

# SAM HOUSTON STATE UNIVERSITY

## Department of Engineering Technology ETDD 1361 (section 03) Engineering Graphics Spring 2018

**Instructor:** Junkun Ma  
**Office Location:** Room 400J, Pirkle  
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**Lecture Time:** 10:00 ~ 11:50 Monday & Wednesday  
**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 is a recognized standard course in beginning drawing for engineering and industrial education. Drafting techniques including sketching, geometric construction, dimensioning, multi-view projection, section and auxiliary views are introduced. The purpose of this course is to provide students with an understanding of the importance of modern graphic communication to the design process. Students will gain hands-on experience creating freehand sketches, CAD technical drawings using orthographic projections, sectional views, auxiliary views, and isometric drawings. Emphasis is placed on creating drawings that are neat and correctly dimensioned using industry standards. Students will use traditional mechanical drafting methods and CAD software. Classroom activities will complement and support the laboratory exercises with explanations and demonstrations of required tasks.

### **Required Course Material:**

ETDD 1361 Engineering Graphics Assignment Package (by D. Benke)  
available at: Eagle Graphics (1304 Sam Houston Ave.)

### **Suggested Reference Book for AutoCAD:**

AutoCad 2018 Tutorial First Level 2D Fundamentals  
Randy H. Shih  
SDC Publications ([www.SDCpublications.com](http://www.SDCpublications.com))  
ISBN-13 978-1630571221 Copyright 2017

### **Supplies:**

Basic drafting equipment package  
Triangular Engineers Scale  
Triangular Architects Scale

Lead (2h, 6h, f, etc.)  
Eraser

6 inch 30/60 degree triangle  
6 inch 45 degree triangle  
Pencils or Lead Holder(s)  
Tape or Dots

Eraser Shield  
Compass (6 inch)  
Dividers  
Paper

Available at the following or other suppliers:  
Bearkat Books Art Supplies (1108 16<sup>th</sup> St.)

### **Course Objectives:**

This course provides a thorough introduction to contemporary engineering graphics utilized in today's industry and industrial technology education. Students are given comprehensive coverage of drafting theories, symbols, and ANSI standards, which are highlighted and put into practice by having each student complete a number of drawing assignments. The areas covered including technical sketching, lettering, drafting, equipment, geometric construction, orthographic projection, sectional views, basics dimensioning, and an introduction to AutoCAD software.

By the end of this course, students should be able to:

- Apply primary techniques in engineering drafting practices and CAD software application
- Visualize objects from multi-view drawings
- Sketch objects in multi-view and pictorial views
- Use AutoCAD for 2D drawings

### **Lectures/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 drafting assignments. Lecture sessions are intended to introduce the necessary body of drafting theory that you need to master.

### **CAD:**

The focus of this course is on the principles, tools, and techniques of advanced drawing that are used in both manual and CAD situations, with emphasis on CAD drafting and design techniques.

### **Laboratory Assignments:**

Laboratory assignments are evaluated using the following criteria as appropriate for the specific assignment:

- Directions followed correctly and all parts of the assignment completed.
- Construction -- views constructed correctly and placed in proper orthographic arrangement.
- Composition on the screen or page -- sufficient spacing between views, drawing centered, lettering sufficient size, title information complete.
- Accuracy -- lines meet exactly where expected, proper size and position of parts and of the entire object.
- Line types -- proper line types used for object, hidden features, center lines, cutting planes, etc.
- Dimensioning -- placement and spacing from proper views, appropriate text size, precision, notes & leaders in conformity to industry standards.

### **Equipment and Supplies:**

- **CAD software:** AutoCAD will be available in the computer lab. Students may choose to purchase his/her own software for personal computers at home.

- **Folders:** Students will be required to turn in work each week in a folder to keep all materials together. Each student will need one folder with *STUDENT NAME* and *COURSE NUMBER* plainly visible on the cover.

### **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. Drawings/Assignments turned in late will be penalized **one point per assignment subtracted from a student's final grade.** Absences do not exempt you from the responsibility of turning materials/assignments 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.)
4. If you have perfect attendance during this course you will have the option to be exempt from taking the final exam if you have earned enough **POINTS** to receive an A or B.

### **Course Evaluation:**

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. You should expect to spend a minimum of three to four hours per week in lab. Each student is expected to individually complete all drawing exercises for each of the units in this course. Penalties will be assessed for work, which is turned in late. The final grade for the course will be based on the following grading scale:

#### **Grading Scale:**

Lab Assignments (CAD)	60%
Practical Problems (Manual)	40%

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

**Tentative Schedule:**

<b>Week</b>	<b>Date</b>	<b>Assignment</b>
1	01/17	Introduction to Engineering Graphics Review Course Syllabus
2	01/22 & 01/24	Multi-view Sketching and Projection
3	01/29 & 01/31	Multi-view Sketching and Projection
4	02/05 & 02/07	Multi-view Sketching and Projection
5	02/12 & 02/14	Multi-view Sketching and Projection
6	02/19 & 02/21	Isometric Drawings
7	02/26 & 02/28	Dimension Drawings
8	03/05 & 03/07	Section View Drawings
9	03/12 & 03/14	*** Spring Break ***
10	03/19 & 03/21	Introduction to CAD
11	03/26 & 03/28	Lab Assignments
12	04/02 & 04/04	Lab Assignments
13	04/09 & 04/11	Lab Assignments
14	04/16 & 04/18	Lab Assignments
15	04/23 & 04/25	Lab Assignments
16	04/30 & 05/02	Lab Assignments
*** <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**