

# Piping Standards & Materials (PFPB 2308: Spring 2025)



**LAMAR INSTITUTE  
OF TECHNOLOGY**

## **CREDIT**

3 Semester Credit Hours (2 hours lecture, 4 hours lab)

## **MODE OF INSTRUCTION**

Face to Face

## **PREREQUISITE/CO-REQUISITE:**

None

## **COURSE DESCRIPTION**

Identification, description, and application of piping standards and specifications. Includes identification and use of various metallic and non-metallic piping materials, identification and installation of valves, and material take-offs. ( WECM )

## **COURSE OBJECTIVES**

Upon completion of this course, the student will be able to

1. Identify the types, uses, and properties of plastic pipe and fittings; describe the different methods for joining plastic pipe; and describe the methods used to support, protect, and test plastic pipe.
2. Identify the types, uses and properties of copper tube and fittings; describe the different methods for cutting and bending copper tube; and describe the methods used to install and test cooper tube.
3. Identify types, uses, and properties of cast iron pipe; describe the methods for measuring, cutting, and joining cast iron pipe; and describe the methods for supporting, installing, and testing horizontal and vertical pipe runs.
4. Identify the types, uses, and properties of steel pipe; describe the different methods of measuring, cutting, and joining steel pipes; and describe the methods used to stall and test steel pipe.
5. Describe the benefits and components of DWV systems; describe trap types, their purpose, and installation requirements; describe DWV fittings and their applications; and describe DWV sewer connections, components, and related codes.
6. Describe how water is distributed in municipal, residential, and private water systems; identify the major components of a water distribution system and describe the function of each; and explain the relationships between the components of a water distribution system.

## **INSTRUCTOR CONTACT INFORMATION**

Instructor: Henry LaRocca

Email: hlarocca@lit.edu

Approved: **Initials/date**

Office Phone: (409) 245-8758 Cell: (409) 998-0528

Office Location: PATC 210

Office Hours: Monday and Wednesday: 8:30 a.m. – 9:00 a.m.  
Tuesday and Thursday: 12:00 p.m. – 1:00 p.m.  
Friday: 8:00 a.m. – 10:00 a.m.

## **REQUIRED TEXTBOOK AND MATERIALS**

Textbook: Plumbing Level One

Author: NCCER, Publisher: Pearson, Edition: 5<sup>th</sup>, ISBN: 9780137933839

## **MATERIALS AND TOOLS**

<u>Item</u>	<u>Quantity</u>
3"-3 ring notebook and notebook paper	1
25 ft. min. steel tape/6 ft. plumbers folder ruler	1 each
Safety glasses	1
Leather gloves	1 pair
Safety Shoes	1 pair
Calculated Industries Calculator	1
Required PFPB Shirt	2 minimum
Screwdriver, flat tip, 6 inch	1
Screwdriver 10 inch	1
Screwdriver Phillips #2 tip, 6 inch	1
Adjustable Wrenches – 6 inch and 12 inch	1 each
Pipe wrench – 14 inch	1
Pliers – Needlenose pliers, 7 inch	1
Pliers – Adjustable or ARC joint	1
Hammer – ball peen, 16 ounce	1
Hacksaw, adjustable angle	1
Hacksaw 18 TPI B=blades	3-5

## **ATTENDANCE POLICY**

- I. Students are allowed to miss two days without penalty; each additional day will result in the student's grade being dropped by a letter grade.

Example:

2 days absent = If student has an A average no penalty

3 days absent = A drops to a B

4 days absent = B drops to a C

5 days absent = C drops to a D (student must retake class)

6 days absent = D drops to a F (student must retake class)

- II. Absences are counted for unexcused, excused and coming to class late.
- III. 3 tardies = 1 absences
  - A. Tardy- arriving within 15 minutes after class begins or leaving before the end of class.
  - B. More than 15 minutes late you will be counted absent.
  - C. If you sleep in class, you will be counted absent.
- IV. Excused absences. Only given to allow students to make up missed work.
  - A. Will be given for documented Injury or Illness. The doctor's excuse required showing proof. Will count toward total days missed.
  - B. Will be given for documented Death in immediate family. Will count toward total days missed.
  - C. Approved LIT school functions; E.g., SkillsUSA, SGA etc. Will not count toward total days missed

