

Multi-Skilled Technician (680 Hour) Program

Multi-Skilled Technician

This 680 hour program covers system level training and integration fundamentals. The program includes concepts of manufacturing safety, blueprint reading, integrated electrical schematics and PLC, integrated mechanical systems components, integrated fluid power systems and integrated welding systems.

Who Should Attend

- Manufacturing workers who are interested in expanding their skills to be better prepared in the areas of mechanical, electrical, and specialty processes.

Outcome

- Upon completion of this module the trainees will have the knowledge of systems level integration and troubleshooting. Systems processes are broken-down to zone, cell and station level schematics and equipment related to interlocks of fluid power, robotics, mechanical systems, welding and PLC communications.

Objectives

- Identify all Safety within systems and interpret safety placards.
- Recognize System Process.
- Identify Zone, Cell and Station.
- Define key terms within systems integration.
- Interpret system level electrical and mechanical prints and process sheets
- Identify integration interlocks between subsystems.
- Use PLC program and interlocks to troubleshoot.
- Use Robot teach pendant I/O to troubleshoot.
- Identify fault conditions using HMI.
- Identify error messages and describe fault solutions.
- Troubleshoot communication devices between subsystems.
- Identify components in the systems.
- Identify Main Control panel circuits and PLC relationship to those circuits.
- Identify pushbutton stations.
- Troubleshoot faults within the system, pneumatic, mechanical, robotic and PLC.

Multi-Skilled Technician Program Offerings

Core Courses

Computer Literacy	(32 Hours)
Manufacturing Safety	(16 Hours)
Blueprint Reading/Schematic and Metrology	(32 Hours)

Electrical Courses

Basic Electrical	(40 Hours)
Motor and Drives Control	(40 Hours)
PLC's	(80 Hours)
Robotics – Operations	(40 Hours)
Robotics – Electrical	(40 Hours)

Mechanical Courses

Rigging and Machine Leveling	(40 Hours)
Systems/Drives/Power Transmission	(40 Hours)
Fluid Power	(80 Hours)
Robotics - Mechanical	(40 Hours)
Pipefitting and Tube Bending	(40 Hours)

Specialty Courses

Machine Tool	(80 Hours)
--------------	------------

Master Skills Course

Capstone – Systems Troubleshooting	(40 Hours)
------------------------------------	------------

100+ Courses available in Advanced Integrated Manufacturing, Advanced Automotive Technology, Renewable Energy, Alternative Energy, Process Improvement/Quality, Defense, and Aerospace.

Questions?

Workforce & Continuing Education
7900 Tank Avenue
Warren, MI 48092
Phone: 586.498.4100
Fax: 586.498.4101
Email: workforcedev@macomb.edu
Web: www.macomb.edu/wdi

“Workforce & Continuing Education can customize any course to meet the specific needs of our customer’s.”