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 Collegewide Curriculum Committee.

DEPT. HVAC                      COURSE NO. 1150

NUMBER OF CREDITS: 3

COURSE TITLE: Heating Systems

CATALOG DESCRIPTION: To learn different types of controls, safety components, and methods of repair. How to test systems, calculate corrections, and install many parts of a heating system.

AUDIENCE: Persons that would like to become a certified technician in the HVAC/R fields.

FULFILLS MN TRANSFER CURRICULUM AREA(S) (Leave blank if not applicable)
Area : by meeting the following competencies:
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PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE: Heating Fundamentals

LENGTH OF COURSE 1 semester

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: Math, Reading

2) THINKING SKILLS: Problem solving.

3) COMMUNICATIONS SKILLS: Must communicated well with others and communicate problems well that will arise in the field.

4) HUMAN DIVERSITY:

TOPICS TO BE COVERED: This course will cover all types of heating systems. How to install properly. Each one with the codes and regulations that are needed for proper installation. The techniques that are used to troubleshoot a heating system to minimize the time spent on each job. Also to make sure that the equipment is working up to the manufactures specifications.
LIST OF EXPECTED COURSE OUTCOMES:
1. The student will design a heating system using a house plan.
2. The student will determine the codes that are needed for proper installation of the heating system.
3. The student will match controls and symbols of different types of equipment.
4. The student will use proper tools and techniques for troubleshooting.
5. The student will define schematics (ladder, and pictorial).
6. The student will identify schematic components.

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

EXPECTED STUDENT LEARNING OUTCOMES: The student at the end of the semester will be able to troubleshoot all types heating systems. Use proper techniques to find the problems and how to replace the equipment. Redesign the heating systems of a home. Have the equipment when finished work up to manufactures specifications.

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.

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.

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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The information in this course outline is subject to revision.