Course Description: An introduction to the diesel industry including diesel history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities and diesel maintenance.

Students MUST actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically-related activity will be reported as never attended and dropped from the course.


Course Goals/Objectives: Utilizing appropriate safety procedures, the student will demonstrate familiarity with historical development and career information on the diesel industry; demonstrate safe, professional, and responsible work practices; identify and demonstrate the proper use of shop equipment and tools; identify and describe functions of vehicle subsystems; demonstrate the use of service publications; identify various diesel fasteners used in industry; and perform extensive diesel maintenance.

NOTE: This is an introductory and theoretical course. The performance objectives stated as “determine needed repairs” are to be considered limited or subjective conclusions and may not necessarily be verified and/or repaired in class.

A. GENERAL ENGINE DIAGNOSIS
B. ENGINE RELATED SERVICE
C. CYLINDER HEAD AND VALVE TRAIN DIAGNOSIS AND REPAIR
D. LUBRICATION AND COOLING SYSTEMS DIAGNOSIS AND REPAIR
E. GENERAL TRANSMISSION AND TRANSAXLE DIAGNOSIS
F. TRANSMISSION AND TRANSAXLE MAINTENANCE AND ADJUSTMENT
G. IN-VEHICLE TRANSMISSION AND TRANSAXLE REPAIR
H. CLUTCH DIAGNOSIS AND REPAIR
I. TRANSAXLE DIAGNOSIS AND REPAIR
J. DRIVE AND HALF SHAFT UNIVERSAL AND CONSTANT-VELOCITY (CV) JOINT DIAGNOSIS AND REPAIR
K. REAR AXLE DIAGNOSIS AND REPAIR
L. STEERING SYSTEMS DIAGNOSIS AND REPAIR
M. SUSPENSION SYSTEMS DIAGNOSIS AND REPAIR
N. WHEEL AND TIRE DIAGNOSIS AND REPAIR
O. HYDRAULIC SYSTEM DIAGNOSIS AND REPAIR
P. DISC BRAKE DIAGNOSIS AND REPAIR
Q. MISCELLANEOUS (WHEEL BEARINGS, PARKING BRAKES, ELECTRICAL, ETC.) DIAGNOSIS AND REPAIR
R. ANTI-LOCK BRAKE SYSTEM
S. LIGHTING SYSTEMS DIAGNOSIS AND REPAIR
MIDLAND COLLEGE
SYLLABUS
DEMR 1306
INTRODUCTION AND THEORY OF DIESEL TECHNOLOGY
2-4

T. REFRIGERATION SYSTEM COMPONENT DIAGNOSIS AND REPAIR
U. HEATING AND ENGINE COOLING SYSTEMS DIAGNOSIS AND REPAIR
V. FUEL, AIR INDUCTION, AND EXHAUST SYSTEMS DIAGNOSIS AND REPAIR
W. EMISSIONS CONTROL SYSTEMS DIAGNOSIS AND REPAIR
   a. Positive Crankcase Ventilation

**Student Contributions and Class Policies:**

1. Student/Participant must furnish a set of approved safety eye glasses.

2. Student/Participant must understand class attendance is critical; therefore, three consecutive absences or five total absences may be considered justification for failure or dismissal from class.

3. Punctuality, being prepared for class, being alert, participating proactively and exhibiting a respectful and appropriate attitude will be required.

**Evaluation of Students:**

<table>
<thead>
<tr>
<th>Evaluation Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Questions &amp; Final Exam</td>
<td>40%</td>
</tr>
<tr>
<td>Participation</td>
<td>10%</td>
</tr>
<tr>
<td>Lab Tasks</td>
<td>50%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

- 90 and above A
- 80-89 B
- 70-79 C
- 60-69 D
- 59 and below F

**Course Schedule:** This class meets for 2 lecture hours and 4 lab hours per week.

**SCANS Information:** SCANS skills are taught and/or reinforced in diesel courses. The student must locate, read, interpret and understand instruction information and direction materials. The participant must communicate thoughts, ideas and information through verbal and written mediums. Practical arithmetic and mathematics will apply continually throughout diesel technology training. Listening, interpreting, and responding to verbal communications and instructions as well as speaking in response to questioning will be a daily involvement. Thinking, reasoning, visualizing and problem solving are required assets to the automotive technician. The student/participant must display responsibility, self-management and honesty.

**Administrative Information:**

Curt Pervier, Applied Technology Dean
Lisa Hays, Division Secretary
Technology Studies
(432) 685-4676
Fax: (432) 685-6472
Students should feel free to contact the instructor at any time. Appointments are encouraged for advising and planning the most appropriate or beneficial course work.

*Syllabus subject to change as deemed necessary by the instructor to ensure learning objectives and course goals are met.

**Students with Disabilities**
Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must place documentation on file with the Counselor/Disability Specialist. Students with disabilities should notify Midland College prior to the beginning of each semester. Student Services will provide each student with a letter outlining any reasonable accommodations. The student must present the letter to the instructor at the beginning of the semester.

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individuals have been designated to handle inquiries regarding the non-discrimination policies: Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu; Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, nmorgan@midland.edu. For further information on notice of non-discrimination, visit [http://wdcrobcollp01.ed.gov/CFAPPS/OCR/contactus.cfm](http://wdcrobcollp01.ed.gov/CFAPPS/OCR/contactus.cfm) or call 1 (800) 421-3481.

**Spanish**
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