Pipe Drafting (DFTG 2323)

Credit: 3 semester credit hours (2 hours lecture, 4 hours lab)

Prerequisite/Co-requisite: DFTG 1309 and DFTG 1305

Course Description
A study of pipe fittings, symbols, specifications and their applications to a piping process system. Creation of symbols and their usage in flow diagrams, plans, elevations, and isometrics

Required textbook and materials
1. *Pipe Drafting and Design,* 3rd edition, by Roy A. Parisher and Robert A Rhea, Gulf

    a. Professional Publishing

    b. ISBN number is 978-0-12-384700-3

2. Flash Drive – 1GB minimum

3. Piping Selector (Piping Wheel)

4. Notebook

5. Access to computer with AutoCAD

Course Objectives
Upon completion of this course, the student will be able to:
1. Create drawings of foundations, structural supports and process equipment.

2. Identify symbols and research specifications

3. Apply appropriate codes and standards

4. Generate a bill of material list

5. Use charts and standards

6. Generate isometric drawings

7. Calculate measurements for pipe fittings

Course outline
A. Introduction
    1. Introduction of faculty and staff
    2. Review syllabus
    3. Review class policies
    4. Overview of pipe drafting
B. Steel pipe
    1. History
    2. Materials and sizing
    3. Manufacturing pipe
    4. Methods of joining pipe
C. Pipe fittings
    1. Welded fittings
    2. Screwed and socket weld
    3. Flanged
    4. Cast iron and plastic

D. Flange basics
1. Flange ratings
2. Flange faces
3. Flange types
4. Bolts and gaskets
E. Valves
1. Valve defined
2. Valve types
3. Valve operators
F. Mechanical equipment
1. Types of equipment
2. Descriptions
3. Terminology
4. Vendor data drawings
G. Flow diagrams and instrumentation
1. Uses of flow diagram
2. Types of flow diagrams
3. Flow diagram instruments
4. Flow plan arrangement
H. Codes and specifications
1. Codes
2. Specifications
3. Specification classes
4. Abbreviations
I. Equipment layout
1. Plant coordinate system
2. Site plans
3. Unit plot plans
4. Equipment location drawings
5. Foundation location drawings
6. Piping drawing index
J. Pipe arrangement drawings
1. Sections and elevations
2. Responsibilities
3. Information sources
4. Dimensioning
5. Details
6. Pipe line list
K. Standard piping details
1. Pipe rack spacing
2. Piping flexibility
3. Anchors and guides
4. Insulation
5. Rod and spring hangers
L. Piping systems
1. Plant utilities
2. Valve manifolds
3. Utility stations
4. Meter runs
5. Sewer and underground
M. Piping isometrics
1. Isometric orientation
2. Drawing isometrics
3. Dimensions
4. Notes
5. Callouts
6. Isometric offsets

Grade Scale

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

Course Evaluation

Final grades will be calculated according to the following criteria:

Activity	Percentage
Assignments	25%
Quizzes	25%
Participation and notebook	10%
Projects	20%

Final	20%
Total	**100%**

Late penalties will be assessed on all work turned in late, 5 points per day

Course requirements

1. Create drawings with blocks from data sheets

2. Create isometric drawings

3. Recognize standard piping symbols and abbreviations

4. Produce a working set of drawings

Attendance Policy (all work during absence must be made up)

1. 20% absences allowed – 4 tardies are equivalent to 1 absence
2. Miss more than 20% of classes and receive an F for the course

Course Policies

1. No food, drinks or use of tobacco products in class.

2. No foul or harsh language will be tolerated.

3. Turn off all cell phones during lectures.

4. Do not bring children to class.

5. No cheating of any kind will be tolerated. Students caught cheating or helping someone to cheat can and will be removed from the class for the semester. Cheating can result in expulsion from LIT.

6. 6. If you wish to drop a course, the student is 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.

7. Back-ups: It is the student's responsibility to make back-up copies of their work. Do not rely on the server to be there 100% of the time. I cannot help you if you lose your work. Remember that in order for your work to be graded it must be turned in.

8. Internet usage

   a. Classroom computers have access to the internet.

   b. Student usage of the internet will be monitored.

   c. Proper usage of the internet will be allowed to be used for classroom research as directed.

   d. Any unauthorized use of the internet will not be tolerated.

   e. Improper usage of the internet, such as profanity, pornography, gambling, etc. will result in disciplinary action not limited to expulsion from LIT.

Disabilities Statement

The Americans with Disabilities Act of 1992 and section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services in the Cecil Beeson Building.

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 or obtained in print upon request at the Student Services Office.

Contact information

Contact info varies per instructor

Refer to Calendar for important dates and course schedules!