

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 100 Auto Maintenance and Minor Repair

UNIT VALUE: 3 **MINIMUM NUMBER OF SEMESTER HOURS:** 80

BASIC SKILLS REQUIREMENTS: Appropriate language and computational skills

ENTRANCE REQUIREMENTS:

PREREQUISITE: None.

COREQUISITE: None.

RECOMMENDED PREPARATION: None.

SCOPE OF COURSE:

Designed for the student with little or no background in the automotive field. The course covers many maintenance and minor repair items as well as basic theory of operation. The areas covered include batteries, cooling systems, drive belts, lubrication, brakes, tires, and consumer education.

SPECIFIC COURSE OBJECTIVES:

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

1. Develop practical skills in diagnosis and repair of basic automotive systems, ie. batteries, brakes, tires, alignment, cooling system, and emission controls.
2. Understand the operation of the modern automobile and explain how to properly maintain it.
3. Be aware of which service functions they can complete and those that are beyond their abilities at this point.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Batteries
 - A. Operation
 - B. Testing
 - C. Servicing

- II. Drive Belts
 - A. Inspection
 - B. Adjustment

- III. Brakes
 - A. Types
 - B. Parts
 - C. Operation
 - D. Service

- IV. Cooling System
 - A. Inspection
 - B. Testing
 - C. Cleaning
 - D. Parts replacement
 - E. Coolant service
 - F. Spotting trouble

- V. Exhaust Systems
 - A. Inspection
 - B. Muffler removal and installation
 - C. Tailpipe removal and installation

- VI. Filters
 - A. Carburetor air filter types
 - B. Servicing air filters
 - C. Gasoline filter types
 - D. Servicing gasoline types
 - E. Oil filters types
 - F. Servicing oil filters

- VII. Lighting systems
 - A. Bulb and socket types
 - B. Servicing headlights
 - C. Interior and instrument
 - D. Fuses and circuit breakers
 - E. Turn signals and flasher systems
 - F. Brake light switches

- VIII. Lubrication
 - A. Equipment
 - B. Fittings
 - C. Front suspension and steering linkage service
 - D. Important service points
 - E. Engine
 - F. Servicing engine
 - G. Accessories

- IX. Positive Crankcase Ventilation
 - A. PVC system types
 - B. Inspection
 - C. Systems and valve testers
 - D. Servicing

- X. Exhaust Emission Control
 - A. Types of systems
 - B. Servicing

- XI. Shock Absorbers
 - A. Types
 - B. Replacement

- XII. Spark Plugs
 - A. Heat range causes of plug failure
 - B. Reach
 - C. Cleaning
 - D. Troubleshooting tips

- XIII. Tires
 - A. Air pressure
 - B. Wear patterns
 - C. Balance
 - D. Rotation
 - E. Service
 - F. Special tires
 - G. Repair

- XIV. Transmissions and Differentials
 - A. Automatic transmissions
 - B. Manual transmissions

- XV. Universal Joints
 - A. Types
 - B. Lubrication without fittings or plugs

- XVI. Wheel Bearings
 - A. Inspection
 - B. Service
 - C. Replacement

XVII. Principles of Shop Safety

REQUIRED READING:

Gousha, H.M. Car Service. San Jose: Prentice Hall, 1990.

SUGGESTED READING:

Various automotive trade journals and other automotive publications.

REQUIRED WRITING:

Weekly laboratory reports and unit reviews on text assignments.

OUTSIDE ASSIGNMENTS:

Reading assignments from textbook, approximately 180 pages of reading are assigned each semester. Written reviews of each chapter are required. Studying and rewriting of lecture notes.

INSTRUCTION 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 of determining whether the stated objectives have been met by students):

- 20% Written unit exams
- 40% Laboratory reports and completed lab assignments
- 20% Chapter reviews
- 20% Final exam

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

 Yes X 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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