COURSE OUTLINE

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                        COURSE NUMBER:  DSL1130
NUMBER OF CREDITS:  3 cr.
COURSE TITLE:  Hydraulic Theory and Application

CATALOG DESCRIPTION : Covers principles and fundamentals of hydraulics. The will work on various components and systems as related to diesel hydraulics within a laboratory environment.

AUDIENCE : First Year Diesel 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 :

THIS COURSE IS USUALLY OFFERED:
Every other year ☐  fall ☐  spring X  summer ☐  undetermined ☐

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 about and make repairs one of each type of pump.
   b. They will learn about and go through at least one type of control valve.
   c. They will learn about and repair a hydraulic cylinder.

2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:
   A. To annalize the operation different hydraulic pumps gear, piston, and rotor.
   B. To troubleshoot the effect on performance of the engine dependant on operation.
   C. To troubleshoot the repair necessary to get the proper operation of the hydraulic system.
   D. To troubleshoot timing operation when set right and wrong.

3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:
   A. Particapation in class discussion.
B. Complete written reports and assignments
C. To improve oral communications skills through class presentations

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human
diversity through:
A. To understand the roles of the technician in communicating with a diverse population
B. To work effectively in teams comprised of diverse backgrounds
C. To express personal philosophies on diverse issues.

TOPICS TO BE COVERED: Hydraulic pump, control valves, cylinders and motors.

LIST OF EXPECTED COURSE OUTCOMES: The student will receive a passing grade when all projects are
completed to the instructors satisfaction

LEARNING/TEACHING TECHNIQUES used in the course are:
X Collaborative Learning  X Problem Solving
X Student Presentations  [] 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  [] Individual Projects
X Oral Presentations  [] Worksheets  X Collaborative Projects
X Textbook Problems  X Papers  [] Portfolio
[] Group Problems  [] Term Paper
[] Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES: The students complete project assigned them.

"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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