



AUTOMATION | ELECTRICAL  
DATA COMM & SECURITY  
INDUSTRIAL & SAFETY  
FLUID POWER

## AUTOMATION

TUE. DEC. 4 -  
THU. DEC. 6  
8 AM - 5 PM

SMC SPRINGFIELD  
509 N. WASHINGTON  
SPRINGFIELD, MO 65806

COURSE NUMBER MMS-125  
**HYDRAULICS AND PNEUMATICS  
FUNDAMENTALS**

## TRAINING EVENT

This three-day course is designed for mechanical technicians and provides information on the concepts associated with hydraulics, hydraulic systems and components, fluid principles, hydraulic system design, and hydraulic schematic symbology.

Upon completion of this course, you should be able to:

- Describe the basic principle of fluid dynamics.
- State the relationship between force, pressure, and area.
- List and describe the major components of a hydraulic system.
- Identify the symbols used to identify hydraulic components in a schematic.
- List and describe the major components of a pneumatic system.
- Identify the symbols used to identify pneumatic components in a schematic.



### + HANDS-ON

Throughout this course, you will have the opportunity to practice the skills you have learned through a variety of hands-on exercises.

### COST

**\$2,250**  
Includes lunch  
each day

### REGISTER

To register, contact Brandy Meeker  
at [bmeeker@smcelectric.com](mailto:bmeeker@smcelectric.com)  
by Tuesday, November 13.

## **Prerequisites**

To successfully complete this course, the following prerequisites are required:

- Understanding of mechanical theory and mechanical systems

## **SCHEDULE**

### **Day 1**

- Listing the Advantages of Hydraulics and Pneumatics
- Discuss Hydraulic and Pneumatic Components
- Disassembling, Cleaning, Inspecting, and Reassembling a Hydraulic and/or Pneumatic Control Valve
- Operating a Hydraulic and/or Pneumatic Cylinder Using a Given Medium

### **Day 2**

- Operating Multiple Hydraulic Cylinders Using a Hydraulic Medium
- Disassembling, Cleaning, Inspecting, and Reassembling a Hydraulic and/or Pneumatic Control Valve

### **Day 3**

- Operating a Pneumatic Cylinder Using a Pneumatic Medium
- Operating Multiple Pneumatic Cylinders Using a Pneumatic Medium
- Lab
- Review And Exam