



Bridges Career Academy

Construction & Design

Crosby-Ironton High School

Acquire basic construction skills and learn about the architectural and construction industries. Learn a variety of machine operations related to wood and other construction materials. Learn both architectural and mechanical design processes while using computer aided design software. Gain entry-level employment or continue education.

Academic Courses

- CAD Drafting and Design
- Residential and Commercial Wiring
- Wood Production
- Construction

Career Experiences

- Listen to industry speakers
- Attend the Bridges Career Exploration Day or other regional career fairs
- Work with professionals in plumbing, wiring, HAVC and cabinetry

Completion Standards

COMPLETE

3 courses

GRADES

B ↑

ATTENDANCE

miss < 4 days

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



Explore types of careers

www.careerwise.minnstate.edu/careers

Review the local job outlook

www.careerwise.minnstate.edu/jobs

Find postsecondary programs

www.careerwise.minnstate.edu/education

Job Skills

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

- Understanding planning and time management
- Be an active member of a team
- Use critical thinking and problem-solving skills
- Work safely
- Work precisely and manage tools and equipment



Supported in part by Sourcewell (formerly NJPA)

www.BridgesConnection.org/CrosbyIronton

Construction & Design Career Academy

Crosby-Ironton High School

The Construction and Design Academy allows students to acquire not only basic construction skills but also the information needed to understand the architectural and construction industries of today. In the construction courses, students will learn a variety of machine operations related to wood and other construction materials. Computer Aided Design software will allow students to learn skills in both architectural and mechanical design processes. Students will be prepared to go directly to employment or further their education when completing this Academy.

ACADEMY COURSES

CAD Drafting and Design — .5 High School and/or 3 College Credits

This course is an exploration into the areas of architectural, engineering and computer-aided design and 3-D parametric modeling design. Drafting and design are the extremely important factors in any mechanical, architectural or design process. The knowledge and skills achieved within this class will provide an excellent opportunity to prepare for any post-secondary engineering, design or technical program.

Residential and Commercial Wiring — .5 High School Credit

This course is designed to introduce the student to the many electrical and communication concepts and their applications as found in our modern society. Areas to be covered will include basic electrical concepts and circuit design, both wireless and hard ware configurations, parametric design, and an introduction to power.

Wood Production — .5 High School Credit

Students will perform hand and machine operations including cutting, shaping and assembly for the construction of fixtures, furniture, other articles of wood or related materials, after completion of a safety test. Each student will have the opportunity to build at least one project, and if time allows, additional projects will be provided. Class fees could be \$20-\$60, depending on design.

Construction — .5 High School Credit

Each student will be exposed to a wide variety of woodworking skills from the basic to the advanced. Each student will be allowed to choose their own project and identify the best methods and procedures to build it. The course will also include learning the basics of framing and building house and pole barn types of structures. Class fees could be \$40-\$80, depending on design.

COMPLETION STANDARD

Students wishing to receive a certification for this academy must complete 3 courses while earning a “B” or better in each course. Students must also have an attendance record of no less than four days absent.

CAREER EXPERIENCES

Students will explore and research careers with industry speakers, work with professionals in the industry in areas of plumbing, wiring, HVAC and cabinetry, and attend the Bridges’ Career Exploration Day event and other regional career fairs.

JOB SKILLS

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

- Understanding planning and time management
- Be an active member of a team
- Use critical thinking and problem-solving skills
- Work safely
- Work precisely and manage tools and equipment

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