

MIDLAND COLLEGE
SYLLABUS
DEM 1321
POWER TRAIN APPLICATIONS I
2-4

Course Description: In-depth coverage of the mechanics and theory of power trains. Emphasis on disassembly, inspection, and repair of power train components.

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: Required: **Cengage Unlimited digital e-book--Heavy Duty Truck Systems, 7th Edition; 9781337787109**

End-of-course Outcomes: Interpret power flow; assess component failure; and demonstrate ability to make power train component repairs.

- A. CLUTCH DIAGNOSIS AND REPAIR
- B. TRANSMISSION DIAGNOSIS AND REPAIR
- C. TRANSAXLE DIAGNOSIS AND REPAIR
- D. DRIVE AND HALF SHAFT UNIVERSAL AND CONSTANT-VELOCITY (CV) JOINT DIAGNOSIS AND REPAIR
- E. REAR AXLE DIAGNOSIS AND REPAIR
 - a. Ring and Pinion Gears and Differential Case Assembly
 - b. Limited Slip Differential
 - c. Axle Shaft
- F. FOUR-WHEEL DRIVE/ALL-WHEEL DRIVE COMPONENT DIAGNOSIS AND REPAIR

Students may perform the following tasks in order to maintain safe lab and classroom spaces:

- Participate in shop and classroom maintenance which may include, but not limited to sweeping, mopping, disposing of trash, cleaning work benches, organize tools and equipment, organize tool room, disinfect classroom tables and chairs.
- Disassemble discontinued lab training vehicles or equipment for salvage.
- Repurpose lab vehicles to be utilized in lab assignments.
- Other course related tasks as assigned by instructor.

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.

MIDLAND COLLEGE
SYLLABUS
DEMR 1321
POWER TRAIN APPLICATIONS I
2-4

Evaluation of Students:

10% = Attendance/Punctuality
10% = Professionalism/Participation
25% = Mid-term & Final exams
40% = Skills Objectives (Lab Assignments)
15% = Knowledge Objectives (Classroom Assignments)
100% Total

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.

Curt Pervier, Dean, Applied Technology

Administrative Information:

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.

Non-Discrimination Statement

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individual has been designated to handle inquiries regarding the non-discrimination policies:

**MIDLAND COLLEGE
SYLLABUS
DEMR 1321
POWER TRAIN APPLICATIONS I
2-4**

Tana Baker

Title IX Coordinator/Compliance Officer
3600 N. Garfield, SSC 131
Midland, Texas 79705
(432) 685-4781
tbaker@midland.edu

For further information on notice of non-discrimination, visit the ED.gov Office of Civil Rights website, or call 1 (800) 421-3481.

Americans with Disabilities Act (ADA) Statement:

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must visit www.midland.edu/accommodation and complete the Application for Accommodation Services located under the Apply for Accommodations tab. Services or accommodations are not automatic, each student must apply and be approved to receive them. All documentation submitted will be reviewed and a "Notice of Accommodations" letter will be sent to instructors outlining any reasonable accommodations.