

SAM HOUSTON STATE UNIVERSITY

Department of Engineering Technology ETDD 3379 (section 01) Industrial Systems Drafting Spring 2018

Instructor: Junkun Ma
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Lecture Time: 17:00 ~ 20:50 Thursday
Lecture Location: Room 240, Pirkle
Office Hours: 13:00 ~ 17:00 Monday & Wednesday
10:00 ~ 12:00 Tuesday
Other time by appointment only

The instructor reserves the right to make changes to the schedule, policies, assignments, and grading scale described in the syllabus in the event of extenuating circumstances or by mutual agreement between the instructor and the students.

Course Description:

This course includes the illustration and preparation of drawings and related symbolism used in pipe drafting and design as well as fundamentals of piping and fitting. Electrical symbols and drawing for industrial application will also be briefly discussed.

Required Course Material:

Pipe Drafting and Design, 3rd Ed.
Roy A. Parisher and Robert A. Rhea
Gulf Professional Publishing (an imprint of Elsevier)
ISBN-13 978-0-12384-700-3 Copyright 2012

Supplies:

Portable storage device (such as flash drive) with minimum 10 MB free space

Course Objectives:

Some of the objectives for this course are as follows:

- Have an overview of Pipe Drafting and Design
- Understand the Manufacturing Methods for Steel Pipes
- Be able to recognize the types of pipe fittings and their uses
- Be able to recognize the various types of flanges
- Understand valve types and their operations
- Be able to recognize types of equipment and describe them
- Understand the uses of flow diagrams, instruments, and symbols
- Understand the codes and specifications used in the piping industry

- Understand the specifications and identify symbols used in the electrical field
- Be able to identify drawings used for electrical work for power distribution
- Understand drawings for lighting layout, power plant layout, roof top units, power distribution, alarm system, and panel schedule
- Be able to scale the electrical drawing
- Be able to produce construction drawings as it relates to the electrical and fluid field.

Lecture/Demonstrations:

The scheduled class meeting time is used for instructional lectures, demonstrations, discussion, lab activities, and evaluation. Lectures will focus upon the essential procedures, techniques, and other information needed to complete pipe drafting and design. Lecture sessions are intended to introduce the necessary fundamentals of industrial drafting and fitting as well as electrical systems that you need to master.

Term Project / Report:

A group project will be assigned for this course. The main purpose of the project is for the student to apply various concepts and theories introduced in this course to develop piping and electrical circuit design. A final report is expected to be submitted at the end of the semester.

Attendance Policy:

1. **Attendance:** Every student is expected to be present and *on time* for every class. You are tardy whether you come in late or leave early. Roll will be taken at the beginning of each class or lab session. In case you are absent, whether excused or unexcused, you are still responsible for the material covered.
2. Each student should be prepared for class/lab by having carefully read and studied all assigned textbook readings and/or handouts. Each project is to be done on an individual basis (except for the term project). Drawings / Assignments turned in late will be penalized **by 50% of actual grade earned.** Absences do not exempt you from the responsibility of turning material/assignment in on time and they do not extend the due date of the assignment schedule.
3. There will be no makeup exams, quizzes, or assignments except for special events (documented illness, business trip on behalf of SHSU etc.) or by mutual agreement prior to the absences between the instructor and the student.
****(Exempt attendance notification is the responsibility of the student and all info referring to the absent must be presented to the instructor prior to or within one week from the date in question. Therefore, the student should call or e-mail the instructor as soon as possible when becoming aware of the absence.)

Course Evaluation:

Each student should be prepared for class/lab by having carefully read and studied all assigned textbook readings and/or handouts. Each assignment is to be done on an individual basis. You should expect to spend a minimum of three to four hours per week in lab. The final grade for the course will be based on the following grading scale:

Grading Scale:

Review Questions/Assignments	15%
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Lab Assignments (CAD)	25%
Project & Report	15%
Mid-term exam	20%
Final exam	25%

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

Tentative Schedule:

Week	Date	Topics
1	01/18	Overview of Piper Drafting & Design; Electrical Systems Review of Course Syllabus Industrial Systems & Drawings
2	01/25	Steel Pipe
3	02/01	Pipe Fittings
4	02/08	Flanges
5	02/15	Valves
6	02/22	Mechanical Equipment
7	03/01	Flow Diagram & Instrumentation
8	03/08	Codes & Specifications / Mid-term Exam
9	03/15	*** Spring Break ***
10	03/22	Codes & Specifications / Equipment Layout
11	03/29	Piping Arrangement Drawings, Sections, and Elevations
12	04/05	Piping Arrangement Drawings, Sections, and Elevations
13	04/12	Standard Pipe Details / Piping systems
14	04/19	Piping systems / Piping Isometrics
15	04/26	Electrical drawings / Site plan / Drawing for lighting layout
16	05/03	Drawing for power layout / panels schedule / scale
*** <u>All Assignments DUE***</u>		*** <u>No Assignments accepted after Friday 05/04***</u>
17	05/07 ~ 05/10	FINAL WEEK

Review Questions:

All review questions are due BEFORE the lecture on the designated date.

Review questions and due date will be posted on Blackboard as the semester progress.

Academic Dishonesty:

When under the pressure of deadlines, some students may be tempted to copy another student's drawing and hand it in as their own. Before yielding to such temptation, the student should be aware of the University's policy statement on academic ethics, and that the instructor would consider failure for the course a more appropriate punishment. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating, plagiarism, collusion, and abusing resource materials on an examination or other academic work which is to be submitted.

Classroom Rules of Conduct:

Students will avoid doing behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, obstructs the mission of the university. **Cellular telephones, ear phones and pagers must be turned off before class begins.** **Students are prohibited from eating and drinking in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction.** Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

Student Absences on Religious Holy Days Policy:

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

University policy 861001 provides the procedures to be followed by the students and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first fifteen days of the semester or the first seven days of a summer session in which the absence(s) will occur. The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

Tobacco Policy:

In order to promote a healthy, safe, and aesthetically pleasing work, educational, and living environment, Sam Houston State University (SHSU) will endorse a smoke free and tobacco free environment. The primary purpose of this policy is to establish guidelines prohibiting smoking and the use of all tobacco products. Tobacco products include cigarettes, cigars, pipes, smokeless tobacco, and all other tobacco products.

Cell Phone Policy:

The use by students of electronic devices that perform the function of a telephone or text messages during class-time may be prohibited if deemed disruptive by the instructor to the conduct of the class. Arrangements for handling potential emergency situations may be granted at the discretion of the instructor. Failure to comply with the instructor's policy could result in expulsion from the classroom or with multiple offenses, failure of the course.

Any use of a telephone or text messages or any device that performs these functions during a test period is prohibited. These devices should not be present during a test or should be stored securely in such a way that they cannot be seen or used by the student. Even the visible presence of such a device during the test period will result in a zero for that test. Use of these devices during a test is considered evidence of cheating and could result in a charge of academic dishonesty.

Disabled Student Policy:

It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities from their instructors, school/department chair, or by contacting the Chair of the Committee for Continuing Assistance for Disabled Students and Director of the Counseling Center, Lee Drain Annex, or by calling (936) 294-1720.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Counseling Center and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. **NOTE: no accommodation can be made until you register with the Counseling Center**

No assignments will be accepted after the last day of lecture for Spring 2018 at 5:00PM on Friday, May 04, 2018