Registrar's Office

Grande Prairie Regional College

Department of Science

EG 1100 Engineering Graphics 3.5(2-1-3) UT(3.5) Fall
U of A Equivalent - Engg 110
Course Information

Calendar Description: EG 1100 Engineering Graphics 3.5(2-1-3) UT(3.5)
Sketching, drafting and interpretation of pictorials and multiviews of three-dimensional objects, visual design, introduction to scales, sectioning and dimensioning.
(CADD is required for 1/3 of the course credit.)

Instructor:	Dr. Jaime P. Santiago J209, 539-2865
Lecture:	MW 11:00 - 11:50 a.m., J227
Mechanical Drawing Lab AutoCAD Lab	RF 3:00 - 5:50 p.m., J203 RF 3:00 - 5:50 p.m., A313
Textbooks:	**Fundamentals of Engineering Drawing, 11th Edition** by Warren J. Luzzader and Jon M. Duff (Prentice-Hall) **AUTOCAD WITH LAB APPLICATIONS** RELEASES 10, 11, AND 12 by S. R. Kyles
Laboratory Workbook:	**Problems in Engineering Drawing for Design and Production 11th Edition** by Warren J. Luzzader, Jon M. Duff and Larry D. Goss

Grading:		
	Mechanical Drawing Lab Exercises	20%
	Midterm Exam (Mechanical Drawing)	14%
	Midterm Exam (AutoCAD)	6%
	Final Exam (Mechanical Drawing)	35%
	AutoCAD Quizzes	5%
	AutoCAD Assignments	5%
	AutoCAD Lab Exam	5%
	AutoCAD Project	10%

AutoCAD Seminars and Quizzes:

AutoCAD seminars will be held every Friday morning from 11:00 - 11:50 a.m. to highlight the important points of the units assigned for that week, i.e., the students must have done the assigned units before class to be able to participate in the discussion. Students will have to work on the assigned units on their own time. Computers will generally be available in the evenings. At the start of every seminar session students will write a 10 minute multiple choice quiz on the units assigned for that week.

AutCAD Assignments:

There will be approximately 10 sets of AutoCAD assignments in this course. Assignments will be marked in the lab during the last hour of every lab period. The instructor reserves the right to mark all assigned problems or only some randomly chosen problems. To test the students knowledge of DOS and AutoCAD, each student will load the AutoCAD software and load any assignment drawing requested by the instructor. The instructor may also asked the student to modify some part of the drawing to further test the student's knowledge of AutoCAD commands covered in the unit.

AutoCAD Project:

Groups of two students each will submit a project proposal before midterm exam week. The project should be an engineering application of AutoCAD including customization of the AutoCAD main and icon menu systems, a slide show presentation, printer-plotted drawings, and printed documentation. Project is due at the end of the semester. More details including limitations and formats will be provided later in the semester.

Midterm Examination:

The mechanical drawing midterm exam is tentatively scheduled for **20 October, 1994 from 3:00 p.m. to 5:50 p.m.** in the mechanical drawing lab. Arrangements will be made with the math instructor to allow all students to write the exam at the same time. AutoCAD midterm exam is scheduled for **21 October, 1994 from 11:00 a.m. to 11:50 a.m.** in the regularly assigned lecture room.

Final Examination:

Final exam is 3 hours long and will be held in the regular mechanical drawing lab room. Dates and times will be announced later by the registrar's office. Any conflicts should be reported to the registrar. There is no written AutoCAD final exam. Instead, the students will be asked to draw and print/plot a detail drawing using AutoCAD within a 3 hour lab time period.

Essential Equipment:

0.5 mm and 0.3 mm mechanical drafting pencils
pencil lead refills: 0.3 mm (2H and 4H); 0.5 mm (F or HB and 2H)
Or drawing pencils (F, 2H, 4H) and pencil sharpener
eraser (e.g., MARS 526 50 Vinyl)
scales: engineers (decimal inch) scale
metric scale (may be fan type or triangular)
45° triangle (6" or 8")
30°- 60° triangle (6" or 8")
protractor
compass
masking tape
3.5" HD (1.44 MB) floppy diskettes

