

Lassen Community College Course Outline

AT-150 Automotive Maintenance

0.0 Units

I. Catalog Description

This course was designed to introduce shop procedure and safety to the student. The students will also acquire skills necessary to perform vehicle maintenance procedures such as change engine oil, transmission fluid, engine coolant and other fluids. Visual inspection of other automotive systems will also be covered. This course is design to provide entry level skills for employment. The course has been approved for Hybrid delivery.

Recommended Preparation: English 105 or equivalent placement through the assessment process.

Does not transfer to UC/CSU

17 Hours Lecture, 34 Hours Lab, 51 total student hours

Scheduled: Fall, spring, summer

II. Coding Information

Repeatability: Not repeatable

Grading Option: P/NP (non-credit)

Credit Type: Noncredit (Not Community Service)

TOP Code: 094800

III. Course Objectives

A. Course Student Learning Outcomes

Upon completion of this course the student will be able to:

1. Identify vehicle information and perform basic preventative vehicle maintenance at a beginner level.
2. Students will also be able to perform vehicle inspection and basic repairs at a beginner level.

IV. Course Content

A. Shop safety

1. Shop safety procedures and routines
2. Shop equipment usage
3. Personal protection equipment
4. Fire safety

B. Tools

Tool identification

C. Data Acquisition

1. Vehicle identification
2. Repair manual usage
3. Mitchell/All Data usage

D. Vehicle Safety Inspection

1. Critical safety
2. Convenience safety

E. Vehicle Maintenance

1. Manufacturer maintenance schedules

2. Oil types and viscosity
 3. Engine oil change
 4. Chassis and hinge point lube
 5. Accessory drive belt and pulleys inspection and replacement
 6. Cooling system inspection and coolant flush
 7. Power steering system inspection and flush
 8. Air filter inspection
 9. Transmission and axle fluid inspection and change
- F. Chassis inspection
1. Tire inspection
 2. Brake system inspection and fluid flush
 3. Shocks and strut inspection
 4. Spring and suspension inspection
 5. Frame inspection
 6. Exhaust system inspection

V. Assignments

A. Appropriate Readings

1. Industry materials as furnished by the instructor
2. Trade magazines
3. Manufacturer's bulletins
4. Current professional manuals

B. Writing Assignments

Typical writing assignments will include:

1. Providing written answers to assigned questions
2. Performing mathematical calculations as assigned
3. Maintaining a notebook of class assignments/activities

C. Expected Outside Assignments

Appropriate outside assignments may include:

1. Researching appropriate readings
2. Preparing written assignments and completing homework as assigned.
3. Studying as needed for successful classroom performance

D. Specific Assignments that Demonstrate Critical Thinking

Students will perform analysis and evaluation of readings and/or classroom materials and utilize this analysis in classroom discussion, writing assignments, and in performing laboratory activities. Students must select and use appropriate methods and materials needed to complete laboratory assignments.

Assignments in hybrid delivery may include completion of similar assignments online, discussion groups, email responses, and completion of lab packs online or in class.

VI. Methods of Evaluation

Traditional classroom delivery:

Term paper (topic choice, thesis statement, outline, bibliography, rough draft, final draft), homework, classroom discussion, essay, journals, lab demonstrations and activities, multiple choice quizzes, and participation.

Hybrid delivery:

All quizzes and exams will be administered during the in person class time. Students will be expected to complete online assignments and activities equivalent to in class

assignments and activities for the online portion of the course. Electronic communication, both synchronous and asynchronous (chat/forum) will be evaluated for participation and to maintain effective communication between instructor and students.

VII. Methods of Delivery

Check those delivery methods for which, this course has been separately approved by the Curriculum/Academic Standards Committee.

Traditional Classroom Delivery Correspondence Delivery

Hybrid Delivery Online Delivery

Traditional classroom delivery:

The appropriate method of instruction will be determined by the instructor and may include:

1. Lecture with or without various audio/visual aids.
2. Group problem solving, discussion, debate, and/or critique.
3. Demonstration
4. Computer-assisted/other self-paced instruction.
5. Field trips or field assignments.
6. Laboratory assignments utilizing planned activities or "live" work.

Hybrid delivery:

Hybrid modality may involve face to face instruction mixed with online instruction. A minimum of 1/3 of instruction, including 100% labs, will be provided face to face. The remaining hours will be taught online through a technology platform as adopted by the district.

VIII. Representative Texts and Supplies

Halderman & Deeter. *Introduction to Automotive Service*, 1st Edition, 2013, Pearson, ISBN: 9780133005332 or eText ISBN: 9780133058611

Industry materials as furnished by the instructor

Current professional manuals

Most current publication/edition will be used for all manuals.

Student should have **Appropriate Shop Clothing**

IX. Discipline/s Assignment

Automotive Technology

X. Course Status

Current Status: Active

Original Approval Date: 09/19/2017

Board Approval: 10/10/2017

Chancellor's Office Approval: 04/04/2018

Revised By: Chad Lewis

Curriculum/Academic Standards Committee Revision Date: 02/15/2022