



# Welding

2 YEAR PROGRAM

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## PROGRAM SUMMARY

- Welding holds much of our world together, from buildings and bridges to airplanes and equipment.
- Take a drawing or blueprint and breathe life into it by fabricating a life size creation.
- Know you have a future with many different job skills that will drive you down the road of success towards manufacturing, field work or owning your own company.
- Skilled Welders Needed! There is a large shortage of welders in the United States with great opportunities for employment.

## COLLEGE CREDIT CONNECTIONS

- Alfred State College
- Lincoln Technical Institute
- Niagara County Community College
- Ohio Technical College
- Universal Technical Institute

## SPECIAL NOTES

- Students in this program are eligible for post-secondary dual enrollment opportunities.
- Steel toed or composite toed work boots are required.

## PROGRAM ELIGIBILITY

- Technical Endorsement
- 3.75 Credits per Year
- Pathways to Graduation (CTE and CDOS)

## Career Paths

### PROFESSIONAL CAREERS

Building Superintendent  
Certified Welding Inspector  
Engineer  
Mechanical Engineer  
Welding School Teacher

### TECHNICAL CAREERS

Boilermaker / Ironworker  
Fabricator  
Machinist  
Millwright  
Robotics Technician  
Sheet Metal  
Shipwright  
Underwater Welder

### ENTRY LEVEL CAREERS

Apprenticeship Opportunities  
Certified Welding Inspector - CWI  
Pipeliner  
Welding Fabricator  
Welding Supervisor

## WELDING SAFETY

- PPE
- Electrical Shock
- Ferrous
- Cylinder Safety / Storage
- Equipment Operation
- Power Sources

## METAL WORKING SAFETY

- Grinding
- Preparation
- Sheering
- Machine Cutting
- Hand Cutting

## OXY-FUEL CUTTING

- Equipment Set Up
- Cylinder Handling
- Regulator Safety
- Torches / Gases
- Hand Cutting
- Track Cutting
- Hand Auto Cutting

## SMAW (SHIELDED METAL ARC WELDING), STICK

- Equipment Set Up
- Basic Operations
- Types of Electrodes
- Multiple Position Welding
- Out of Position
- Operating Equipment

## GMAW (GAS METAL ARC WELDING) / FCAW (FLUX CORED), MIG

- Equipment Set up
- Flowmeters / Gases
- Machine Parts
- Operating Equipment
- Welding Defects
- Pulse Mig Welding

## GTAW (GAS TUNGSTEN ARC WELDING), TIG

- Equipment Set Up
- Gases / Flowmeter
- Equipment Operator
- Ferrous Metals
- Non-Ferrous Metals
- Torches and Machine Types
- Pulse TIG Welding

## ROBOTICS

- Types
- Processes
- Automotive Industry
- Machine
- CAD Drawing
- CNC Plasma Table

## PLASMA ARC CUTTING

- Equipment Set Up
- Safety
- Types
- Gases
- Torches

## LIGHT MANUFACTURING

- Drill Press
- Sheet Metal Bending
- Machining Lathe
- Bridge Port Drill
- Hydraulic Shear
- Hydraulic Band Saw
- Iron Worker