Faculty are required to have the outline submitted to the Academic Affairs Office. The course outline is
the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. Diesel Truck Program COURSE NUMBER: DSL 2160
NUMBER OF CREDITS: 3cr. 1 Lecture 2 Lab.
COURSE TITLE: Truck Braking System
CATALOG DESCRIPTION: This course covers the design, construction, and operation of medium and
heavy-duty truck hydraulic and air brake systems and components; Air compressors, air lines, valves,
controls, brake chambers, linkages, and foundation brakes. In the lab component there will be overhaul of
medium and heavy-duty air brake and ABS systems. Students will test, disassemble, inspect, repair, the
individual Components as need be on actual costumer truck or on school training units.

AUDIENCE: Diesel truck students, Diesel tech students

FULFILLS MN TRANSFER CURRICULUM AREA(S) (Leave blank if not applicable)
Area: by meeting the following competencies:
Area: by meeting the following competencies:
Area: by meeting the following competencies:

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:
LENGTH OF COURSE: 80 hours.
THIS COURSE IS USUALLY OFFERED:
Every other year [ ] fall [ ] spring [ ] summer [ ] undetermined X

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT: The academic objectives of this course are:
   a. The Students will learn the operation of basic operating components work together
   b. To understand the different system operation Hydraulic, Air, and ABS braking.
   c. To inspect and make determination of what repairs are needed for each project.
   d. To rebuild a set of brakes in a truck medium or heavy duty truck.
   e. To make the necessary adjustments after the repairs have made to the brake system.

2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:
   a. To analyze the different systems and how they work.
   b. To troubleshoot the operation of the braking system and make a judgment on proper repairs.
   c. To order the right needed parts to make repairs.
   d. To think through proper repair procedures to have the system operate like new.
3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:
   a. Talking to the customer or instructor and finding out what the problem is.
   b. Explaining to the customer or instructor what they found and how they intend to make repairs.
   c. Fill out a work order listing needed parts and explaining needed repairs.
   d. When the job is done there will be a oral or written report on the outcome of the job.

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through:
   a. Understanding the roles of the technician in communicating with a diverse population.
   b. Working effectively in teams comprised of diverse backgrounds.
   c. Express personal philosophies on diverse issues.

TOPICS TO BE COVERED: Operation and repair of brake components, nomenclature of different systems, and how those systems work together.

LIST OF EXPECTED COURSE OUTCOMES: The student will become comfortable with the repair and understanding of how the different braking systems work and how to make repairs and adjustments before and after the job is complete.

LEARNING/TEACHING TECHNIQUES used in the course are:
X Collaborative Learning  X Problem Solving
X Student Presentations  X Interactive Lectures
☐ Creative Projects  ☐ Individual Coaching
X Lecture  X Films/Videos/Slides
X Demonstrations  ☐ Other (describe below)
X Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
X Reading  X Tests  X Individual Projects
X Oral Presentations  X Worksheets  X Collaborative Projects
X Textbook Problems  X Papers  ☐ Portfolio
X Group Problems  ☐ Term Paper
☐ Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES: The student will gain a 2.0 or higher GPA after completing this course of study.

"This course will cover the characteristics of hazardous wastes and its safe handling, storage, and disposal."

The information in this course outline is subject to revision.

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by
contacting the Student Services Advisor or by calling 800-658-2330 or Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.

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