COURSE OUTLINE

DEPT.  Plumbing & Heating Technology                      COURSE NUMBER: PLHT 1115

NUMBER OF CREDITS: 1 (1 lecture)

COURSE TITLE: Print Reading I

CATALOG DESCRIPTION: Introduce students to fundamental print reading skills. Students will read building plans and pipe diagrams, interpret floor plan elevations, draw isometric views and sketch working drawings.

AUDIENCE: Students interested in pursuing a career in plumbing and heating.

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:
N/A

LENGTH OF COURSE: Semester

THIS COURSE IS USUALLY OFFERED:
Every other year ☐ X fall spring ☐ 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. Understand technical components of blue prints, building plans, & pipe diagrams and symbols.
   b. Read architects scale and interpret floor plan elevations.
   c. Interpret and draw simple floor plans and schematics.
   d. The design and construction standards for both residential and commercial plans, symbols, and specifications for the trade.

2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:
a. Completing homework (reading, reports, and worksheets)
b. Participating in classroom discussions
c. Taking open and closed book quizzes and tests
d. Complete assigned lab projects

3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:
   a. Participate in classroom discussions and reports.
   b. Participate in assignments, worksheets and reports

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through:
   a. Participate in classroom discussions.
   b. Work with fellow students on projects.
   c. Working with students from other cultures.

TOPICS TO BE COVERED:
1. Fundamental components of building plans and drawings
2. Plumbing & HVAC symbols, blueprint terms, welding symbols
3. Interpret and draw simple plans

COURSE LEARNING OUTCOMES (GENERAL):
   1. Read architects scale
   2. Interpret and draw simple floor plans
   3. Analyze rough in drawings
   4. Design underground and drainage, water, waste and vent system
   5. Design and size water distribution piping

STUDENT LEARNING OUTCOMES (SPECIFIC):
Students will:
1. Define blueprint terms
2. Identify blueprint schedule
3. Solve construction problems
4. Identify welding symbols
5. Identify plumbing symbols
6. Identify HVAC symbols
7. Interpret simple floor plans and rough in drawings
8. Understand underground and drainage water, waste and vent system designs

LEARNING/TEACHING TECHNIQUES used in the course are:
- Collaborative Learning
- Problem Solving
- Student Presentations
- Interactive Lectures
- Creative Projects
- Individual Coaching
- Lecture
- Films/Videos/Slides
- Demonstrations
- Other (describe below)
- Lab
ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

- Reading  
- Tests  
- Individual Projects  
- Oral Presentations  
- Textbook Problems  
- Collaborative Projects  
- Group Problems  
- Papers  
- Portfolio  
- Other (describe below)

**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.

The information in this course outline is subject to revision

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 via your preferred Telecommunications Relay Service.

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**TOPICS TO BE COVERED:**

**LIST OF EXPECTED COURSE OUTCOMES:**

1. describe estimating procedures
2. describe topographic contour design
3. describe plumbing system blueprints
4. describe masonry blueprints
5. describe footing/foundation detail
6. describe job/sea level elevation
7. describe construction drawings
8. describe commercial construction material
9. describe construction specifications