



# Bridges Career Academy

## Design

*Bertha-Hewitt High School*

Understand career options in mechanical, architectural, engineering and commercial design. Experience working with pro-engineering software while creating a variety of designs — from mechanical parts to dream homes. Learn skills in designing prototypes, mechanical plans, blue print reading, design techniques, 2D drawing, and use of technical information. Gain entry-level employment or continue education.

### Academic Courses

- CAD/Drafting
- Advanced CAD/Engineering
- Architectural/Interior Design

### Career Experiences

- Listen to industry speakers
- Attend the Bridges Career Exploration Day or other regional career fairs
- Tour local businesses

### Completion Standards

COMPLETE

**All courses**

GRADES **B** ↑

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



**Explore types of careers**  
[www.careerwise.minnstate.edu/careers](http://www.careerwise.minnstate.edu/careers)

**Review the local job outlook**  
[www.careerwise.minnstate.edu/jobs](http://www.careerwise.minnstate.edu/jobs)

**Find postsecondary programs**  
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### Job Skills

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

- Team work skills
- Manage software and equipment
- Use critical thinking skills
- Effectively communicate
- Time management



# Design Career Academy

## Bertha-Hewitt High School

The Design Academy provides students with an understanding of the vast number of careers in today's mechanical, architectural, engineering and commercial design industries. Students experience working with Pro-Engineering software as they create a variety of designs from mechanical parts to dream homes. Skills in designing prototypes, mechanical plans, blue print reading, design techniques, 2D drawing, and use of technical information are essential elements of the courses. When completing this academy, students will have skills to enter the work force or continue their education at a post-secondary institution.

### ACADEMY COURSES

#### **CAD/Drafting** — 1 High School Credit

This course introduces students to the world of drafting and design. Students begin by creating working drawings from standard designs then move to research and development of new product ideas and designs. Curriculum takes students through the process of drawing; a sketch, a design, a working drawing. Mechanical drafting software will be used to design existing parts and create new products. Many of the new product designs will be done in small groups to reflect the work teams in industry.

#### **Advanced CAD/Engineering** — 1 High School Credit

In this course student will use industry designed Pro Engineer/CAD software to advance their drafting skills. Skills learned include the importance of using both three view drawings and isometric drawings. Learning to create, alter and modify different part drawings will allow students to design more complex machine parts.

#### **Architectural/Interior Design** — 1 High School Credit

In this course students are introduced to the world of architectural design as well as interior design. Students begin by creating house plans from variety of existing documents as a way of learning and understanding the reason behind specific designs. Student design their own dream house by making a working blue print of the home's interior and exterior. The home's design will be presented through power point and include the home's furnishings.

### COMPLETION STANDARD

Students wishing to receive a certification for this Academy must complete all the courses earning an average of 'B' or better in each course.

### CAREER EXPERIENCES

Students will explore and research careers with industry speakers, attend the Bridges Career Exploration Day event and other regional career fairs, tour the local businesses, and work with real life industry projects. Highlights include touring Diamond Tool and an Engineering Company.

### JOB SKILLS

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

- Team work skills
- Manage software and equipment
- Use critical thinking skills
- Effectively communicate
- Time management

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

**JOB OUTLOOK:** [www.careerwise.minnstate.edu/jobs](http://www.careerwise.minnstate.edu/jobs)

**POSTSECONDARY PROGRAMS:** [www.careerwise.minnstate.edu/education](http://www.careerwise.minnstate.edu/education)

