



## AUTO 1001

**Division:** Career and Technical Education

**Department:** Automotive Technology

**Course:** AUTO 1001

**Title:** Automotive Technology I

**Catalog Description:**

This course covers principles of fuels, lubricants, body and chassis maintenance, tune up, engines, cooling systems, air conditioning, electrical, batteries and cables, starting and charging systems, ignition systems, lights, fuses, and flashers.

**General Education Requirements:** N/A

**Semesters Offered:** TBA

**Credit/Time Requirement:** Credit: 6; Lecture: 4; Lab: 6

**Clock/Hour Requirements:** 150

**Offered for Non-Credit:** No

**Prerequisites:** None

**Corequisites:** None

**Justification:**

This course is approved by the program advisory committee and prepares students for Automotive Service Excellence (ASE) certification.

**Student Learning Outcomes:**

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

- describe the composition and use of fuels and lubricants
- demonstrate body and chassis maintenance
- describe engine principles and maintenance procedures
- demonstrate tune up procedures
- describe engine cooling systems and maintenance procedures
- describe how to evacuate and charge air conditioning system
- describe batteries and maintenance procedures
- describe starting and charging systems and testing procedures
- describe ignition systems and repair procedures
- describe lights, fuses, flashers, and repair procedures.

**Content:**

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

- fuels and lubricants
- engine performance
- cooling system repair
- air condition theory and maintenance
- battery and cable theory and maintenance
- starting and charging theory and repair
- lights, fuses, and flasher replacement.

### **General Education Outcomes:**

1) Read effectively, constructively, and critically.

Students will read the required text, shop manuals, and reference materials, as well as other assigned readings. Students must be able to answer questions on exams and synthesize information into laboratory experiences.

4) Retrieve, evaluate, interpret, and deliver information through a variety of traditional and electronic media.

Students will utilize electronic and written reference manuals and computer diagnostics to identify, troubleshoot, and repair engines, transmissions, brakes, and other vehicle components.

### **Key Performance Indicators:**

#### **In class:**

- Students are tested orally on an ongoing basis. Classroom assignments are given for each chapter. Written tests are given on major subject areas. Students are also graded on practical application of theoretical skills as they are performed in automotive repairs. Selected points are given towards a possible total of 100% for each completed assignment, along with practical application (90%) and tests (10%) for total grade.

#### **Following class:**

- Course evaluation will be demonstrated by the following methods:
  - student feedback as per ASE requirements
  - students transferring to other post secondary institutions
  - student performance in subsequent courses.

### **Representative Text and/or Supplies:**

- Tim Gilles, *Automotive Service*, current edition, Thomson/Delmar Learning.
- Instructional materials as directed by instructor

**Optimum Class Size:** 10

**Maximum Class Size:** 18

**Signatures:**

I hereby submit this course syllabus:

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Brent Reese, BS, Associate Professor

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

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Brent Reese, BS, Associate Professor, Chair

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

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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:

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

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Michelle Olsen, MLS, Campus Librarian (Richfield Campus)