



Bridges Career Academy

Welding

Upsala High School

Understand careers in metals. Experience working with a variety of metals, while designing, and welding metals to create projects. Learn skills in blue print reading, tool sharpening, thread cutting and shop safety. Learn the basics of small engines and use welding skills to maintain engines. Project-based, using real life activities. Gain entry-level employment or continue education.

Academic Courses

- Welding I
- Welding II
- Small Gasoline Engines

Career Experiences

- Listen to industry speakers
- Attend the Bridges Career Exploration Day or other regional career fairs
- Participate with professionals
- 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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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
- Time management



Bridges Career Academies
& Workplace Connection

Welding Career Academy

Upsala High School

The Welding Academy provides students with an understanding of the vast number of careers in the world of metals today. Students will experience working with a variety of metals, while designing, and welding metals to create projects. Skills in blue print reading, tool sharpening, thread cutting and shop safety are essential elements of the courses. In addition, students learn the basics of small engines and use their welding skills to maintain engines. 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 — .5 High School Credits and/or 3 College Credits

This exploratory course is designed to introduce students to metal working. All areas of safety, careers, trade knowledge, layout and design, sheet metal, tool sharpening, machining, heat treating, thread cutting, spot welding and bench metal work skills will be covered. Students will be allowed to complete both personal and elective projects.

Welding II —.5 High School Credits and/or 3 College Credits

The purpose of this course is to develop the basic skills and techniques of Oxyacetylene, MiG and TiG welding. Shop safety, types of electrodes, welding machines, and basic weld types will be covered in all three welding methods. Students will learn the proper use of the plasma torch as well as learning the correct technique of welding basics. Students will be allowed to complete both personal and elective projects.

Small Gasoline Engines — .5 High School Credits

This course is designed for students interested in the basics of small engine operation and maintenance. This course covers the use of small engines, the history and future developments for these engines. Engine mechanics, parts and operation are the main topics covered for both two and four-cycle engines.

COMPLETION STANDARD

Students wishing to receive a certification must complete all courses; earn a minimum of a 'B' average.

CAREER EXPERIENCES

Students will explore and research careers with industry speakers, attend Bridges Career Exploration Day, 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
- Time management

CAREER OPTIONS: www.careerwise.minnstate.edu/careers

JOB OUTLOOK: www.careerwise.minnstate.edu/jobs

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