

## COURSE INFORMATION

COURSE PREFIX/NO: **IMT 151**  
COURSE TITLE: **Piping Systems**  
LEC HRS/WEEK: 2.0  
LAB HRS/WEEK: 3.0  
CREDIT HRS/SEMESTER: 3.0

## DL ATTENDANCE/VA STATEMENT TEXTBOOK INFORMATION

### COURSE DESCRIPTION:

This course covers plumbing and piping systems used in industrial, commercial and/or residential construction. Emphasis will be placed on the reading and sketching of piping schematics as well as the fabrication and design of piping systems.

### COURSE COMPETENCIES:

Upon successful completion of this course the student must have demonstrated the capability to:

- Demonstrate personal and shop safety at all times
- Identify copper, plastic, and steel pipe
- Determine proper length of pipe needed in different systems with appropriate fittings.
- Measure and cut copper, plastic, and steel pipe to proper lengths
- Prepare pipes for cementing, threading, flaring, and sweating as appropriate
- Join various types of piping
- Identify function and name of valves in a piping system.
- Make and interpret working drawings using proper piping symbols
- Identify fittings and explain their uses
- Demonstrate consistent safe use of hand and power tools
- Select proper tools for the job.

### PERFORMANCE OBJECTIVES:

Student will demonstrate:

1. Ability to abide by personal and shop safety rules at all times.
2. Ability to identify copper, plastic, and steel pipe.
3. Ability to determine proper length of pipe needed in different systems with appropriate fittings.
4. Ability to measure and cut copper, plastic, and steel pipe to proper lengths.
5. Ability to prepare pipes for cementing, threading, flaring, and sweating as appropriate.
6. Ability to join various types of piping.
7. Ability to identify function and name of valves in a piping system.
8. Ability to make and interpret working drawings using proper piping symbols.
9. Ability to identify fittings and explain their uses
10. Consistent safe use of hand and power tools.
11. Ability to select proper tools for the job.

### COURSE REQUIREMENTS:

Employers need people who will be on the job when needed, be prepared to work, be able to work, get along with their supervisor and fellow employees, and who are willing to do whatever is necessary to get the job done and done well.

This means the employee must have the knowledge and the capability and, just as important, have the character and attitude that are necessary to enable the employee to "fit" into the organization.

## ATTENDANCE POLICY

Anyone absent more than 20% of the scheduled course hours will be withdrawn from the class according to school policy as outlined in the school catalog. If a student is tardy (arrives after roll call or is late returning from break) as many three times it will count as one hour of absence.

The fourth time and each time the student is tardy after that will count as one hour of absence. If a student leaves the class early without the instructor's approval it will count as one hour, or more, of absence (depending on how early).

## ACADEMIC HONESTY

Any student caught cheating or involved in other academic dishonesty will receive an "F" grade for the course and may be subject to further disciplinary action.

## GRADING

Based on this concept, students in industrial maintenance will be graded on the following:

Citizenship (See Separate Handout)  
Competencies and performance based objectives  
Academic knowledge

### CITIZENSHIP WILL COUNT 20% OF THE TOTAL COURSE GRADE

Competencies listed above are skills the student is expected to possess before he/she completes the course. They will be included as part of the grading criteria for tests and performance based objectives at appropriate times throughout the course.

For successful completion of the course, the student must score a minimum of 70% on each performance based objective.

### PERFORMANCE BASED OBJECTIVES WILL COUNT 40% OF THE TOTAL GRADE

## TESTING

The student will be tested a minimum of three times during the course. Tests may be "open book", "closed book" or both at instructor's option. Minimum passing score for test is 70%.

### TEST GRADES WILL COUNT 40% OF THE TOTAL COURSE GRADE.

The minimum passing score for the course is 70%. The grading scale is as follows:

Grade	Points
A	92.6 - 100
B	85.1 - 92.5
C	77.6 - 85
D	77.5 - 70

### Evaluation Method

Written/Verbal Test	40%
Performance Objective	40%
Citizenship	20%

Any project or examination not completed will result in a grade of "incomplete" which will become "F" if the project or examination is to be completed within 6 weeks of the semester. Make-up work will be scheduled at the instructor's convenience.

**ENTRY LEVEL SKILLS:**

A student entering this course should have an appropriate entrance score indicating an understanding of shop math and mechanical aptitude demonstrating interest in industrial mechanics.

**PREREQUISITES:** None.

**CO-REQUISITES:** None.

**TOPIC/CONTENT OUTLINE:**

- Pipe Principles and Preparation
- Make up Fittings
- Reading Drawings
- Mensuration
- Plumbing Hardware
- Domestic Water Systems
- Fixture Connections
- Testing

**METHOD OF INSTRUCTION:**

Formal classroom discussion, using book, components, and appropriate training aids, interspersed with "hands on" shop work for reinforcement.