DFTG 2423 201HY
Pipe Drafting
Fall 2022
Tuesday 6:00-8:50pm Lab
A minimum of 3 hours online per week

Instructor Information:
Name: Andrew Gregory
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Office: STEM-134
Phone: 409 933-8161

Student hours and location:
My office hours are Tuesday, Wednesday, 2:00 to 5:00 pm. TVB 1304 And Friday 12:00-1:30 pm. Online TEAMS.

Required Textbook:
Pipe Drafting and Design, Roy A. Parisher & Rhea, Robert A. Publisher: Gulf Publishing, Houston, TX

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.

Course requirements:
Each week there is the same process for learning the material:

1. First you read the text.
2. In the lab we will collectively review any questions the class members have on the exercises.
3. In lab we will collectively complete the drawing problems.
4. You will also take a short quiz in Blackboard to keep you reading the text.
5. You will also complete a discussion forum post related to the week's topic

Determination of Course Grade/Detailed Grading Formula
Students will be graded on "points-earned" criteria. A grade of C or above is considered acceptable.

Assessments	Points Each	Total Point Value
Lab Attendance	5	75
Discussion Forum	10	150
Drawing Problems (per chapter)	65	975
Chapter Quizzes	20	300
Course Evaluation	50	50
TOTAL		**1,550**

*Individual Assignments due dates and criteria are listed on the schedule

Grading Scale

1395-1550 points = A

1240-1394 points = B

1085-1239 points = C

930-1084 point = D

Below 930 = F

Late Work, Make-Up, and Extra Credit Policy:

Late work will be penalized 20%. If there is a documented medical or family emergency, please see me to discuss a work plan to get you caught up.
You may complete late work up to the Sunday of the last week of the semester.
Only assignments or quizzes designated by the instructor will award extra credit.

Attendance Policy:

Attendance is required at the lab sessions. In addition, you are required to log in to 'D2L' a minimum of once per week.

Communicating with your instructor: ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. . I do receive my college email on my phone. Typically, emails are answered within a day or less. Course assignments will be graded within a week. I would like to have all the previous week assignments graded by Lab Time.

Student Learner Outcomes:
Upon successful completion of this course, students will:

1. Create a piping process unit of pipe fittings, valves, vessels, pumps, and exchangers using CAD Architectural Units.
2. Apply precision CAD inputs creating piping plans, elevations, sections, and details to scale.
3. Using CAD modify tools to change existing entities as required.
4. Construct orthographic and isometric piping drawings.
5. Construct drawings of various exchangers and vessels.
6. Construct drawings of process flow diagrams.
7. Dimension drawings using proper dimension techniques.
8. Analyze the planning of a drawing project and debrief on its outcome.

Core Objectives
This course addresses the following core objectives:

1. Critical Thinking Skills: Students will demonstrate creative thinking, innovation, and the ability to analyze, evaluate, and synthesize information.
2. Communication Skills: Develop, interpret, and express ideas through written, oral, and visual communication.
3. Empirical and Quantitative Skills: Students will demonstrate applications of scientific and mathematical concepts.
4. Teamwork: Students will have the ability to consider different points of view sand to work effectively with other to support a shared purpose or goal.
5. Social Responsibility: Students will demonstrate intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities.
6. Personal Responsibility: Evaluate choices and actions of others or one's own and relate consequences to ethical decision-making**.**

Table Mapping SLO's, Core Objectives and Assignments

Outcome	Maps to Core Objective	Assessed via this Assignment
1. Create a piping process unit of pipe fittings, valves, vessels, pumps, and exchangers using CAD Architectural Units.	Critical Thinking	Week 11 Drawing Problems
2. Apply precision CAD inputs creating piping plans, elevations, sections, and details to scale.	Communication-Visual	Week 12 Drawing Problems
3. Using CAD modify tools to change existing entities as required.		Week 5 Drawing Problems

4. Construct orthographic and isometric piping drawings.	Teamwork	Week 15 Drawing Problems
5. Construct drawings of various exchangers and vessels.	Social Responsibility	Week 6
6. Construct drawings of process flow diagrams.		Week 8
7. Dimension drawings using proper dimension techniques.	Quantitative	Week 13
8. Analyze the planning of a drawing project and debrief on its outcome.	Personal Responsibility	Discussion Forum Week 12

Academic Dishonesty:
Any incident of academic dishonesty will be dealt with in accordance with college policy and the Student Handbook. Academic dishonesty – such as cheating on exams is an extremely serious offense and will result in a grade of zero on that exam and the student will be referred to the Office of Student Conduct for the appropriate disciplinary action.

Student Concerns:
If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact Professor Sheena Abernathy, Chair Science and Engineering Department at sabernathy@com.edu or 933-8330.

