Registrar
1993-1994

Grande Prairie Regional College

Department of Science

EG 2100 Engineering Graphics 3.5(2-1-3) UT(3.5) Winter
U of A Equivalent - Engg 110
Course Information

Calendar Description: EG 2100 Engineering Graphics 3.5(2-1-3) UT(3.5)
Sketching, draftingand 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., J226
Mechanical Drawing Lab	RF 3:00 - 5:50 p.m., J229
AutoCAD Lab	RF 3:00 - 5:50 p.m., A305
Textbooks:	**Fundamentals of Engineering Drawing, 11th Edition** by Warren J. Luzzader and Jon M. Duff (Prentice-Hall) **Applying AutoCAD** **A Step-By-Step Approach for AutoCAD Release 11** by Terry T. Wohlers
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%

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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. ***Extension Services is offering AutoCAD courses for the community. Extension courses will be held on Monday, Tuesday and Friday evenings. Therefore, it is recommended that students work on their AutoCAD assignments on Wednesday evening (Thursday lab section) and Thursday evening (Friday lab section).*** 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 being checked 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 Reading Week. The project should be an engineering application of AutoCAD including customization of the AutoCAD main and icon menu systems, a slide show presentation, 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 **17 February, 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 **18 February, 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
	Reading Week		
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	Jan 6/7		Introduction to labs. Introduction to DOS and AutoCAD software.
2	Jan 13/14	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	Jan 20/21	15 and 17	Multiview Sketching
4	Jan 27/28	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	Feb 3/4	10	Geometric Construction
6	Feb 10/11	31, 33 and 34(Section A-A only)	Sectional Views
7	**Feb 17**	**Midterm Exam**	**Exam for whole class. All material up to sectional views.**
	Feb 21 - 25	**Reading Week**	**Classes cancelled.**
8	Mar 3/4	27, 29	Auxiliary Views
9	Mar 10/11	67, 68	Descriptive Geometry
10	Mar 17/18	57, 58	Isometric and Oblique Pictorials
11	Mar 24/25	35, 36	Dimensioning
12	Mar 31/Apr 1	**Labs cancelled**	**Friday, March 31 is Good Friday.**
13	Apr 7/8	62, 65	Development and Intersection
14	Apr 14/15	Handout	**This is the AutoCAD lab exam.**

AutoCAD Assignments

Week	Units	Date Due	Problems
1	1 - 4		
2	5 - 9	Jan 13/14	Prb 2-3, 3-3, 6-1, 7-2
3	10 - 14	Jan 20/21	Prb 11-3, 11-2, 12-2, 13-1
4	15 - 19	Jan 27/28	Prb 16-1(Be sure views are positioned correctly.), 17-1, 19-1
5	20 - 23	Feb 3/4	Prb 20-1, 21-1, 23-1
6	24 - 27	Feb 10/11	Prb 24-2, 25-3, 26-2, 27-1
7		Feb 17/18	No CAD assignment. Midterm Exam
		Feb 21 - 25	**Reading Week**
8	28 -32	Mar 3/4	Prb 29-1, 30-1 (Use program provided by instructor. ATTEXT.BAS is not available in lab computers.) 31-3
9	33 - 37	Mar 10/11	Prb 33-5, 34-1, 35-1
10	38 - 42	Mar 17/18	Prb 38-2, 39-1, 40-1, 42-1
11	43 - 46	Mar 24 /25	Prb 43-2, 44-1, 46-1 (do preferred 3 orthographic views)
12		Mar 31/Apr 1	Labs cancelled
13	47 - 49, 57-58	Apr 7/8	Work on menu system for project.
14		Apr 14/15	AutoCAD lab exam