program.

Industry-Driven Curricula for Advanced Manufacturing

Electrical Curriculum

Electrical Control Circuits

- Basic Electrical Circuits
- Electrical Measurements
- Circuit Analysis
- Inductance & Capacitance
- Combination Circuits

Residential/Commercial Wiring

- Electrical Wiring Techniques
- Wiring System Installation

Electrical Motor Control

- Introduction to Electrical Motor Control
- Manual Motor Control & Overload Protection
- Control Transformers
- Control Ladder Logic
- Control Relays & Motor Starters
- Introduction to Troubleshooting
- Systems Troubleshooting
- Reversing Motor Control
- Automatic Input Devices
- Basic Timer Control: On-Delay & Off-Delay

Industrial Electrical Wiring

- Introduction to Electrical Control Wiring
- Electrical Control System Wiring

Industrial Power Distribution

- Introduction to Raceways
- Basic Conduit Bending – EMT
- Advanced Raceways
- Conductors, Disconnects & Overload Protection
- Conduit Sizing & Wire Pulling Techniques

Electronic Curriculum

Programmable Controllers

- Introduction to Programmable Controllers
- Basic PLC Programming
- PLC Motor Control
- Discrete I/O Interface
- Introduction to PLC Troubleshooting
- PLC Systems Troubleshooting
- Event Sequencing
- Application Development
- PLC Timer Instructions
- PLC Counter Instructions

Mechanical Curriculum

Hydraulics

- Hydraulic Power Systems
- Basic Hydraulic Circuits
- Principles of Hydraulic Pressure & Flow
- Hydraulic Speed Control
- Pressure Control Circuits
- Hydraulic DVC Applications
- Hydraulic Cylinder Applications
- Hydraulic Relief Valve Operation
- Hydraulic Check Valve Applications

Pneumatics

- Pneumatic Power Supply
- Basic Pneumatic Circuits
- Principles of Pneumatic Pressure & Flow
- Pneumatic Speed Control Circuits

Pneumatics Maintenance

- Pneumatic Maintenance
- Pneumatic System Construction



Piping Systems

- Metal Piping Systems
- Metal Piping Installation
- Metal Tubing Systems
- Hoses

Electro-Fluid Power

- Power Devices
- Control Relays
- Sequencing Control

Electronic Sensors

- Introduction to Electronic Sensors
- Operational Theory of Electronic Sensors

Hydraulic Troubleshooting

- Introduction to Pressure Compensated Pumps
- Troubleshooting Pumps
- Troubleshooting Hydraulic Components
- Troubleshooting Hydraulic Systems

Basic Mechanical Drives

- Introduction to Mechanical Drive Systems
- Key Fasteners
- Power Transmission Systems

Light Duty V-Belt & Chain Drives

- Introduction to V-Belt Drives
- Introduction to Chain Drives

Heavy Duty V-Belt Drives

- Heavy Duty V-Belt Drives
- V-Belt Selection & Maintenance

Heavy Duty Chain Drives

- Heavy Duty Chain Drives