**BARTON COMMUNITY COLLEGE**

**COURSE SYLLABUS**

# **GENERAL COURSE INFORMATION**

Course Number: PLMB 1010

Course Title: Plumbing Systems

Credit Hours: 1

Prerequisite: PLMB 1030 Fixtures and Fittings

Division/Discipline: Workforce Training and Community Education/Plumbing

Course Description: This course explains the factors that influence Drain, Waste, Vent, and distribution system design and how different types of drains, fittings, vents, and pipe are used to distribute water and move waste in a building.

1. **INSTRUCTOR INFORMATION**

# **COLLEGE POLICIES**

Students and faculty of Barton Community College constitute a special community engaged in the process of education. The College assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism. Information about academic integrity is located in the Student Handbook.

The College reserves the right to suspend a student for conduct that is determined to be detrimental to the College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy & Procedure Manual. (Most up-to-date documents are available on the College webpage).

Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is to notify Student Support Services via email at [disabilityservices@bartonccc.edu](mailto:disabilityservices@bartonccc.edu).

# **COURSE AS VIEWED IN THE TOTAL CURRICULUM**

This course is intended to prepare entry level employees or train incumbent workers in the plumbing industry to perform identified job tasks to comply with federal regulations and industry standards. The course includes practical and classroom training. Upon successful completion of the course participants will be prepared to demonstrate identified skills to employers for qualification purposes.

# **ASSESSMENT OF STUDENT LEARNING**

Barton Community College is committed to the assessment of student learning and to quality education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

## Course Outcomes, Competencies, and Supplemental Competencies:

1. Explain how waste moves from a fixture through the drain system to the environment.
   1. Identify significant code and health issues, violations, and consequences related to DWV systems.
   2. Identify the major components of a drainage system and describe their functions.
2. Explain trap installation requirements.
   1. Identify the different types of traps and their components.
   2. Explain the importance of traps.
   3. Identify the ways that traps can lose their seals.
   4. Explain why a trap loses its seal.
3. Select proper vents, drains, and fittings for various applications.
   1. Explain vent types.
   2. Demonstrate proper sizing of drains and vents.
   3. Identify fittings and their applications.
4. Design a DWV (Drain, Waste, Vent) System.
   1. Identify proper grade for DWV systems.
   2. Describe system considerations for designing a building drain and sewer system.
   3. Describe the function of a sewer main.
   4. Describe the function of waste treatment.
   5. Identify code and health issues associated with DWV systems.
   6. Sketch an isometric drawing of a simple DWV system and label its components.
5. Identify key components of a water distribution system.
   1. Identify various sources of water.
   2. Explain the water treatment process.
   3. Describe the process by which water is distributed in municipal, residential, and private water systems.
6. Identify key components of supply and distribution.
   1. Identify materials used for water supply and distribution.
   2. Identify a service line from a private water supply.
   3. Identify a service line from a public water main.
7. Identify a cross-connection.
   1. Explain the need for and proper use of backflow preventers.
   2. Describe various types of valves and their uses.
8. Design a building distribution system.
   1. Identify components necessary for a building distribution system.
   2. Explain how to size main supply lines.
   3. Describe the proper fixtures and faucets used in the distribution system.
   4. Sketch an isometric drawing of a simple water distribution system and label its components.
9. **INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS**

# **TEXTBOOKS AND OTHER REQUIRED MATERIALS**

# **REFERENCES**

# **METHODS OF INSTRUCTION AND EVALUATION**

# **ATTENDANCE REQUIREMENTS**

1. **COURSE OUTLINE**