



AUTO 1000

Division: Career and Technical Education

Department: Transportation Technology

Course: AUTO 1000

Title: Automotive Safety and Basics

Catalog Description:

This course provides proper knowledge of practices in safety to help establish working habits that would reflect industry standards and result in a safe working environment.

General Education Requirements: N/A

Semesters Offered: TBA

Credit/Time Requirement: Credit: 1; Lecture: 1; Lab: 1

Clock/Hour Requirements: 30

Offered for Non-Credit: Yes

Prerequisites: N/A

Corequisites: N/A

Justification:

This course covering safety and automotive basics for Automotive Service Excellence/National Automotive Technicians Education Foundation (A.S.E./N.A.T.E.F.) certification is required for all automotive technology programs. This course is approved by the program advisory committee.

Student Learning Outcomes:

Upon successful completion of this course, students will be able to:

- understand the importance of safety and accident prevention in an automotive shop
- explain the basic principles of personal safety, including protective eye wear, clothing, gloves, shoes, and hearing protection
- explain the procedures and precautions for safely using tools and equipment
- explain what should be done to maintain a safe work area, including handling vehicles in the shop and venting carbon monoxide gases
- describe the purpose of the laws concerning hazardous wastes and materials, including the right-to-know laws
- list the basic units of measurements for length, volume, and mass in the two measuring systems
- list the various mechanical measuring tools used in the automotive shop
- describe the proper procedure for measuring with a micrometer
- list some of the common hand tools used in auto repair

- describe the use of common pneumatic, electrical, and hydraulic power tools found in an automotive service department
- explain the basic principles of electricity
- name the diagnostic tools and equipment commonly used in vehicle repair work
- explain why it is important for technicians to be skilled in the use of electrical, electronic, and computerized test equipment
- list the basic systems that make up an automobile and name their major components and functions.

Content:

Course objectives will be accomplished by providing students with learning experiences in the following subject areas:

- personal safety, including understanding rules and regulations, dress, protective clothing, and personal protective equipment
- safe methods of using hand and power tools
- safely moving vehicles in shop areas and precautions with running vehicles
- understanding hazardous materials and right-to-know laws
- working with both metric and United States (US) standard measuring systems
- properly using precision tools
- identifying hand, pneumatic, electric, and hydraulic tools and their functions
- basic electrical principles and use of electronic test meters and equipment.

General Education Outcomes:

Applied Education Outcomes:

3) Students will demonstrate safe practices and awareness of potential hazards in their field of expertise.

Students will study, test on, and practice a safe work environment in the lab area.

Key Performance Indicators:

Student Learning Outcomes will be assessed by two or more of the following Key Performance Indicators:

- exams
- assignments
- student feedback as per ASE requirements
- students transferring to other post secondary institutions
- student performance in subsequent courses.

Representative Text and/or Supplies:

- Instructional materials as directed by instructor

Optimum Class Size: 10

Maximum Class Size: 18

Signatures:

I hereby submit this course syllabus:

Brent Reese, BS, Associate Professor

I hereby find this course consistent with the goals and resources of the Transportation Technology Department:

Brent Reese, BS, Associate Professor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)