Bridges Career Academy
Computer Aided Drafting
Brainerd High School

Explore the variety of careers in the drafting industry. Learn both mechanical and architectural drafting software needed to design plans and create sets of plans for both drafting disciplines. Participate in hands-on projects and experiences.

Academic Courses

Required:
- CAD I
- CAD II

Optional:
- CIS Intro to Engineering Design

Career Experiences

- Learn from industry speakers
- Tour local businesses
- Attend the Bridges Career Exploration Day or other regional career fairs
- Work with industry projects and software

Completion Standards

COMPLETE

☑ **CAD I AND II**
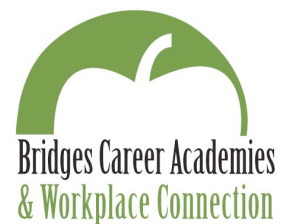
☑ **Eng optional**

GRADES **B**↑

ACT CAREER READINESS CERTIFICATE GOLD

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:

- Work in a team environment
- Manage tools and equipment
- Use critical thinking skills
- Effectively communicate
- Use original thinking to create unique project

Bridges Career Academies & Workplace Connection

www.BridgesConnection.org/Brainerd

Computer Aided Design Academy
Brainerd High School

The Computer Aided Drafting Academy allows students to explore the variety of careers in the drafting industry. Students will learn both Mechanical and Architectural drafting software that is needed to design plans and create sets of plans for both drafting disciplines. Hands-on projects and experiences are an integral part of this Academy. For those interested in the technical and professional careers of the new emerging industries of manufacturing design, architectural design and other engineering technologies, this academy introduces them to the basic skills required for a successful career.

ACADEMY COURSES

CAD I — 1 High School Credit
The course focus is learning the fundamentals of CAD (Computer Aided Drafting) software and understanding how to utilize several programs. The students' imagination and creativity will be challenge with individual and various assigned projects. Both Auto CAD and Inventor programs will be used in Architectural and Mechanical drafting purposes. Creating, interpreting plans and reading complex graphs, tables and charts will highlight this career.

CAD II — 1 High School Credit
This course will be a continuation of CAD I. Fundamentals of design will be stressed. The students' imagination and creativity will be challenged with individual and various projects. Both Auto CAD and Inventor programs will be used for both Architectural and Mechanical drafting purpose. Students will develop and understanding of not only the options available to them through using this software, but learn which software is best to create the design they desire.

CIS Intro to Engineering Design— 1 High School Credit and/or 3 College Credits
Introduction to engineering Design is a yearlong course with curriculum designed by Project Lead the Way. Students learn the 12-step engineering design process, basic use of Autodesk Inventor, basics of structural, visual and functional analysis. The course is project based and students learn through presentations and projects.

COMPLETION STANDARD
Students wishing to receive a certification must complete CAD I and CAD II with an option of taking Introduction to Engineering Design. Students must maintain a minimum of 80% academic standard in the courses. Students will also participate in the ACT National Career Readiness Certificate (NCRC) as part of this Academy Standard.

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. In addition, student will work with current industry software.

JOB SKILLS
In addition to having technical skills, employers expect their workers to have other skills such as:
- Work in a team environment
- Manage tools and equipment
- Use critical thinking skills
- Effectively communicate
- Use original thinking to create unique project

CAREER OPTIONS: www.careerwise.minnstate.edu/careers
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www.BridgesConnection.org/Brainerd