FORM VERSION: 5/95
DATE REVISED: 10/97

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

__X__Transfer Course__X__A.A. Degree Applicable Course
(check all that apply)

COURSE NUMBER AND TITLE: AT 210 Specialized Automotive Electronics

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

BASIC SKILLS REQUIREMENT: Appropriate language and computational skills.

ENTRANCE REQUIREMENT:

PREREQUISITE: None.

COREQUISITE: None.

RECOMMENDED PREPARATION: AT 105 or AT 110.

SCOPE OF COURSE:

Electronic principles as they pertain to the automobile. Identification, diagnosis, repair, and verification of malfunctioning electronic components is the major objective of the course. Computer controls fundamentals and diagnosis of GM systems, 1981-1990.

SPECIFIC COURSE OBJECTIVES:

Students will:

1. Identify electronic computer controlled systems.
2. Explain electronic system diagnostic procedures.
3. Apply principles of computer system repair.
4. Analyze digital multimeter test indications.
5. Evaluate test code results.
6. Apply principles of shop safety.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

I. Series Networks
   A. Active
   B. Passive

II. Parallel Circuits
   A. Active
   B. Passive

III. Wiring Diagram Diagnosis
   A. Digital
   B. Analog

IV. Wire Repair
   A. Soldering
   B. Crimp Connectors

V. Semi-Conductor
   A. Testing Procedures
   B. Replacement and Confirmation of Test Results

VI. Microprocessor Systems
   A. Analyze Trouble Codes
   B. Repair Methods
   C.

REQUIRED READING:

Santini, Al. Automotive Electricity and Electronics. 3rd ed. New York: Delmar Publishers, 1996.

SUGGESTED READING:

Mitchel Manuals. Electronics Controls Manual. San Diego, CA: Mitchell Manuals, 1981-1985.

Automotive Electronics. 2nd ed. SET GM (Package) General Motors, 1993.

Manufacturers Service Manuals (G.M., Ford, Toyota, etc.)

REQUIRED WRITING:

One page report to class on electronic controls. Written solutions to GM workbook problems.

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.

Students will spend not less than five hours in outside reading and studying per week.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:
__X__lecture
__X__laboratory
_____lecture-laboratory combination
_____directed study

Lecture, laboratory and demonstration are primary methods of instruction. Overhead projection, videos and handout sheets
are also incorporated.

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

Oral Reports	5%
Test	5%
Test	5%
Test	5%
Final	20%
Demonstration of lab skills	60%

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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SIGNATURES ON FILE