

**El Paso Community College**  
**Syllabus**  
**Part II**  
**Official Course Description**

<b>SUBJECT AREA</b>	<b>Diesel Mechanics</b>								
<b>COURSE RUBRIC AND NUMBER</b>	<b>DEM 1327</b>								
<b>COURSE TITLE</b>	<b>Tractor Trailer Service and Repair</b>								
<b>COURSE CREDIT HOURS</b>	<table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 0 10px;"><b>3</b></td> <td style="text-align: center; padding: 0 10px;"><b>2</b></td> <td style="text-align: center; padding: 0 10px;"><b>:</b></td> <td style="text-align: center; padding: 0 10px;"><b>3</b></td> </tr> <tr> <td style="text-align: center; padding: 0 10px;">Credits</td> <td style="text-align: center; padding: 0 10px;">Lec:</td> <td style="text-align: center; padding: 0 10px;">Lab</td> <td></td> </tr> </table>	<b>3</b>	<b>2</b>	<b>:</b>	<b>3</b>	Credits	Lec:	Lab	
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Credits	Lec:	Lab							

**I. Catalog Description**

Provides an introduction to and familiarization with components and systems related to tractor trailer service. Emphasizes records required by the Department of Transportation. **(2:3). Lab fee.**

**II. Course Objectives**

Upon satisfactory completion of this course, the student will be able to:

- A. Inspect vehicles.
- B. Make necessary repairs to the frame and trailer.
- C. Describe the chassis frame of a heavy-duty truck.
- D. Define the terms yield strength, section modulus, and resist bend moment (RBM) area.
- E. List the materials from which frame rails are made and describe the characteristics of each.
- F. Explain the elements of frame construction.
- G. Describe how frame damage can occur due to impact and overloading.
- H. Carry out basic chassis frame alignment checks.
- I. Explain how the chassis frame, side rails, and crossmembers can be repaired.
- J. List some guidelines to follow when using frame repair hardware.
- K. Describe what is meant by semi-trailers and full trailers.
- L. Identify the various tractor/trailer and train combinations.
- M. Describe what is meant by full frame, unibody, and monocoque.
- N. Explain the various types of hitching mechanisms used and their effects on tractor/trailer or train designation.
- O. Describe the design characteristics of the dry van, reefer, flatbed, tanker, and other types of highway trailers.
- P. Explain the operating principles of a reefer trailer.
- Q. Outline some common trailer maintenance practices.

**III. THECB Learning Outcomes (WECM)**

Inspect vehicles and make necessary repairs to the tractor or trailer to Department of Transportation standards and complete Department of Transportation documentation using correct Department of Transportation forms and procedures.

**IV. Evaluation**

The knowledge and skills stated in the objectives must be demonstrated by the students in the form of test and lab assignments in order to complete the course. Performance tests and lab assignments will be weighed as follows:

Performance Tests	40% of final grade
Lab Assignments	40% of final grade
Classroom Participation	<u>20% of final grade</u>
Total	100%

90-100	A
80-89	B
70-79	C
60-69	D
0-59	F

**V. Disability Statement (Americans with Disabilities Act [ADA])**

EPCC offers a variety of services to persons with documented sensory, mental, physical or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-8815); and MDP Rm A-125 (831-7024).

**VI. 6 Drop Rule**

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructors before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.