

SEP 26 2000

**Grande Prairie Regional College
Department of Science and Technology**

EG 2100 – Engineering Graphics
Fall, 2000
3.5(2-1-3)UT

Course Outline

Sketching, drafting and interpretation of pictorials and multiviews of three-dimensional objects, visual design, introduction to scales, sectioning, and dimensioning are included in the course content. (CADD is required for one third of the course credit.)

Note: Chemical Engineering will not accept this course as an option. Other Engineering Departments will accept this course as a technical option.

Instructor	Jaime P. Santiago J209 539-2865 santiago@gprc.ab.ca
Lecture	M 11:30 - 12:50 J228
CAD Seminar	F 10:00 - 11:20 J228
Laboratory	L1: T 13:30 - 14:20 J101, 14:30 - 16:20 J204 L2: R 13:30 - 14:20 J101, 14:30 - 16:20 J204
Textbooks	Graphics Technology by James Earle Applying AutoCAD, A Step-By-Step Approach by Terry T. Wohlers

Marks Distribution

Drawing Labs	15 %
CAD Labs	15 %
Drawing Midterm Exam	15 %
CAD Midterm Exam	15 %
Drawing Final Exam	20 %
CAD Final Exam	20 %

Lecture and AutoCAD Seminar Topics

Lecture materials are from Graphics Technology by Earle. AutoCAD topics are from Applying Autocad by Wohlers.

Lectures		AutoCAD Seminars	
Date	Topic	Date	Topic
		Sept. 8	Introduction to AutoCAD, Web browser and FTP software, Chapters 1 -5
Sept. 11	Lettering, scales	Sept. 15	Chapters 8 - 6
Sept. 18	Orthographic Projection	Sept. 22	Chapters 9 - 13
Sept. 25	Geometric Construction	Sept. 29	Chapters 14 - 16
Oct. 2	Isometric and Oblique Pictorials	Oct. 6	Chapters 17 - 20
Oct. 9	Sectional Views	Oct. 13	Chapters 21 - 24
Oct. 16	Auxiliary Views	Oct. 20	Chapters 25, 26, 27, 29
Oct. 23	Sketching/Drawing Midterm Exam	Oct. 27	Chapters 30 - 34
Oct. 30	Dimensioning	Nov. 3	Chapters 36, 37, 38
Nov. 6	Descriptive Geometry	Nov. 10	No class
Nov. 13	Slope and Bearing of a Line, Strike and Dip	Nov. 17	Chapters 39 - 42
Nov. 20	Contour maps, outcrop, profiles	Nov. 24	Chapters 44 - 47
Nov. 27	Revolution, Development	Dec. 1	Chapters 48 - 51
Dec. 4	Threads, Tolerancing	Dec. 8	No class

Sketching/Drawing Labs

Date	Topic	Drawing Sheets
Sept. 19, 21	Lettering Scales	1, 2 3, 4
Sept. 26, 28	Orthographic Sketching Missing Lines Missing Views	5 6 7
Oct. 3, 5	Geometric Construction	8, 9
Oct. 10, 12	Orthographic Drawing	10
Oct. 17, 19	Oblique and Isometric Sketching Oblique and Isometric Drawing	11 12, 13
Oct. 24, 26	Sections	14, 15
Oct. 31, Nov. 2	Primary and Secondary Auxiliary Views	16, 17
Nov. 7, 9	Dimensioning	18, 19
Nov. 14, 16	Descriptive Geometry Slope and Bearing of a Line Strike and Dip	20 21 22
Nov. 21, 23	Contour Maps, Outcrop Profiles	23 24
Nov. 28, 30	Threads Development	25 26

All sketching and drawing lab work are due at the end of the period.

Materials:

- 0.5 mm and 0.3 mm mechanical pencils, F, 2H and 4H lead
- eraser
- metric, engineers and architect's scales
- compass
- divider
- 30-60-90 degree triangle
- 45 degree triangle
- protractor
- masking tape
- erasing shield

AutoCAD Drawing Assignments

All drawing assignments are from *Applying AutoCAD, A Step-By-Step Approach* by Wohlers. All drawings must be printed and handed in to the instructor at the end of the lab. AutoCAD drawing files must be uploaded via FTP to each student's directory. Create subdirectories to organize your files appropriately.

Date Due	Textbook Chapters	Applying AutoCAD Skills	Using Problem Solving Skills	Project
Sept. 19, 21	Chapters 1-5	Ch 3 #1, p31 Ch 3 #4, p32 Ch 4 #2, p47 (Fig 4-12 only); #12, p50		
Sept. 26, 28	Chapters 6-8	Ch 6 #3, p78 (Fig 6-11); #6, p80; #7, p81		Part 1 Project, p102
Oct. 3, 5	Chapters 9-13	Ch 10, #5, p136 Ch 11, #6, p158 (Use proper linetypes.) Ch 12, #3, p172 Ch 13, #5,6, p182	Ch 9, #1, p121	Part 2 Project, p184
Oct. 10, 12	Chapters 14-16	Ch 14, #3, p200 Ch 15, #4, p219; #6, p219; #9, p221; #10, p222 Ch 16, #8, p239; #9, p240		
Oct. 17, 19	Chapters 17-20	Ch 17, #3, p255 Ch 18, #6, p270 Ch 19, #2, p282 Ch 20, #6, p295		Part 3 Project, p298 – draw a FULL SIZE plan view of J101. Use architectural units.
Oct. 24, 26	Chapters 21-24		Ch 21, #1, p312 Ch 22, #2, p335 Ch 23, #1, p345 Ch 24, #1, p361	I will demo Part 4 Project, p362
Oct. 31, Nov. 2	Chapters 25, 26, 27, 29	Ch 25, #6, p379 Ch 26 #7, p398 Ch 29 #2, p445		No Part 5 Project
Nov. 7, 9	Chapters 30-34		Ch 31, #2, p471 Ch 32, #2, p481 Ch 33 - Add attributes to symbols created in Ch 32, #2	Part 6 Project Use symbol library created in Ch 33 to draw a simple circuit; extract attributes
Nov. 14, 16	Chapters 36, 37, 38	Ch 36 #1, p537 Ch 37 #2, p551	Ch 38 #1, p563	Part 7 Project #2 – but draw die in 3D (not isometric as indicated in book). Define and save appropriate UCS's.
Nov. 21, 23	Chapters 39-42	Ch 39 #1-4, p575 Ch 40 #2,3, p587	Ch 41 #2, p601	
Nov. 28, 30	Chapters 44-47		Ch 46 #1, p665 Ch 47 #2, p679	
Dec. 5, 7	Chapters 48-51		Ch 48 #1, p692 Ch 48 #2, p693 Ch 50 – print and upload pulley2.dwg	Part 9 Project