Recommended Optional Equipment

erasing shield
divider
Ames lettering guide
dusting brush

Textbook Reading: Fundamentals of Engineering Drawing

Week	Subject	Chapter	Sections
1	Introduction, Drawing Instruments, Alphabet of Lines, Linewidths, Parallel, Perpendicular and Inclined Lines	1 2	All sections 2.1 - 2.13
2	Engineers, metric and architect's scales, Vertical and Inclined Lettering	2	2.24 - 2.25 2.34 - 2.42
3	Multiview Sketching	4 5 6	4.1 - 4.6 5.1 - 5.7, 5.9 - 5.14 6.5 - 6.16
4	Orthographic Projection	5	5.15 - 5.40
5	Engineering Geometry	3	3.1 - 3.40
6	Sectional Views	7	All sections
7	Auxiliary Views	8	All sections
8	Descriptive Geometry	9	9.1 - 9.30
9	Descriptive Geometry Isometric and Oblique Projection	9 11	9.1 - 9.30 11.1 - 11.22
10	Isometric and Oblique Projection Dimensionsing	 13	 13.1 - 13.25
11	Limit Dimensioning and Tolerances	13	13.1 - 13.25
12	Development and Intersections	10	All sections
13	Threads, ISO and ANSI standards	14	14.1 - 14.17
14	Detail drawing, assembly drawing Graphic Methods for Communication	16 19	16.1 -16.20 19.1 - 19.20

Mechanical Drawing Lab Schedule

Week	Date	Exercise No.	Subject
1	Sep 8/9		Introduction to labs. Introduction to DOS and AutoCAD software
2	Sep 15/16	3(Parts 1 & 3) 4(Parts 1 & 3) 6(Parts 1 & 2) 7(Parts 1 & 2)	Inclined Lettering Vertical Lettering Metric Scale Decimal Inch Scale
3	Sep 22/23	15 and 17	Multiview Sketching
4	Sep 29/30	20(Parts 1, 2 and 3) 21(Parts 1, 2 and 3)	3-view orthographic with missing line 3-view orthographic with missing view
5	Oct 6/7	10	Geometric Construction
6	Oct 13/14	31, 33 and 34(Section A-A only)	Sectional Views
7	**Oct 20 (Thursday)**	**Midterm Exam**	**Exam for whole class. All material up to sectional views.**
8	Oct 27/28	27, 29	Auxiliary Views
9	Nov 3/4	67, 68	Descriptive Geometry
10	Nov 10/11	**Labs cancelled**	**Friday, Nov 11 is Remembrance Day**
11	Nov 17/18	57, 58	Isometric and Oblique Pictorials
12	Nov 24/25	35, 36	Dimensioning
13	Dec 1/2	62, 65	Development and Intersection
14	Dec 8/9	Handout	**This is the AutoCAD lab exam.**

AutoCAD Assignments

Week	Chapter	Date Due	Problems
2	1 - 3	Sep 15/16	M1, C2 , A3 do not dimension any drawing
3	4 - 6	Sep 22/23	E4, A5, C6
4	7 - 9	Sep 29/30	M7 (ignore rocker arm), M8 (Title Block only, assume A size paper), C9
5	10, 11, 13, 14	Oct 6/7	E10 (Step 1 only), Printer plot E10, E13(generate new title block), E14
6	15, 16, 19, 20	Oct 13/14	M15. E16, M19(Macro 1), Chapter 20 Exercise (skip step 4)
7	**No CAD assignment**	Oct 20/21	**Midterm Exam Week**
8	21, 22, 23	Oct 27/28	E21, C23
9	25, 26, 27	Nov 3/4	Chapter 25 No. 1, 18, A26, A27 (upper cabinets and range hood only)
10	**No CAD assignment**	Nov 10/11	**Friday, November 11 is Remembrance Day**
11	28, 29, 30	Nov 17/18	A28, A29 (show 1 room only), A30 (no carpeting)
12	31, 32, 33	Nov 24/25	A31, C32
13	34, 35, 36	Dec 1/2	C34, calculate mass and centroid of C34
14		Dec 8/9	**AutoCAD lab exam**

