**Course Description:** Advanced concepts and skills required for tune-up and troubleshooting procedures of diesel engines. Emphasis on the science of diagnostics with a common sense approach.

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.

**Text, References and Supplies:** “Medium/Heavy Duty Diesel Engines” by Gus Wright
Text: 9781284067057

**End-of-Course Outcomes:** Analyze engine malfunctions; determine corrective repair; perform engine repairs; and adjust engine tune-up according to manufacturer’s specifications.

**A. GENERAL ENGINE DIAGNOSIS**
**B. LUBRICATION SYSTEMS DIAGNOSIS AND REPAIR**
**C. COOLING SYSTEM DIAGNOSIS AND REPAIR**
**D. AIR INDUCTION AND EXHAUST SYSTEMS DIAGNOSIS AND REPAIR**
**E. FUEL SYSTEM DIAGNOSIS AND REPAIR**
   1. FUEL SUPPLY SYSTEM DIAGNOSIS AND REPAIR
   2. MECHANICAL FUEL INJECTION DIAGNOSIS AND REPAIR
   3. ELECTRONIC FUEL MANAGEMENT SYSTEM DIAGNOSIS AND REPAIR
**F. ENGINE BRAKES**

**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 pro-actively and exhibiting a respectful and appropriate attitude will be required.

**Evaluation of Students:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Questions &amp; Final Exams</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 direct 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
Applied Technology
(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://wdcrobcopl01.ed.gov/CFAPPS/OCR/contactus.cfm or call 1 (800) 421-3481.

Spanish

Midland College no discrimina por motivos de raza, color, nacionalidad, sexo, discapacidad, o edad en sus programas o actividades. Las siguientes personas han sido designadas para responder a cualquier pregunta o duda sobre estas políticas no discriminatorias: 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. Para más información sobre estas políticas no discriminatorias, visite http://wdcrobcopl01.ed.gov/CFAPPS/OCR/contactus.cfm o llame al 1 (800) 421-3481.