



CAT[®] Equipment Technician

Spring 2000

MAG 4 - DIESEL ENGINE FUEL & TUNE-UP COURSE INFORMATION

David Clark

CATALOG DESCRIPTION

Advanced instruction in the theory and procedures for tune-up and troubleshooting of diesel engines. All engine systems (including the fuel, air induction, lubrication, and cooling systems) will be covered. Major emphasis placed on the fuel injection system calibration and adjustment.

UNITS & HOURS

5 Units Tuesday & Thursday 3 hours lecture & 6 lab hours/week

7:45 - 9:00	Lecture	AGR 2 Classroom
9:00 - 9:20	Break	
9:20 - 11:50	Laboratory	AGM 4 Shop

TEXTBOOK

Diesel Engine & Fuel System Repair, 4th Edition - Dagele

ASSIGNMENTS & GRADES

The class is designed to develop equipment technician skills to tune-up and troubleshoot diesel engines. Laboratory skills (engine system service and adjustment, fuel system calibration and adjustment, troubleshooting) will constitute 50% of the student's grade. The remaining 50% of the grade will be determined by lecture tests (quizzes, tests, midterm, final) and assignments (homework, notebook, worksheets).

Point Distribution: 90% = A, 80% = B, 70% = C, 60% = D, Less = F

Lecture:	Final	100	
	Midterm	100	
	3 Tests @ 50/each	150	
	Notebook	50	
	Homework, Quizzes	<u>100</u>	500
Lab:	Participation 32 @ 5/each (clean-up, work ethic)	160	
	Assignments	300	
	Leadership	<u>40</u>	500
	Total =		<u>1000</u>

GRADE POLICY (See separate sheet)

WORK ETHIC (See separate sheet)

Attendance drop date

OFFICE HOURS:

Tuesday, Thursday, Friday 1:00-2:00 p.m.
Telephone: RC 638-3641, Extension 3317 or 638-0317

Ag Shop Office (AGM 5)

REQUIRED MATERIAL & ITEMS:

Approved eye protection
Approved footwear
3-ring notebook/binder

Two work shirts
RC Mech CAT Equipment Technician shirt
A.V. Uniform
2930 N. Blackstone
Fresno, CA 93703
Phone: 224-1199

FINAL EXAM: Thursday, May 18, 2000 ... 8:00 a.m.

COURSE OUTLINE

Chapter 1 Development of the Diesel Engine

Chapter 2 Diesel Engine Operating Fundamentals

Test

Chapter 3 Understanding Horsepower and Related Terms

Chapter 4 Combustion Systems

Midterm

Chapter 14 Types of Fuel Systems

Chapter 15 Theory of Electronic Fuel Systems

Chapter 16 Diesel Fuel, Filters and Separators

Test

Chapter 17 Mechanical and Electronic Governors

Chapter 18 Injection Nozzles

Test

Chapter 23 Caterpillar Fuel Systems - NSFS, SMFS, MUI, EUI, HEUI

Final

GRADE POLICY
Spring 2000

Student achievement will be measured by a combination of assignments, quizzes, tests, and laboratory work.

ATTENDANCE

Lecture: Attendance at lecture is required and roll will be taken at each class meeting. A "tardy" is considered an absence unless the student contacts the instructor at the end of class to have the status changed to a tardy. Two tardies will count as an absence. Any student who misses more than two weeks of class meetings may be dropped by the instructor (i.e. class meets two times a week, 4 absences; class meets 1 time a week, 2 absences).

Lab: Attendance in all labs is mandatory. Students must make prior arrangements with the instructor to be excused from lab. At that time, the instructor will determine what, if any, make-up work will be appropriate.

Quizzes: There will be no make-ups for quizzes.

Tests: Make-up tests are limited to students who have made arrangements with the instructor prior to the required testing period or those students who have been excused by the Dean of Admissions.

ASSIGNMENTS

For maximum point consideration, all written essay assignments and term reports should be typed and double-spaced.

Lecture assignments (homework) will be accepted late up to the test for that unit of the course; however, late assignments will be penalized 1/3 of the possible points.

Late laboratory assignments turned in within one week of the required due date will be accepted with a penalty equal to 1/3 of the maximum points. Any lab assignments turned in after that time up to the last regular class meeting will be accepted with a 50% penalty.

DROP DATE

The final drop date is Friday, March 10, 2000.



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Gary Wenter

WORK ETHIC

Most student are enrolled in college classes to obtain a quality job or to enhance their skills for advancement with the current employment situation. Employers look for a punctual, responsible individual who is prepared to go to work. Our goal is to replicate the work place environment where a student can develop and demonstrate these desirable traits.

Punctual

It is customary to arrive at least 5 minutes before work starts. Individuals will be terminated if they are not punctual.

Responsible

It is expected that an employee work every scheduled work day. Individuals will be terminated if they are not responsible.

Prepared

It is expected that an employee be prepared when he/she arrives at work. Students must have work shirts, safety glasses, and appropriate footwear to participate in the laboratory. If a student is not prepared, he/she cannot participate and will receive a zero (see "responsible").