EG1100 - Schedule for Fall, 1994-95

Date	Day	Lecture No.	Seminar No.	Subject	Mechanical Drawing Lab No.	AutoCAD Assignment No.	AutoCAD Quiz No.	Comments
5-Sep	Mon							Labour Day
6-Sep	Tue							Start of classes.
7-Sep	Wed	1		Introduction, drawing instruments, alphabet of lines, line weights				
8-Sep	Thu				1	1		
9-Sep	Fri		1	Chapter 1: Introductory geometry and setting up	1	1		
10-Sep	Sat							
11-Sep	Sun							
12-Sep	Mon	2		Scales				
13-Sep	Tue							
14-Sep	Wed	3		Technical lettering				
15-Sep	Thu				2	2		
16-Sep	Fri		2	Chapters 2 and 3	2	2	1	
17-Sep	Sat							
18-Sep	Sun							
19-Sep	Mon	4		Multiview and isometric sketching				
20-Sep	Tue							
21-Sep	Wed	5		Multiview projection				
22-Sep	Thu				3	3		
23-Sep	Fri		3	Chapter 4 and 5	3	3	2	
24-Sep	Sat							
25-Sep	Sun							
26-Sep	Mon	6		Conventional practices				
27-Sep	Tue							
28-Sep	Wed	7		Engineering geometry				
29-Sep	Thu				4	4		
30-Sep	Fri		4	Chapter 6 and 7	4	4	3	
1-Oct	Sat							
2-Oct	Sun							
3-Oct	Mon	8		Engineering geometry				
4-Oct	Tue							
5-Oct	Wed	9		Sectional views				
6-Oct	Thu				5	5		
7-Oct	Fri		5	Chapter 8 and 9	5	5	4	
8-Oct	Sat							
9-Oct	Sun							
10-Oct	Mon							Thanksgiving Day
11-Oct	Tue							
12-Oct	Wed	10		Sectional views				
13-Oct	Thu				6	6		
14-Oct	Fri		6	Chapter 10 and 11	6	6	5	
15-Oct	Sat							
16-Oct	Sun							
17-Oct	Mon	11		Auxiliary view				Midterm week
18-Oct	Tue							
19-Oct	Wed	12		Secondary auxiliary view				
20-Oct	Thu			Mechanical Drawing Midterm Exam				
21-Oct	Fri		7	AutoCAD midterm exam				
22-Oct	Sat							
23-Oct	Sun							
24-Oct	Mon	13		Descriptive geometry				
25-Oct	Tue							
26-Oct	Wed	14		Descriptive geometry				
27-Oct	Thu				7	7		
28-Oct	Fri		8	Chapter 13, 14, and 15	7	7	6	
29-Oct	Sat							

Date	Day	Lecture No.	Seminar No.	Subject	Mechanical Drawing Lab No.	AutoCAD Assignment No.	AutoCAD Quiz No.	Comments
30-Oct	Sun							
31-Oct	Mon	15		Contour map, bearing and slope, cut and fill				
1-Nov	Tue							
2-Nov	Wed	16		Isometric drawing				
3-Nov	Thu				8	8		
4-Nov	Fri		9	Chapter 25, 26, and 27	8	8	7	
5-Nov	Sat							
6-Nov	Sun							
7-Nov	Mon	17		Oblique pictorial				
8-Nov	Tue							
9-Nov	Wed	18		Dimensioning				
10-Nov	Thu							
11-Nov	Fri							Remembrance Day
12-Nov	Sat							
13-Nov	Sun							
14-Nov	Mon	19		Dimensioning				
15-Nov	Tue							
16-Nov	Wed	20		Tolerancing				
17-Nov	Thu				9	9		
18-Nov	Fri		10	Chapter 28, 29, 30	9	9	8	
19-Nov	Sat							
20-Nov	Sun							
21-Nov	Mon	21		Development				
22-Nov	Tue							
23-Nov	Wed	22		Intersection				
24-Nov	Thu				10	10		
25-Nov	Fri		11	Chapter 31, 32, 33	10	10	9	
26-Nov	Sat							
27-Nov	Sun							
28-Nov	Mon	23		Threads				
29-Nov	Tue							
30-Nov	Wed	24		Working drawing				
1-Dec	Thu				11	11		
2-Dec	Fri		12	Chapter 34, 35, 36	11	11	10	
3-Dec	Sat							
4-Dec	Sun							
5-Dec	Mon	25		Graphic method for communication				
6-Dec	Tue							
7-Dec	Wed	26		Communication				
8-Dec	Thu				12	12		
9-Dec	Fri		13		12	12		Last day of classes.
10-Dec	Sat							
11-Dec	Sun							
12-Dec	Mon							Start of final exams