

CAREER PATHWAY

WELDING TECHNOLOGIES

Plating Machine Setters, Operators & Tenders | Metal & Plastic Workers | Welding, Soldering, Brazing Machine Setters, Operators & Tenders | Heat Treating Equipment Setters, Operators & Tenders | Welders, Cutters, Solderers & Blazers | Tool Grinders, Filers & Sharpeners | Structural Metal Fabricators & Fitters | Sheet Metal Workers

CAREER TECHNICAL COURSES

	Welding Technologies (1st & 2nd Semester)
YEAR 1	Shielded Metal Arc Welding (1st Semester)
	Gas Metal Arc Welding (2nd Semester)
	Gas Tungsten Arc Welding (1st Semester)
YEAR 2	Flux Cored Arc Welding (2nd Semester) or Manufacturing Capstone (Job Placement)

INDUSTRY CREDENTIAL OPPORTUNITIES

- American Welding Society (AWS) Welding Qualification - **9 Points**
- American Welding Society (AWS) GMAW Plate - **12 Points**
- American Welding Society (AWS) SMAW Plate - **12 Points**
- OSHA - 10-Hour Training - **1 Point**
(College Credit - CTS001 - 1 Credit Hour)
- CPR First Aid - **1 Point**
- Ohio Driver's License - **1 Point**

COLLEGE CREDIT OPPORTUNITIES

Students who demonstrate proficiency in career tech courses in approved secondary programs can receive college credit for their approved coursework.

POTENTIAL PLACEMENT & INCOME -



*May 2025 State Occupational Employment and Wage Estimates for Ohio

Metal & Plastic Workers	\$46,940
Plating Machine Setters, Operators & Tenders (Metal & Plastic)	\$48,460
Welding, Soldering, Brazing Machine Setters, Operators & Tenders	\$51,130
Structural Metal Fabricators & Fitters	\$51,700
Welders, Cutters, Solderers & Blazers	\$53,370
Heat Treating Equipment Setters, Operators & Tenders (Metal & Plastic)	\$54,860
Tool Grinders, Filers & Sharpeners	\$60,000
Sheet Metal Workers	\$68,810



in
partnership
with



BUCKEYE HILLS
CAREER CENTER

WELDING TECHNOLOGIES

SUBJECT
CODE

176009

WELDING TECHNOLOGIES

Students will use fundamental welding principles involving shielded metal arc, oxyacetylene, gas tungsten, and gas metal arc welding in the flat, horizontal, and vertical positions. An emphasis is given to electrode selection, equipment setup, operating procedures, welding inspection, and testing. Students will learn joint designs and layout and will be introduced to welding codes and standards. Additional topics include employability skills and an emphasis will be given to personal safety.

SUBJECT
CODE

176001

SHIELDED METAL ARC WELDING

Students will be able to safely use the Shielded Metal Arc Welding process (SMAW) to join various types of metal. They will perform multiple types of welds in all positions up to overhead. They will select the appropriate type of electrode and adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate the quality of welds.

SUBJECT
CODE

176000

GAS METAL ARC WELDING

Students will safely use the Gas Metal Arc Welding process (GMAW) to join various types of metal. They will cut metals using oxy-fuel processes and perform multiple types of welds in all positions up to overhead. They will select the appropriate type of electrode and shielding gas and adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate weld quality.

SUBJECT
CODE

176003

GAS TUNGSTEN ARC WELDING

Students will safely use the Gas Tungsten Arc Welding process (GMAW) to join various types of metal. They will perform multiple types of welds in all positions up to overhead. They will select the appropriate type of electrode, filler metal and shielding gas and be able to adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate weld quality.

SUBJECT
CODE

176002

FLUX CORED ARC WELDING

Students will be able to safely use the Flux Core Arc Welding process (SMAW) to join various types of metal. They will perform multiple types of welds in all positions up to overhead. They will select the appropriate type of cored electrode and adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their understanding of quality control factors to evaluate the quality of welds.

SUBJECT
CODE

176008

MANUFACTURING CAPSTONE

The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Manufacturing program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or internship.