MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE
COURSE OUTLINE

Faculty is 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.  Plumbing & Heating Technology                    COURSE NUMBER: PLHT 1140

NUMBER OF CREDITS: 2 (2 lab)

COURSE TITLE:  Print Reading II

CATALOG DESCRIPTION: Learn how to read building plans and pipe diagrams, interpret floor plans, elevation views, draw isometrics and sketch detailed work drawings. Students will develop skills in estimating plumbing cost for basic residential installations and remodels. Building on these skills, the student will gain knowledge of complex residential pipe diagrams, and isometric 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:
PLHT 1115 Print Reading I

LENGTH OF COURSE : 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: The academic objectives of this course are:
   a. Interpret technical components of complex residential blue prints, building plans, & pipe diagrams and symbols.
   b. Read architects scale and interpret floor plan elevations.
   c. Interpret construction specifications and schedules.
   d. The design and construction standards for both residential and commercial plans, symbols, and specifications for the trade.
   e. Analyze and propose solutions to print conflicts.
   f. Estimating job and material costs and time
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. Advanced components of building plans and drawings
2. Plumbing & HVAC symbols, blueprint terms, welding symbols
3. Complex building plans
4. Estimating and interpreting plans
5. Construction specifications and schedules

COURSE LEARNING OUTCOMES (GENERAL):
1. Draw floor plans to scale.
2. Interpret complex residential prints.
3. Interpret material sizes and fixtures from prints
4. Calculate run, travel, and offsets.
5. Interpret plumbing prints and symbols
6. Interpret construction specifications
7. Interpret construction schedules
8. Identify and propose solutions to print conflicts

STUDENT LEARNING OUTCOMES (SPECIFIC):
Students will:
1. Draw floor plans to scale
2. Calculate run, travel and offsets
3. Solve construction problems
4. Interpret plumbing prints and symbols
5. Interpret HVAC prints and symbols
6. Interpret complex floor plans and rough in drawings
7. Understand underground and drainage water, waste and vent system designs
8. describe estimating procedures
9. Identify topographic contour design
10. Understand plumbing system blueprints
11. Read masonry blueprints
12. Recognize footing/foundation detail
13. Identify job/sea level elevation
14. Read construction drawings
15. Recognize commercial construction material
16. Identify and understand construction specifications

LEARNING/TEACHING TECHNIQUES used in the course are:

- Collaborative Learning
- Problem Solving
- Interactive Lectures
- Individual Coaching
- Films/Videos/Slides
- Other (describe below)

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

- Reading
- Tests
- Individual Projects
- Oral Presentations
- Worksheets
- Collaborative Projects
- Textbook Problems
- Papers
- Portfolio
- Group Problems
- Term Paper
- 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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