

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

Transfer Course A.A. Degree Applicable Course
(check all that apply)

COURSE NUMBER AND TITLE: AT 130 Automotive Brakes

UNIT VALUE: 3

MINIMUM NUMBER OF SEMESTER HOURS: 96

BASIC SKILLS REQUIREMENT: Appropriate language and computational skills.

ENTRANCE REQUIREMENTS:

PREREQUISITE: None.

COREQUISITE: None.

RECOMMENDED PREPARATION: None.

SCOPE OF COURSE:

The hydraulic and mechanical function of automotive brake systems. Brake troubleshooting, complete system repair, and overhaul of power, drum, and disc brakes. Preparation for the State Brake License.

SPECIFIC COURSE OBJECTIVES:

Students will:

1. Apply principles of brake theory and practical experience on modern brake servicing equipment.
2. Explain trouble diagnosis procedures for brake systems.
3. Compare and contrast different types of automotive brake systems.
4. Evaluate emergency stopping distance tests.
5. Identify wear characteristics of all types of brakes.
6. Apply principles of shop safety.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Foundation and Safety
- II. Hydraulic Theory
 - A. Dual System
 - B. Split/Diagonal System
- III. Disc Systems
 - A. Single
 - B. Quad/Dual
- IV. Drum Systems
- V. Preparation for State Test

REQUIRED READING:

Eichorn, Lane. Automotive Brake Systems. New York: Del Mar, 1996.

SUGGESTED READING:

California, State. Handbook For Installation and Inspection Citations Brake Adjusting. Sacramento, CA, 1990.

REQUIRED WRITING:

Students are expected to complete homework assignments from each chapter of the textbook. Written assignments of 1-3 pages are to be turned in after each chapter has been completed.

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short term classes.

Student may select one of the following to spend at least 48 hours in research/writing or viewing:

1. Two reports on brake related event.
2. Reading text, state brake manual, and written homework .
3. Library media viewing on equipment.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

- lecture
- laboratory
- lecture-laboratory combination
- directed study

This course may be offered as a distance education course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.

Yes No

If yes, check all that apply. (See guidelines for preparation for definitions.)

- telecourse
- mediated instruction
- computer assisted instruction

GRADING POLICY AND STANDARDS (include methods for determining whether the stated objectives have been met by students):

Tests on Units of Instruction --	40%
Participation and Lab Participation --	40%
Applying for and taking State Test --	10%
Required writing assignments	10%

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?

Yes No Number of times course may be taken for credit: 1.

If yes, identify specific provision of Title 5 Division 2 section(s) 55761-55763 and 58161 which qualifies course as repeatable:

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SIGNATURES:

SIGNATURES ON FILE