DEPT. Plumbing & Heating Technology  COURSE NUMBER: PLHT 1100

NUMBER OF CREDITS: 3 (2 lecture, 1 lab)

COURSE TITLE: Introduction to Plumbing

CATALOG DESCRIPTION:

Introduces students to the tools and equipment of the plumbing trade, the necessity of safety in the workplace and methods described in the Minnesota Plumbing Code. Students will study plastic piping, which involves the joining of drainage, waste & vent, water supply and distribution lines. Students will become familiar with the different types of copper pipe, fittings and tubing. PEX water and heating distribution piping will be discussed and utilized. Students will also utilize and study water pumps.

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 ☐ fall x 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. Recognize a safe work environment and the need for personal safety.
   b. Identify and join various types of pipe and assembly techniques.
   c. Develop ability to operate hand and power cutting & measuring tools used in industry.
   d. Understand the history of plumbing and heating profession.
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:
   a. History plumbing and heating profession.
   b. Shop safety and Personal Protective Equipment use
   c. Types and appropriate pipe types metal and plastic
   d. Use of hand, power cutting, measuring, and pipe assembly tools.
   e. Joining pipe and pipe fittings.

COURSE LEARNING OUTCOMES (GENERAL):
   a. Students will understand plumbing practices.
   b. Students will execute safe operating procedures of machines used in industry.
   c. Discuss the history of plumbing profession.
   d. Articulate safe working techniques and procedures
   e. Identify use and care of Personal Protective Equipment (PPE)
   f. Identify types and sizes of copper pipe and fittings
   g. Operate hand and power cutting and cleaning tools
   h. Join copper lines and fittings using proper tools and assembly techniques
   i. Identify plastic drain, waste and vent (DWV) and water supply pipe and fittings
   j. Join plastic pipe and fittings using proper tools and assembly techniques

STUDENT LEARNING OUTCOMES (SPECIFIC):
Students will:

1. Determine iso waste layouts
2. Make mechanical vivtaulic joints
3. Completer c.i. soil pipe project
4. Prepare mechanical compression joint
5. Asssemble cross linked polyethelene pex joint
6. Prepare cast iron soil pipe joint
7. Install various anchors
8. Install drain maintenance chemicals
9. Use power tools
10. Draw DWV isometric systems
11. Determine excavation safety
12. Prepare supports steel pipe vertically
13. Prepare support steel pipe horizontally
14. Prepare support H2O piping materials vertically
15. Prepare support H2O piping materials horizontally
16. Understand c.i. soil pipe
17. Recognize ladder safety

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
- 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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