



# Bridges Career Academy

## Welding

*Pierz-Healy High School*

Understand the careers in welding. Experience working with a variety of welding materials from stick welding to oxy-fuel welding. Understand metals in relationship to welds. Project based, uses real-life activities. Work on both required and personal projects. Gain entry-level employment or continue education.

### Academic Courses

- Welding I
- Welding II
- Advanced Welding
- Technical Education

### Career Experiences

- Listen to industry speakers
- Tour local businesses
- Attend the Bridges Career Exploration Day or other regional career fairs
- Work with real-life industry projects

### Completion Standards

COMPLETE

**ALL courses**

GRADES **B** ↑

Earn a **certificate** and **green cord** at graduation



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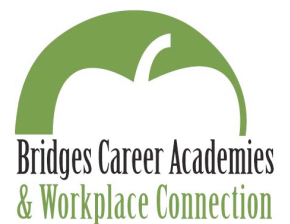
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### Job Skills

In addition to having technical skills, employers expect workers in this industry to have these skills:

- Listening Skills
- Manage Tools and Equipment
- Use Critical Thinking Skills
- Effectively Communicate
- Safety



# Welding Career Academy

Pierz-Healy High School

The Welding Academy provides students with an understanding of the vast number of careers in the welding industry. Students will experience working with a variety of welding materials from stick welding to oxy-fuel welding. Understanding metals in relationship to welds is an essential element of this Academy. The academy is project based, uses real life activities and allows students to work on both required and personal projects. When completing this academy, students will have skills to enter the work force or transfer credits to higher education.

## ACADEMY COURSES

### **Welding I** — 2 High School Credits and/or 3 College Credits

This course is a cooperative with St. Cloud Technical College's "Discovery Academy" allowing students to earn college credit. The principles of welding processes, safety practices, and industry trends will be demonstrated. Students will have the opportunity to learn fabrication and project building. This course covers safety related to welding, as well as the use of oxy-fuel welding, brazing and equipment.

### **Welding II** — 2 High School Credits and/or 3 College Credits

This course is also connected with St. Cloud Technical and the "Discovery Academy", with students having the opportunity to receive college credit. Students cover the safety hazards and applications for Gas Tungsten, Arc Welding in the welding industry. Curriculum includes power source setup, current types, current selection, shielding gases and torch types. In addition, safety principles for SMAW processes, learning various wire types, flux core, metal core, aluminum and stainless steel.

### **Advanced Welding** — 2 High School Credits

This course is an extension of knowledge and skills learned in Welding I and II. Blue print reading, TIG welding, and a more in-depth look at metallurgy. Students will fabricate and perform welding techniques related to the metals industry. Students are able to take this course as an independent study while working on personal projects.

### **Technical Education** — 1 High School Credit

This exploratory entry-level course is outlined to expose students to the numerous opportunities in vocational education. Students will be exposed to occupational safety and practices. Skills introduced include carpentry, woodworking, metal fabrication, and computer aided drafting (CAD). Alternative energy awareness, home maintenance and the unique and diverse opportunities in career and vocational education will be discussed.

## COMPLETION STANDARD

Students wishing to receive a certification must complete all courses, earning a minimum of a 'B' in all courses.

## CAREER EXPERIENCES

Students will explore and research careers with industry speakers, attend Bridges Career Exploration Day and other career fairs, tour the local businesses, and work with real life industry projects.

## JOB SKILLS

In addition to having technical skills, employers expect their workers to have other skills such as:

- Listening Skills
- Manage Tools and Equipment
- Use Critical Thinking Skills
- Effectively Communicate
- Safety

**CAREER OPTIONS:** [www.careerwise.minnstate.edu/careers](http://www.careerwise.minnstate.edu/careers)

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