

**Odessa College  
Technical Studies Division  
Automotive Technology**

**Course Syllabus**

**COURSE NUMBER:** DEMR 1406  
**COURSE TITLE:** Diesel Engine I  
**CREDIT HOURS:** 4      **LECTURE HOURS:** 2      **LAB HOURS:** 6  
**PREREQUISITE:** DEMR 1405, consent of department chair or instructor, Co-requisite: DEMR 1449

**CATALOG DESCRIPTION:**

Fundamentals of engine operation, diagnosis and repair including lubrication systems and cooling systems. Emphasis on overhaul of selected engines, identification, and inspection, measurements, and disassembly, repair, and reassembly of the engine. May be taught manufacturer specific. Study of engine designs and special tools needed to repair and maintain engines to manufactures specifications. Student will use service manual to organize technical information, diagnose, and read precision clearances. Student will learn to read and use precision measurement instruments. Reading of technical manuals required. Lab fee required. (SCANS 1, 2, 3, 4, 5, 7, 8, 9, 10, 11)  
Prerequisite: Consent of department chair or instructor. Co-requisite: AUMT 2417.

**COURSE LEARNING OUTCOMES:**

Utilize appropriate safety procedures; demonstrate engine diagnostic procedures; and diagnose and repair cylinder head, valve train, engine block, lubrication, and cooling systems.

**COMPETENCIES:**

After completing this course, the student should be able to demonstrate automotive competency in:

**I. DIESEL ENGINES**

**TEXTBOOK**

Shop Manual: Automotive Engine Repair & Rebuilding, Elisabeth H. Dorries, 3<sup>rd</sup> Edition, Thomson Delmar Learning, 2006

**SUPPLIES:**

Students will need course textbook, job sheets, paper, notebook, pen and pencils.

**COURSE GRADE EVALUATION:**

25% Professionalism (*A grade will be assessed using the following guide lines.*)  
Punctuality  
Desire to learn  
Appropriate appearance  
Quality workmanship  
Ability to work with others  
Safe working habits (*Students will be graded in all areas of shop safety.*)  
Positive attitude  
Work ethics  
Integrity  
Attendance  
25% Research Paper and/or Final Exam  
25% Lab Participation  
25% Quizzes and/or Daily

Also see instructor information sheet:

**ATTENDANCE POLICY:**

**YOUR** attendance is the greatest predictor of your success. **Student attendance at EVERY class is expected.** You should expect that each absence will adversely affect your course grade. Please see the instructor regarding anticipated absences or conflicts due to college sponsored activities.

**ACADEMIC ETHICS:**

You are expected to participate and contribute as a group in the labs and classroom; test will be taken without notes or other outside-assistance. If unethical behavior is detected, all parties involved will be denied credit for that project or exam. The questioned material and report of the ethics violation will be submitted to the department chair for further action if deemed necessary.

**STUDENT ASSISTANCE:**

- Admissions: 432-335-6443
- Book Store: 432-335-6654
- Cafeteria: 432-335-6435
- Career Services: 432-335-6835
- Cashier's: 432-335-6600
- Counseling: (Help center) 432-335-6346
- Auto/Diesel Department Chair: 432-335-6633
- .edu: (Student Service Center) 432-335-6833
- Financial Services: 432-335-6429
- Housing/Judicial Affairs: 432-335-6300
- Learning Resources Center: 432-335-6641
- Registrar: 432-335-6443
- Student Learning Center:
  - Peer tutoring available
  - PLATO: Computer tutoring available (LRC 300) 432-335-6878
- Student Support Services: 432-335-6868
- Technical Studies Dean: 432-335-6686
- Testing Center: 432-335-6834
- Vice President Instruction: 432-335-6413
- Vice President for Student Services:
  - 432-335-6683
- Wi-Fi Java, Cyber Café: 432-335-6509

**FACULTY:**

Jerry Griffith	Office Dm101	432-335-6632	<a href="mailto:jgriffith@odessa.edu">jgriffith@odessa.edu</a>
Perry Griffith	Office Dm105A	432-335-6603	<a href="mailto:pgriffith@odessa.edu">pgriffith@odessa.edu</a>

**LAB REQUIREMENTS:**

**General Shop Practices and Procedures**

- **Safety requirements will be strictly enforced: comply with personal and environmental safety practices associated with clothing, eye protection, hand tools, power equipment, proper ventilation, and the handling, storage, and disposal of chemicals in accordance with local, state, and federal environmental regulations.**
- Proper **Personal Protection Equipment (PPE)** will be used in all required areas.
- **Safety Glasses** must be worn **at all times in the lab/shop area**. No exceptions!
- **Adhere to all Safety signs** posted on equipment, fire extinguishers, tool groups, vehicle lifts, support stands, grinders, drill presses, or any other equipment or areas marked with Safety signage.
- Do not restrict the passage of any marked walkway.
- **Safety is paramount** and you are responsible for your work area and your safe work habits! **Therefore, do not leave fluid spills on floor and keep your area free of clutter!**
- Equipment use is limited to those knowledgeable enough to operate the equipment safely; otherwise the equipment is **OFF LIMITS! (Consult your instructor)**.
- Tools and equipment **will not be loaned** or taken from the Odessa College premises.
- Students **MUST** sign out for any specialty tool needed and will only be issued by an instructor or designated person. The student will be **responsible for safety and care of those tools, when finished or at the end of each lab period**, return all tools to the checkout person so they can sign the tool back in.
- NATEF job sheets will be filled out for each lab assignment. When finished, give completed job sheets to the instructor and those will be recorded on your progress report.
- All vehicles are to be treated as customer vehicles. As a student **YOU ARE TO RESPECT THIS**, do not sit in, lean on, or handle any vehicle that has not been specifically assigned to you by your instructor.
- Any time a vehicle hood is open, fender covers must be in place on the fenders at all times.
- Students must get approval from the instructor **before** bringing vehicles in the shop. **Only certain vehicles qualify for NATEF required tasks.**
- Visitors are not allowed in the lab/shop area, however they may be escorted through the lab/shop area by approved personal.