**DROP POLICY**

If you wish to drop a course, you are responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

**COURSE CALENDAR**

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
Week 1, 2, and 1 <sup>st</sup> day of week 3.	Module 02106: Plastic Pipe and Fittings (Have Book and Plumbing tools available)	Read Syllabus All sections of Module	Section 1 Review Questions (End of Week 1)  Section 2 Review Questions (End of Week 1)  Section 3 Review Questions (End of Week 2)  Module Review Questions (End of Week 2)  Exam: Plastic Pipe and Fittings 1 <sup>st</sup> day of Week 3)  Lab: Plastic Pipe and Fittings (1 <sup>st</sup> day of Week 3)
2 <sup>nd</sup> day of Week 3, 4, and 5	Module 02107 Copper Tube and Fittings	All Sections in Module	Section 1 Review Questions (2 <sup>nd</sup> day of Week 3)

			<p>Section 2 Review Questions (End of Week 4)</p> <p>Section 3 Review Questions (End of Week 4)</p> <p>Module Review Questions (1<sup>st</sup> day week5)</p> <p>Exam: Plastic Pipe and Fittings End of Week 5)</p> <p>Lab: Plastic Pipe and Fittings (1<sup>st</sup> day of Week 5)</p>
Weeks 6 & 7	Module 02108 Cast Iron Pipe & Fittings	All Sections in Module	<p>Section 1 Review Questions (End of Week 6)</p> <p>Section 2 Review Questions (End of Week 6)</p> <p>Section 3 Review Questions (1<sup>st</sup> day of week 7)</p> <p>Module Review Questions (1<sup>st</sup> day of week 7)</p> <p>Exam: Cast Iron Pipe &amp; Fittings (End of Week 7)</p> <p>Lab: Cast Iron Pipe &amp; Fittings (End of Week 7)</p>
Weeks 8 & 9	Module 02109 Steel Pipe and Fittings	All Sections in Module	<p>Section 1 Review Questions (End of Week 8)</p> <p>Section 2 Review Questions (End of Week 8)</p> <p>Section 3 Review Questions (1<sup>st</sup> day of week 9)</p> <p>Module Review Questions (1<sup>st</sup> day of week 9)</p>

			Exam: Steel Pipe & Fittings (End of Week 9)  Lab: Steel Pipe & Fittings (End of Week 9)
Week 10, 11, and 1 <sup>st</sup> day of week 12	Module 02111 Introduction to Drain, Waste, and Vent (DWV) Systems	All Sections in Module	Section 1 Review Questions (End of Week 10)  Section 2 Review Questions (End of Week 10)  Section 3 Review Questions (End of Week 10)  Section 4 Review Questions (End of Week 11)  Module Review Questions (End of Week 11)  Exam: Drain, Waste, and Vent (DWV) Systems (1 <sup>st</sup> day of week 12)  Lab: Drain, Waste, and Vent (DWV) Systems 1 <sup>st</sup> day of week 12)
Weeks 2 <sup>nd</sup> day of week 12, 13 and 14	Module 02112 Introduction to Water Distribution Systems	All Sections in Module	Section 1 Review Questions (2 <sup>nd</sup> day of week 12)  Section 2 Review Questions (End of Week 13)  Section 3 Review Questions (End of Week 13)

			Module Review Questions (1 <sup>st</sup> day of Week 14)  Exam: Water Distribution Systems (End of Week 14)  Lab: Water Distribution Systems (End of Week 14)
Week 15	Review		
Final Week	Final		

### ADDITIONAL COURSE INFORMATION

SKILLMILL will be incorporated in class readings and coursework.

### COURSE EVALUATION

Final grades will be calculated according to the following criteria:

Quizzes	15%
Exams	25%
Lab/Projects	40%
Final	20%

### GRADE SCALE

- 90-100 A
- 80-89 B
- 70-79 C
- 60-69 D
- 0-59 F

### TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimum-computer-requirements>. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

### DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of

Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email [specialpopulations@lit.edu](mailto:specialpopulations@lit.edu). You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

### **STUDENT CODE OF CONDUCT STATEMENT**

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at [www.lit.edu](http://www.lit.edu). Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.\

### **ARTIFICIAL INTELLIGENCE STATEMENT**

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI/ChatGPT in their courses

### **STARFISH**

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.