MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE
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 College-wide Curriculum Committee.

DEPT. Diesel Technology    COURSE NO. DSL2137

COURSE TITLE Fuel Lab

CATALOG DESCRIPTION This course allows students an opportunity to apply theory in the laboratory environment. Students will be asked to disassemble, inspect, evaluate, reassemble and calibrate advanced principles in fuel injection. The student will disassemble, inspect, evaluate, reassemble, and calibrate at least 3 sets of injectors to give them the realization of what a properly operating engine needs to perform.

(Prerequisites: Basic engines, AUTO1136 or pre instructors recommendation.)
5cr. (0 lect./pres. 5 lab 0 other)

AUDIENCE: Second 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: DSL2136 to run consecutively

LENGTH OF COURSE

THIS COURSE IS USUALLY OFFERED:
Every year X Every other year [ ]
Fall X Spring [ ] Summer [ ] Undetermined [ ]

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

1. ACADEMIC CONTENT:
   A. To understand the delivery of fuel to engine cylinders.
   B. To learn the different types of fuel delivery systems.
   C. To learn the effects of good and bad fuel delivery on engine performance.
   D. To learn the types of governoring systems for controlling engine operation.

2. THINKING SKILLS:
   A. To use different situations to troubleshoot problems in the engine and fuel systems for best performance.
B. To be able to think through how fuel and engine performance work together.
C. To think through governor and fuel system operating together.
D. To be able to know the different between distributor and inline pumps.

3. COMMUNICATIONS SKILLS:
   A. Participation in class discussion.
   B. Complete written reports and assignments
   C. To improve oral communications skills through class presentations.

4. HUMAN DIVERSITY:
   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: Distributor and inline mechanical fuel systems and a combination mechanical and electrical injection systems. The service and repair of the different fuel systems.

LIST OF EXPECTED COURSE OUTCOMES: The student will be able to fix or diagnose trouble in the operation of a diesel engine. Understand how the different types of fuel systems work.

LEARNING/TEACHING TECHNIQUES used in the course are:
   - Collaborative Learning
   - Creative Projects
   - Lecture
   - Demonstrations
   - Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
   - Reading
   - Oral Presentations
   - Textbook Problems
   - Group Problems
   - Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES:

"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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