Advanced Pipe Drafting (DFTG 2345)

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

Prerequisite/Co-requisite: DFTG 2323

Course Description

A continuation of pipe drafting concepts building on the basic principles acquired in pipe drafting.

Required textbook and materials

1. *Pipe Drafting and Design,* 3rd edition, by Roy A. Parisher and Robert A Rhea, Gulf
    a. Professional Publishing; 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 complete piping drawings and process equipment drawings
2. Layout piping equipment
3. Apply appropriate codes and standards
4. Create complex bill of material with field and shop fab
5. Use charts and standards
6. Generate all necessary piping 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. Piping arrangement drawing
    1. Sections and elevations
    2. Responsibilities
    3. Information sources
    4. Dimensioning
    5. Details
    6. Pipe line list

C. Pipe systems
    1. Plant utilities
    2. Underground pipe
    3. Flare system
    4. Firewater system
    5. Cooling water system

D. Major equipment layout
    1. Exchangers
    2. Horizontal vessels

3. Vertical vessel
4. Pumps
5. Compressors

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 plan drawings with blocks from data sheets
2. Create isometric drawings
3. Create equipment and piping layouts using given data
4. Produce a working set of drawings

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

1. 5 absences allowed – 4 tardies are equivalent to 1 absence
2. 2 points per absence off final grade after 5 initial absences

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. Headphones may be worn only upon Instructor approval
5. Do not bring children to class.
6. 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 from expulsion from LIT.

7. 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.
8. BACK-Ups
   It is the student's responsibility to make back-up copies of their work. Do not rely on the server to be their 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 in your account on the server.
9. 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. Used for classroom research or 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.

Course Schedule

Week	Topic	Reference
1	Course introduction and policies a. Lecture b. Lab: create master drawing	Handouts
2/3/4/5	Piping arrangement drawing a. Lecture b. Lab: create plan drawing using specs	Chapters 10, 11 handouts
6/7/8	Piping system isometrics a. Lecture b. Lab: isometric drawings with components c. Project: as assigned	Chapters 12, 13
9/10/11/12/13/14	Build 3D pipe models a. Lecture b. Lab: create isometric and 3D models c. Project: as assigned	Chapter 14
15/16	Project coordination and course review a. Lecture b. Lab: Review chapters and drawings c. Project: as assigned	Chapter 15

Contact information

Contact info varies per instructor

Refer to Calendar for important dates and course schedules!