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 Academic Affairs and Standards Council.

DEPT.  Diesel                         COURSE NUMBER: DSL 1142

NUMBER OF CREDITS:  3cr. 1lecture 2lab

COURSE TITLE:  Heating Ventilation and Air Conditioning Systems

CATALOG DESCRIPTION : This course will cover cab heating and ventilation systems used in all type of units used in the industry today. The air conditioning services and repair to be gain comfort in cab climate. The environmental concerns that need to be address when making repairs to the air conditioning system.

AUDIENCE  : Diesel tech students, and Diesel truck 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

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. To learn how AC systems are operate when in proper repair.
   b. To learn heating and ventilation system works and how the two work together.
   c. To make needed repairs once the system has been diagnosed.

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 heating and ac 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. The student will need to talk with the customer about what their complaints are and then when they have completed the job explain what was done and why.
b. The student will write a work order out for each job that they do and in some case they will need to write a report on the steps and outcome that they performed on the unit.

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: Air conditioning components pump, evaporator, condenser, and related components, Heating system and electrical operation.

LIST OF EXPECTED COURSE OUTCOMES: The student will become comfortable with the repair and understanding if how the different HVAC systems work and how to make repairs and adjustments before and after the job is complete. The student will take an ASE certification test upon completion of this course so they are ready work in industry.

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
□ 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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