

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:

DMT 66 / RDMT 66 Truck Transmission and Drive Lines

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:

Service and repair of heavy-duty truck drive lines. Topics for study include the disassembly, inspection and reassembly of single and multiple disc clutches, four to fifteen speed transmissions, universal joints and differentials.

SPECIFIC COURSE OBJECTIVES:

Students will:

1. Apply principles of repair for truck transmissions and drive lines.
2. Evaluate system problems.
3. Identify and analyze reasons for parts failures.
4. Apply principles of shop safety.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Theory of Power Flow
 - A. Gear ratios
 - B. Torque multiplication

- II. Clutch Design and Operation
 - A. Single disc
 - 1. Service repair and adjustment
 - B. Dual disc
 - 1. Service, repair and adjustment

- III. Engine Flywheel Inspection and Service

- IV. Transmissions
 - A. Input shaft replacement
 - B. Maintenance and service
 - C. Transmission overhaul

- V. Universal Joints and Torque Tubes
 - A. Maintenance and service

- VI. Rear Axle Maintenance and Service
 - A. Single drive
 - B. Tandem drive
 - C. Rear axle overhaul

- VII. Power Dividers
 - A. Theory of operation
 - B. Maintenance and repair

- VIII. Troubleshooting Drive Line Problems

- IX. Review Principles of Shop Safety

REQUIRED READING:

Brady, Robert N. On-Highway Trucks. Reston, VA: Reston Publishers, 1989.

SUGGESTED READING:

Service manuals from various transmission and drive line equipment manufacturers. (Eaton, Fuller, Rockwell, Spicer) 1989.

REQUIRED WRITING:

Laboratory assignments performance report of approximately 10 pages.

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.

Visit a drive line service shop/facility and write a report of approximately two pages on the type of service and procedures used.

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):

- 50% = Written Work
- 40% = Laboratory
- 10% = Participation

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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