

Lassen Community College Course Outline

AT-50 Car Care Basics

3.0 Units

I. Catalog Description

This course was designed to:

1. Introduce shop procedure and safety to the student;
2. Give students the skills to perform vehicle maintenance and basic roadside repairs;
3. Give students the skills to diagnose and repair minor vehicle malfunctions. This course adheres to ASE Education Foundation standards. The course has been approved for hybrid delivery.

Recommended Preparation: Successful completion of ENGL105 or equivalent multiple measures placement.

34 Hours Lecture, 51 Hours Lab, 68 outside-of-class hours, 153 total student learning hours
Scheduled: Fall

II. Coding Information

Repeatability: Take 1 Time

Grading Option: Graded or Pass/No Pass

Credit Type: Credit - Degree Applicable

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 minor vehicle repairs and basic roadside 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. Major Vehicle Components

1. Powertrain components
2. Chassis
3. Body

E. Vehicle Safety Inspection

1. Critical safety

2. Convenience safety
- F. 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
- G. Chassis inspection**
 1. Tire inspection, rotation, balancing, and patching
 2. Brake inspection
 3. Shocks and strut inspection
 4. Spring and suspension inspection
 5. Frame inspection
 6. Exhaust system inspection
- H. Electrical systems**
 1. Basic electrical theory
 2. Meter usage
 3. Battery theory, testing and maintenance
 4. Starting systems
 5. Light inspection and bulb replacement
- I. Roadside repairs**
 1. Tire change using vehicle tools
 2. Tire chain installation and removal
 3. Jump starting
- J. Fasteners**
 1. Standard and metric nuts and bolts
 2. Tread repair
 3. Broken bolt extraction
- K. Measuring tools**
 1. Tape measure
 2. Micrometer
 3. Feeler gauge
 4. Dial indicator

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 Evaluation:

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

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

VanGelder; *Fundamentals of Automotive Maintenance and Light Repair*, 2nd edition, 2019, Jones & Bartlett Learning, ISBN 9781284143393

Industry materials as furnished by the instructor current professional manuals. Most current publication/edition will be used for all manuals. Student must have appropriate shop clothing, proper footwear, and safety glasses.

IX. Discipline/s Assignment

Automotive Technology

X. Course Status

Current Status: Active

Original Approval Date: 11/20/2012

Revised By: Chad Lewis

Curriculum/Academic Standards Committee Revision Date: 10/17/2023