



# Bridges Career Academy

## Automotive Service

*Little Falls High School*

Acquire the basic skills necessary to service, repair and maintain today's automobiles. Understand how automotive systems work, diagnose and troubleshoot problems, disassemble and reassemble. Learn the skills to repair a personal vehicle. Gain entry-level employment or continue education.

### Academic Courses

- Small Gas Engine Technology
- Basic Vehicle Systems I
- Basic Vehicle Systems II
- Automotive Technology I
- Automotive Technology II

### Career Experiences

- Learn from industry speakers
- Practice car maintenance/repair
- Attend the Bridges Career Exploration Day or other regional career fairs

### Completion Standards

COMPLETE

**All courses**

GRADES

**B↑**

ATTENDANCE

**90%**

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
- Ability to work with customers and coordinating with other employees
- Critical thinking, problem solving and decision making skills
- Managing tools and equipment



# Automotive Service Career Academy

## Little Falls High School

The Automotive Service Academy allows students to acquire the basic skills necessary to service, repair and maintain today's automobiles. Skills in understanding how automotive systems work, diagnosing and troubleshooting problems, disassembly and reassembly are highlights of the academy. When completing this academy, students will have skills to repair personal vehicles, enter the work force or transfer credits to higher education.

### ACADEMY COURSES

#### **Small Gas Engine Technology** — .5 High School Credits and/or 1 College Credits

This course details the principles of power mechanics with special emphasis given to the two and four stroke cycle in small gas engines. Students will experience using a variety of tools, and testing equipment while following service manual specifications.

#### **Basic Vehicle Systems I** — .5 High School Credits

The course offers a general overview of automotive careers, trade knowledge; understand shop safety, the use of automotive tools and equipment. In addition, students will have hands-on experiences with lubrication systems, cooling and heating systems, and electrical systems.

#### **Basic Vehicle Systems II** — .5 High School Credits

As a continuation of Basic Vehicle Systems I, the course provides additional training in the areas of starting and charging systems, engine performance, suspension systems, steering systems, drive train systems and brake systems. It is highly recommended that students have a driver's license when enrolling in this course.

#### **Automotive Technology I** — 1 High School Credit and/or 2 College Credit

Testing the principles of electricity and electronics and applying them to electrical systems highlights this course. Students will learn to measure electrical parameters such things as voltage, current and magnetic induction. In addition, students will learn the principles of hydraulic brake systems from operation to diagnosis.

#### **Automotive Technology II** — 1 High School Credit and/or 1 College Credit

The course is designed to teach the concept and skills required to rebuild and automotive engine. Students will disassemble, inspect and recondition various engine components while paying special attention to tolerances. Reassembly will be completed using industry standards.

### COMPLETION STANDARD

Students wishing to receive a certification must complete all courses, earn a minimum of a 'B' grade, and have 90% attendance.

### CAREER EXPERIENCES

Students will explore and research careers with industry speakers, practice car maintenance and repair, tour local automotive dealerships, and participate in Bridges Career Exploration Day and other career fairs.

### JOB SKILLS

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

- Listening skills
- Ability to work with customers and coordinating with other employees
- Critical thinking, problem solving and decision making skills
- Managing tools and equipment

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

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