BUTTE COLLEGE
COURSE OUTLINE

I. **CATALOG DESCRIPTION**

AUT 200 - Chassis, Engines, Electrical, Auto Skills Practice **0.5 - 1 Unit(s)**

Prerequisite(s): NONE
Co-requisite(s): Must be enrolled in a minimum of 2 units of AUT courses (excluding AUT 1, AUT 41)
Recommended Prep: AUT 1

Transfer Status: NT
25.5 - 51 hours Lab

This class is a supervised lab experience designed to update and enhance technical skills in the following areas: Engines, Brakes/Chassis, Electrical, and Heating/Air Conditioning (AC) Systems. Instruction will be a combination of laboratory demonstrations and skills practice. Students may enroll in this course up to 1 unit(s) to complete the entire curriculum of the course. Pass/No Pass Only. Open Entry/Open Exit.

II. **OBJECTIVES**

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

A. Diagnose and repair, to industry standards, the systems, subsystems and components in an automobile in the areas of base brake and anti-lock brake systems.
B. Verify, diagnose and repair, to industry standards, the systems, subsystems and components in a automobile in the area of suspension and chassis systems both base and electronically controlled.
C. Perform general engine diagnosis.
D. Perform engine block assembly diagnosis and repair.
E. Perform AC system diagnosis and repair.
F. Perform a refrigeration system component diagnosis and repair.

III. **COURSE CONTENT**

A. **Unit Titles/Suggested Time Schedule**

Lab

Topics	Hours
1. Application of Ohm's law, verification, diagnosis and repair of lead acid batteries and hybrid batteries	4.25 - 8.50
2. Verification, diagnosis and repair of vehicle accessories, lighting systems, multiplex systems, systems, sub systems and components	4.25 - 8.50
3. Verification, diagnosis and repair of vehicle base and electronic steering and suspension systems, sub systems and components	4.25 - 8.50
4. Engine block service and diagnosis (Engine bottom end)	4.25 - 8.50
5. Engine - fault diagnosis and repair	4.25 - 8.50
6. Repair of heating and air conditioning components, such as compressor clutches, pressure valves and electrical and vacuum controls	4.25 - 8.50
Total Hours	25.5 - 51

IV. **METHODS OF INSTRUCTION**

A. Class Activities
B. Discussion
C. Demonstrations
D. Laboratory Experiments
E. Problem-Solving Exercises and Skills Practices
F. Selected reading from automotive repair manuals

V. **METHODS OF EVALUATION**

A. Lab Projects
B. Number of successful completed jobs.
C. Effective use of time as compared to the flat rate manual.

VI. **EXAMPLES OF ASSIGNMENTS**

A. Reading Assignments
    1. Using Mitchell's or Honda ISIS reference material, access technical information and data required for the assigned repair job that will be completed during the class meeting.
    2. Using ALLDATA reference material, read the technical information and data required for your assigned repair job. Be prepared to share with the class.

B. Writing Assignments
    1. Write a detailed repair order for the job to be completed in a class meeting. After the work is completed, write a detailed story on the back of the repair order to industry standards.
    2. Fill out an electronic parts requisition including all proper vehicle information to enable professional parts counter personnel to order proper parts for a specific job.

C. Out-of-Class Assignments
    1. Not applicable

VII. **RECOMMENDED MATERIALS OF INSTRUCTION**

Materials Other Than Textbooks:

A. Instructor-developed materials, handouts and worksheets
B. Manufacturer-developed materials, technical manuals.
C. Department vehicles
D. Student owned vehicles

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