



The Smart Automation Certification Alliance (SACA) industry-driven credentials combine knowledge with hands-on skill certifications to enhance preparedness in an advanced manufacturing setting.

**Work at your own pace.** Start with a silver certification and build your skills to complete a gold certification.

### Knowledge and Skill areas:

- Electrical Systems
- Sensor Logic Systems
- Pneumatic Systems
- Hydraulic Systems
- Hydraulic Maintenance
- Electric Motor Control Systems
- Programmable Controller Systems
- Mechanical Power Systems
- Programmable Controller Troubleshooting

To learn more and schedule training, email

[CustomizedTraining@NorthwoodTech.edu](mailto:CustomizedTraining@NorthwoodTech.edu)

[NorthwoodTech.edu/advanced-manufacturing](http://NorthwoodTech.edu/advanced-manufacturing)

## ADVANCED MANUFACTURING

Industry Training  
SACA Certifications

# FREE Training!

### STEP 1: Silver Certification

Online courses  
with a written  
knowledge  
exam



### STEP 2: Gold Certification

Onsite courses  
with a hands-on  
skills assessment



Scan the QR-code  
for more information  
and registration.



# FREE Training!

## NORTHWOOD TECH

### ADVANCED MANUFACTURING FLEX LAB

Rice Lake Campus

Wednesday & Thursday  
1:30 p.m. - 4:30 p.m.

### ST. CROIX MANUFACTURING SKILLS CENTER

Hammond, WI

Monday & Friday  
1:00 p.m. - 4:00 p.m.

#### REGISTER:

Scan the qr-code or visit:

[NorthwoodTech.edu/  
Advanced-manufacturing](http://NorthwoodTech.edu/Advanced-manufacturing)



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and registration.

[NorthwoodTech.edu](http://NorthwoodTech.edu)

2025 Spring Classes	Focus	
Electrical Systems 1	Basic electrical circuits Electrical measurements Circuit analysis	Inductance and capacitance Combination circuits Transformers
Sensor Logic Systems	Control logic Valves and relays Limit switches, timers	Advanced systems Introduction to electronic sensors Electronic sensor applications
Pneumatic Systems 1	Power systems Basic circuits Principles of pneumatic pressure and flow	Speed control circuits DCV applications Air logic Maintenance
Hydraulic Systems 1	Power systems Basic circuits Principles of hydraulic pressure and flow Speed control Pressure control circuits	DCV applications Cylinder applications Relief valve applications Check valve applications Accumulator applications
Hydraulic Maintenance 1	Filter maintenance Fluid maintenance	Fittings and seals Hose and clamping installation
Electric Motor Control Systems 1	Introduction to electrical motor control Manual motor control and overload protection Control transformers	Control ladder logic Control relays and motor starters Reversing motor control Automatic input devices Basic timer control
Programmable Controller Systems 1	Connections Operation Programming Memory organization	Motor control Timers and counters Math and data move
Programmable Controller Troubleshooting 1	Power supply Device testing Processor	Systems Analog input/output
Mechanical Power Systems 1	Motor mounting Key fasteners Torque, power and efficiency	V-belts Chain drives Spur gears Multiple shaft drives

- Silver Certification must be earned prior to being awarded the Gold Certification.
- Each Certification is about 24 hours of course time.



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