Course Description: The student will continue work related to the piping industry, building on the basic principles acquired in the introductory course, DFTG 2323. Advanced techniques in isometrics, 3D, and working drawings will be prepared.

Prerequisite: DFTG 2323

Text, References, and Supplies: Process Pipe Drafting, Current Edition
Terence M. Shumaker

This class will utilize the required text throughout the entire semester; therefore, having a book is essential.

Software: AutoCAD, CADWorx Plant, P&ID, and Equipment

The student will need to provide his/her own:
USB Flash Drive
Pen / Pencil
Paper for taking notes

Course Goals/Objectives: The following list of course goals will be addressed in the course. The goals are directly related to the performance objectives. Upon successful completion of the course the student will:

1. Understand the purpose of a PFD and P&ID drawing.
2. Identify symbols associated with the PFD and P&ID drawing.
3. Follow the schematic representation of a PFD.
4. Demonstrate the importance of the PFD in line with the P&ID.
5. Use the proper method in labeling equipment.
6. Explain Print Reading techniques.
7. Create and understand the importance of a plot plan drawing.
8. Create 3D models of all equipment associated with the P&ID.
9. Understand the purpose of pipe specifications.
10. Follow piping specifications when creating a pipe model.
11. Create pipe model with all equipment externally referenced.
12. Create piping drawings of completed model.
13. Extract fabrication isometric drawings from completed pipe model
Student Contributions and Class Policies:

1. Students are expected to exhibit professional behavior during scheduled class times.
2. Regular and punctual attendance is expected of all students in all classes for which they have registered.
3. All absences are considered to be unauthorized unless the student is absent due to sickness or emergencies.
4. The instructor is responsible for judging the validity of any reasons given for absence.
5. Students will not be allowed to make up an examination missed due to an absence unless they have reasons acceptable to the instructor.
6. Students may be dropped from a class by the registrar, on or before the twelfth day of class, upon recommendation of the instructor who feels the student has been unjustifiably absent or tardy a sufficient number of times to preclude meeting the course objective.
7. After the twelfth day of class, it is the student's responsibility to initiate the drop in the Office of Student Services. Failure to do so may result in the students receiving a grade of “F.”
8. Students are responsible for maintaining, organizing, and backing-up copies of all digital files. Failure to maintain an up-to-date backup may result in data loss.

Evaluation of Students:

Regular daily work........................................40%
Periodic tests.............................................10%
Participation..............................................10%
Attendance................................................20%
Final Exam...............................................20%

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<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90 and above</td>
<td>A</td>
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<tr>
<td>80-89</td>
<td>B</td>
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<td>70-79</td>
<td>C</td>
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<tr>
<td>60-69</td>
<td>D</td>
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<tr>
<td>0-59</td>
<td>F</td>
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Course Schedule: This class meets two or four times a week, for a total of two (2) lecture hours and four (4) lab hours.

Due dates for course assignments will be announced throughout the semester. This will be subject to the progression of the class, therefore attendance is very important.
INFORMATION:
Students will acquire and evaluate information from existing sources and determine its relevance and accuracy as needed to build a systematic information base. Students will employ computers to acquire, organize, analyze, and communicate information.

TECHNOLOGY:
Applies technology to task, understands overall intent and proper procedures for setup and operation of equipment and computer hardware and software.

READING:
Students will locate, understand, and analyze data in documents including manuals, graphs, and schedules to perform tasks. The students will learn from a text to determine the main idea or essential message, the relevant facts and specifications, the meaning of unknown or technical vocabulary, and the appropriateness of theories of other writers.

MATHEMATICS:
Approaches practical problems by choosing appropriately from a variety of math techniques. Students will use basic math calculations throughout the course work.

LISTENING/SPEAKING:
Students will receive, attend to, interpret, and respond to verbal messages and other cues such as body language in ways that are appropriate to the purpose; for example, to comprehend; to learn; to critically evaluate; to appreciate; or to support the speaker.

PERSONAL QUALITIES:
The students will display responsibility, self-esteem, sociability, self-management, integrity and honest toward goal attainment and perseverance.

Students with Disabilities:
Any student who, because of a disabiling condition, may require some special arrangements in order to meet course requirements should contact Shep Grinnan as soon as possible. Mr. Grinnan’s office is located in the Scharbauer Student Center Building. These conditions may include documented physical or educational disabilities. Please be aware that services or accommodations are not automatic. Each student must request them and secure the proper authorizations/documentation.
Program Information:
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Office Phone: (432) 681-6314

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Advanced Technology Center

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