

ENGINEERING AND TECHNOLOGY EDUCATION DEPARTMENT ETE 2270 – 002 COMPUTER ENGINEERING DRAFTING Spring 2009

Instructor:	Jeffrey Turley	Class Room:	IS 008
Phone:	797-3746	Meeting Time:	M-W 1:30 – 3:20
Office Hours:	By Appointment	Email:	jeff.turley@usu.edu

Text: French, Helsel. (2003), Mechanical Drawing Board and CAD Techniques McGraw-Hill; Chicago.

Philosophy:

This course has been designed to give students background experience in drafting theory and applications through the use of drafting board and CAD techniques. This course's objectives are designed to deliver to the student enough background to enable them to competently work with CAD graphics in an entry-level drafting/industry job.

As such, this course in Computer Aided Drafting is very intense. It will require consistent, applied effort, independent preparations and performances on a daily basis. To aid yourself in the acquisitions of important concepts and principles it is highly recommended that you complete all your readings punctually. The expectations for this three credit class will seem high to you as will the standards of acceptable performance, but bear in mind these expectations are reflective of your profession in the field. As in any real world environment your professional behavior (preparation) will also affect your ability to be successful. In an attempt to emulate real industrial/drafting models you will be expected to work in a team environment on more than one occasion and utilize creative thinking skills. Drafting, unlike mathematics, has room for more than one acceptable drawing to completely describe a problem. There is room for a personal flair to your drawing...however, certain drawing fundamentals **MUST** be followed and observed. Their lack of application can and will dramatically affect your grade. These principles will be expected on your drawings throughout the entire semester.

Objective:

Successful completion of the course will provide students with the ability to accurately produce computer-aided drawings. The student is introduced to the AutoCAD computer aided drafting software produced by Autodesk.

The drafting theory part of this course includes the application of sketching, alternate methods of multi-view projection (section views, removed views, and auxiliary views), advanced dimensioning, working drawings, and descriptive geometry.

Course Activities:

1. Complete assigned readings, quizzes, and tests.
 2. Completion of assignments.
 3. Completion of a final group project.
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Goals:

Students will be able to:

1. Communicate ideas through sketching
2. Create multi-view drawings using AutoCAD
3. Create auxiliary views of inclined planes using AutoCAD
4. Create appropriate section views of objects using AutoCAD
5. Dimension drawings using conventional practices.
6. Create 3-D drawings using AutoCAD
7. Demonstrate various techniques employed in the use of CAD
8. Demonstrate the use of AutoCAD software to the extent that is conducive to a work environment
9. Demonstrate creative thinking skills
10. Demonstrate cooperative team working skills

Methods:

Several methods will be utilized in the acquisition of the goals above, including but not limited to the following...

1. Study of the text and other relevant material to gain an appropriate understanding of material presented in lecture.
 2. Practice of skills learned by utilizing the lab outside of scheduled class times.
 3. Completion of all required assignments, each with specific objectives to be mastered.
 4. Instructor lead demonstrations and lectures.
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Materials:

1. 2 Scales – Engineer and Architect (Combo is not acceptable)
 2. Jump drive (Memory Stick)
 3. Notebook for Portfolio (1.5 inch 3 ring binder)
 4. Dividers with fill tabs
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Attendance:

You will struggle if you do not attend; failure to do so can severely hurt your grade and is easily noticed upon assignment grading. Emergencies are understandable but in no way the norm. Please inform the instructor via email or in person if you will have such emergencies (in advance where possible) or else your missed assignments will be considered late.

Evaluation Method:

• Assignments (11 at 30 Pts Ea)	-	33%	A = 93+% up	A- = 90-93%
• Group Project (200 Pts)	-	20%	B+ = 87-89%	B = 83-86%
• Exams (final, midterm)	-	25%	B- = 80-82%	C+ = 77-79%
• Portfolio	-	10%	C = 73-76%	C- = 70-72%
• Participation, Quizzes	-	10%	D+ = 67-69%	D = 63-66%
			D- = 60-62%	F = 59 or less

All Problems/Projects are due at the assigned times. A penalty of 10% per day for late work up to 50% off maximum

Assignments:

- All assignments are due at the beginning of class on the day they are due.
 - A penalty of 10% per day for late work (50% maximum).
 - A maximum of five assignments can be reworked and received by the instructor
 - Late assignments cannot be reworked.
 - When turning in Rework Assignment, student must include original drawing being reworked.
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Group Project:

- Group of 4 to 6 students per group (selection by instructor)
 - Group Proposal (Accepted by instructor and placed in the portfolio)
 - Group Presentation (All members will participate in the Group Presentation)
 - Group Portfolio (Includes all group documents for manufacturing)
 - Individually - personal journal entries, notes, and sketches, etc.
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Exams:

- Mid-Term: Drawing Exam on techniques presented, discussed, and read in Chapters 1 thru 7.
- Final Exam: Comprehensive

Portfolio:

1. 1.5” Binder Minimum
2. 5 Dividers/Sections
 - a. Syllabus, Schedule
 - b. Design Briefs
 - c. Assignments (original assignments placed before redo’s)
 - d. Quizzes
 - e. Notes, Sketches. PowerPoint’s, etc.

**** Portfolios will be checked twice; once at midterm and once at the final
**** Please label all tabs according to the titles above

Fees: (\$10)

Utilized for plotting *class materials only*. Any other prints you pay for individually.

CAD Lab:

Please leave your work areas clean and have consideration for other students at work. Keep talking levels low and show other instructors, TA’s, Lab assistants, and fellow students courtesy. Remember to **check in using your card in the back of the lab**, even if you are arriving for class. Any drafting questions can also be directed towards these assistants, they are a valuable resource to you.

Special Needs:

If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center, preferably during the first week of course. Any requests for special considerations relating to attendance, pedagogy, taking of examinations, etc. must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative formats, i.e. large print, audio, diskette, or Braille.

Point Breakdown:

Description	Points	Total Points
11 Assignments (30 points each)	30	330
1 Group Project	200	200
2 Exams (Mid-Term 100, Final 150)	250	250
1 Portfolio (Mid Term and End of Term Check, 50 each)	100	100
4 Quiz's	10 Each	40
29 Attendance (3 points per day up to 80 points)	3	80
Total		1000