Course outline:

August 23 Week 1
Reading - Chapter 1 Overview of Pipe Drafting and Design
Topic - Overview of Pipe Drafting
Assignment - Prepare a drawing template for use in this course

August 30 Week 2
Reading - Chapter 2 Steel Pipe
Topic - Steel Pipe
Assignment - Organizing a Library in Design Center

September 6 Week 3
Reading - Chapter 3 Pipe Fittings
Topic - Pipe Fittings
Assignment – Fittings Due

September 11 Week 4
Reading - Chapter 4 Flange Basics
Topic - Flange Basics
Assignment - Draw and use flange blocks Due

September 20 Week 5

Reading - Chapter 5 Valves

Topic - Valves

Assignment – Use a library of Valves to draw piping layouts

September 27 Week 6

Reading - Chapter 6 Mechanical Equipment

Topic - Mechanical Equipment - Vessels

Assignment - Vessel drawings and Unit schematics

October 4 Week 7

Reading - Chapter 7 Flow Diagrams and Instrumentation

Topic - Flow Diagrams and Instrumentation

Assignment - Prepare a flow diagram including all symbols as blocks

October 11 Week 8

Reading – Chapter 8 and 9

Topic – Codes and Specifications & Equipment Layout

Assignment – Draw a Unit Plan

October 18 Week 9

Reading - Chapter 9

Topic - Equipment Layout cont.

Assignment - Draw a Unit Foundation location drawing

October 25 Week 10

Reading - Chapter 10 pages 143-185

Topic - Piping Arrangement Drawings, Sections, and Elevations

Assignment - Prepare a Plan of a Unit

November 1 Week 11

Reading - Chapter 10 pages 186-193

Topic - Piping Arrangement Drawing, Sections, and Elevations

Assignment - Prepare Elevations and Section drawing of a Unit.

November 8 Week 12

Reading - Chapter 10 cont.

Topic - Piping Arrangement Drawing, Sections, and Elevations

Assignment - Prepare Elevations and Section drawing of a Unit.

November 15 Week 13

Reading - Chapter 11

Topic - Standard Piping Details

Assignment - Detail Drawings including welding symbols & Dimensioning

November 22 Week 14

Reading – Chapter 13 Piping Isometrics

Topic Piping Isometrics

Assignment – Prepare an Isometric Drawing

November 29 Week 15

Reading - Chapter 13 Piping Isometrics cont.

Topic - Piping Isometrics

Assignment - Prepare an Isometric Drawing

December 6 Week 16

Semester wrap up

Reading, Discussion Forums and Quizzes should be completed online during the week. We will work on the chapter problems during the in-person lab session.

Instructional Polices and Guidelines

Grade Appeal Process:
Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook. https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_20192020v5.pdf
An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.
https://build.com.edu/uploads/sitecontent/files/studentservices/Student_Handbook_2019-2020v5.pdf

Academic Success & Support Services:
College of the Mainland is committed to providing students the necessary support and tools for success in their college career. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement:
Any student with a documented disability needing academic accommodations is requested to contact Michelle Brezina at 409-933-8124 or mvaldes1@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Textbook Purchasing Statement:

A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy:
Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are only permitted to withdraw six times during their college career by State law. The last day to withdraw for the 1st 8 week session is October 5th, November 18th for 16 week courses and December 1st for the 2nd 8 week session
**It is the responsibility of the student to withdraw from the course officially by contacting Admissions and completing the necessary processes.

FN Grading:
The FN grade is issued in cases *of failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor.

Early Alert Program:
The Counseling Center at College of the Mainland has implemented an Early Alert Program. I have been asked to refer students to the program throughout the semester if they have difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Counseling Department. As student success and retention is very important to us, someone from the Counseling Department will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals

Resources to Help with Stress:
If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here https://www.com.edu/community-resource-center/. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.

Success Tips for Students, Course Delivery & Expectations:

Course Delivery & Expectations
The course content is delivered via the online portion of the course through read, watching demonstrations on a screencast and you completing practice exercises and chapter problems. A short five question quiz is also given on each chapter. This is to ensure that you read the text.

You will need to log in each week and the reading, watching the demos and completing the exercise and problems will probably take between 4 and 8 hours outside of the lab time.

The lab is intended to address your questions on the current chapter not presented it in its entirety. Therefore, you should have completed the reading, watched the screencasts and completed all the exercises before the weekly Lab. The exercises are due at 10:00pm the night before our weekly lab meeting

All exercises and drawing problems should be attached to the course assignment in the online course. The files should be in their native format, meaning, if it is a word document submit the word document or if it is an AutoCAD drawing submit the AutoCAD file.

Course Prerequisite:

DFTG 1433 or DFTG 1409 and DFTG 1305

Technology Prerequisite:

You must complete the free Online Learners workshop.

Course Format: The structure of this hybrid course is called either a 'Flipped' or 'Inverted' classroom.

What that means to you, as the student, is that the traditional lecture component of a Lecture/Lab course is delivered online. You can be at home on the couch or can watch and draw on your schedule. The online part is demonstration screencasts of how to use the AutoCAD software. The Lab part is where we meet together one evening a week for some quality face time. Both the online and Lab parts of the class are essential. You should have watched all of the screencasts, completed the exercises, and attempted the drawing problems prior to our Lab session. At the Lab session, we will open with a discussion of issues or problems the group encountered, provide more face-to-face demonstrations, and review your work one on one at your computer.

Technology Outage Policy:

It is your responsibility to complete the coursework in a timely manner. THE ONLY EXTENSION OF DUE DATES related to technology outage is an outage of College of the Mainland's systems such as Blackboard or the internet connect to the College. If your computer or internet provider is experiencing a technological outage, other options include completing the work at the College or at another location, which has WIFI.

Required Materials:

Flash Drive – 4 MB