**BARTON COMMUNITY COLLEGE**

**COURSE SYLLABUS**

# **GENERAL COURSE INFORMATION**

Course Number: PLMB 1030

Course Title: Plumbing Fixtures and Fittings

Credit Hours: 4

Prerequisite: PLMB 1020 Introduction to Plumbing

Division/Discipline: Workforce Training and Community Education/Plumbing

Course Description: This course covers basic types of materials used in the manufacturing of plumbing fixtures and the mechanics of fixtures and faucets. The course also introduces the types of materials, schedules, and applications of plastic, copper, cast-iron, and steel piping. Properly measuring, cutting, and joining techniques for all piping materials are included.

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. Determine the appropriate types of fittings, valves, hangers, and supports needed for plastic piping.
   1. Identify the various types of plastic pipe.
   2. Identify the material properties, storage, and handling requirements of plastic pipe.
   3. Identify the types of fittings and valves used with plastic pipe.
   4. Select the correct support and spacing for the application.
2. Demonstrate how to properly measure, cut, and join plastic piping.
   1. Properly measure, cut, and join plastic pipe.
   2. Identify the techniques used in hanging and supporting plastic pipe.
   3. Identify the hazards and safety precautions associated with plastic pipe.
   4. Select the appropriate personal protective equipment for working with plastic piping.
3. Demonstrate how to measure, cut, and prep groove copper tube
   1. Identify the various types of copper tube.
   2. Select correct types of materials for copper tube systems.
   3. Identify the material properties, storage, and handling requirements of copper tube.
   4. Identify the types of fittings and valves used with copper tube.
   5. Properly measure, cut, and join copper tube.
4. Demonstrate how to hang and support copper tube.
5. Identify the techniques used in hanging and supporting copper tube.
6. Select the correct support and spacing for the application.
7. Identify the hazards and safety precautions associated with copper tube.
8. Select the appropriate personal protective equipment for working with copper tube.
9. Identify materials, schedules, and fittings used with cast-iron piping
   1. Identify the various types of cast-iron pipe.
   2. Select correct types of materials for cast-iron piping systems.
   3. Identify the material properties, storage, and handling requirements of cast-iron pipe.
   4. Identify the types of fittings and valves used with cast-iron pipe.
10. Demonstrate how to properly measure, cut, join, and support cast-iron piping.
11. Identify the techniques used in hanging and supporting cast-iron pipe.
12. Properly measure, cut, and join cast-iron pipe.
13. Identify the hazards and safety precautions associated with cast-iron pipe.
14. Select the appropriate personal protective equipment for cast-iron piping.
15. Identify common fittings, valves, hangers, and supports used with steel pipe.
    1. Identify the common types of materials, schedules, sizes, and labels used for steel piping.
    2. Identify the material properties, storage, and handling requirements of steel pipe.
    3. Identify the types of fittings and valves used with steel pipe.
    4. Identify the techniques used in hanging and supporting steel pipe.
16. Demonstrate how to measure, cut and join steel pipe.
    1. Properly measure, cut, and join steel pipe.
    2. Identify the hazards and safety precautions associated with steel pipe.
17. Demonstrate how to choose the proper fixtures and faucets for a variety of installations.
    1. Describe how each type of fixture and faucet operates.
    2. Identify the basic types of materials used in the manufacture of plumbing fixtures.
    3. Identify common types of sinks, lavatories, and faucets.
    4. Identify common types of bathtubs and showers.
    5. Identify common types of toilets, urinals, and bidets.
    6. Identify and describe common types of drinking fountains and water coolers.
    7. Identify common types of appliances connected by a plumber.
18. **INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS**

# **TEXTBOOKS AND OTHER REQUIRED MATERIALS**

# **REFERENCES**

# **METHODS OF INSTRUCTION AND EVALUATION**

# **ATTENDANCE REQUIREMENTS**

1. **COURSE OUTLINE**