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. 1100

NUMBER OF CREDITS: 3

COURSE TITLE: Refrigeration Fundamentals

CATALOG DESCRIPTION: This Course covers the basics of what heat is and how it can be moved from one place to another. Topics included are sensible heat, latent heat, super heat, and BTU’s. Other topics included are EPA laws and regulations that pertain to the refrigeration certification.

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: No Prerequisites

LENGTH OF COURSE 1 semester

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

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

1) ACADEMIC CONTENT: Math, Reading

2) THINKING SKILLS:

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 the basic refrigeration cycle and the components that complete the cycle. It will cover EPA laws and regulations that must be meet when working with refrigerants and the equipment.
LIST OF EXPECTED COURSE OUTCOMES:
1. The student will identify refrigerant types and their compatibility with different oils
2. The student will identify the different laws and regulations that pertain to the refrigeration field
3. The student will match refrigeration / air conditioning terms and definitions
4. The student will use proper tools and techniques for leak detection
5. The student will perform cutting and welding techniques
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 explain the proper cycle of refrigerant in a refrigeration system and know the laws and regulations that pertain to each individual piece of equipment that the student may work on in the field of HVAC/R

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

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.