

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

_____ Transfer Course X A.A. Degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: DMT 61 / R DMT 61 Diesel Engine Rebuilding I

UNIT VALUE: 3

MINIMUM NUMBER OF SEMESTER HOURS: 96

BASIC SKILLS REQUIREMENTS: Appropriate language and computation

ENTRANCE REQUIREMENTS

PREREQUISITE: None

COREQUISITE: None

RECOMMENDED PREPARATION: DMT 50/ R DMT 50

SCOPE OF COURSE:

Theory and practice in rebuilding diesel engines. Topics for study include disassembly, cleaning, inspection and analysis of engine parts. Also included are cylinder head service, sleeve and piston service, advanced machining and measuring techniques.

SPECIFIC COURSE OBJECTIVES:

The students will:

1. Analyze and deduce engine failures.
2. Solve problems in disassembly of diesel engines.
3. Apply principles of engine rebuilding.
4. Apply principles of shop safety.
5. Record measurement of engine components.
6. Learn organizational procedures.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Review Shop Safety Principles

- II. Introduction to Rebuilding
 - A. Cause for engine overhauls
 - B. Engine inspection for wear and damages
 - C. Types of overhaul and service
 - D. Organizational practices

- III. Engine Rebuilding
 - A. Disassembly and inspection
 - B. Investigation of engine failures
 - C. Parts identification and inspection
 - D. Special tool introduction
- IV. Cleaning Methods and Procedures

REQUIRED READING:

Brady, Robert N. Modern Diesel Technology. Prentice Hall, 1996.

SUGGESTED READING:

Service and reference manuals and various diesel magazines as assigned by instructor.

REQUIRED WRITING:

Each student must maintain a rebuilding worksheet, which consists of written paragraphs, maintain classroom notebook of lecture materials and write an approximately 500 word, two-page report after a research visit to a rebuilding facility or machine shop.

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 one rebuilding facility or machine shop and prepare a follow-up, two-page report. Daily reading assignments and lab sheets.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

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

Lecture, demonstrations, and hands-on laboratory work are the primary methods; slides, video, charts, cut-a-way components, field trips are also incorporated.

DISTANCE LEARNING:

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

Yes No

If yes, check all that apply:

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

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

- 40% = Unit Examinations
- 40% = Laboratory Performance and Reports
- 10% = Class Participation
- 10% = Report on Rebuilding Facility

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

Yes No Number of times course may be taken for credit: 2

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

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SIGNATURES ON FILE
