Grande Prairie Regional College
Department of Science and Technology

EG 2090 – Intermediate Computer Aided Design

Winter Session, 2001
3(2-0-2)UT
U of A Equivalent – Eng g 209

Course Outline

Introduction to microcomputers and computer-aided design for non-engineering students. Introduction to technical sketching for a variety of applications. Computer-aided drawing and design using AutoCAD, with emphasis on the advanced features.

Note: This course is not open to you if you are registered in Engineering or Science.

Instructor

Jaime P. Santiago
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Lecture

W 18:30 – 20:20 J101

Lectures include a freehand sketching approach to technical graphics and design and demonstration of AutoCAD features. You are expected to become proficient in technical sketching and to apply what you learn to your computer-aided design project.

Laboratory

R 18:30 – 20:20 J101

Students work on assignments with the instructor available for individual assistance and troubleshooting.
In order to complete the assignments you will have to spend several hours each week in addition to the scheduled class/lab times.

Textbook

Applying AutoCAD 2000, A Step-By-Step Approach
Terry T. Wohlers
Glencoe McGraw-Hill

Freehand Sketching for CAD
G. S. Hoye
University of Alberta

Assignments

Due at the end of class on Thursdays unless otherwise specified. There is a 20% per day penalty for late assignments.

Marks Distribution

Term Work	20%
Midterm Exam	20% (10% sketching, 10% AutoCAD drawing)
Project	30% (3 dimensional solid models)
Final Exam	30% (10% sketching, 20% AutoCAD Drawing)

Lecture Topics (Wednesdays)

Date	Sketching Topics	AutoCAD Topics
January 3	Introduction/Basic sketching	Windows NT file management, FTP, email
January 10	Introduction to Design	Chapters 1 – 5 Alignment and snap grid, mtext, printing
January 17	Orthographic Sketching	Chapters 6 - 10
January 24	Pictorial Sketching	Chapters 11 - 15
January 31	Sectional Views Auxiliary Views	Chapters 16 - 20
February 7	Dimensioning	Chapters 21 - 24
February 14	Scales	Chapters 25 – 27, 29, 31
February 21	Midterm Exam	Midterm Exam
March 7	Perspective Sketching	Chapters 32, 36 - 38
March 14	Chapters 44 - 48	Chapters 42 and 43
March 21	Introduction to Microsoft PowerPoint	Work on project
March 28	Work on project	
April 4	Work on project	
April 11	Project presentations	

Laboratory Assignments (Thursdays)

All assignment drawing files must be uploaded to your personal directories via FTP. A printout with your name and problem number must be handed in to the instructor.

Lab No.	Due Date	Problems
1	January 11	*Freehand Sketching for CAD* Exercise 2.1 – Sketching Basics *Freehand Sketching for CAD* Exercise 2.3 – Student Profile Open the drawing Expo 98 maps.dwg located in the Samples, a subdirectory of the acad2000 directory. Draw your name using the MTEXT command and 20 point font size. Save the drawing as Expo 98 maps modified.dwg **in your working directory**. Upload the modified file to your personal directories in the FTP server. Send an email to **santiago@gprc.ab.ca** informing your instructor that you have uploaded the above mentioned drawing file. Do not attach the file to your email.
2	January 18	ENGINE.DWG after completing Chapter 4 Chapter 4, Problem 2, p 47-48. Do all three problems in one drawing.
3	January 25	Chapter 6, Problem 2, Figure 6-10, p78 BIKE.DWG after completing Chapter 9 Part 1 Project, p 102. Omit dimensions and center lines. *Freehand Sketching for CAD* Exercise 4.2 – 3, 4, 8 *Freehand Sketching for CAD* Exercise 4.3 – 2, 4, 6 *Freehand Sketching for CAD* Exercise 4.4 – 4, 9. 11
4	February 1	SNAP.DWG after completing Chapter 11 GASKET.DWG after completing Chapter 15 Measure the computer lab and make a freehand sketch of the floor plan including tables and workstations.
5	February 8	Make an AutoCAD drawing of the lab you sketched last week. Make a FULLSIZE printout of TITLE.DWG after completing Chapter 18.
6	February 15	TMP1.DWT template file after completing Chapter 22 Problem 4, p 311, Chapter 21 STAIRD.DWG after completing Chapter 23. Use a standard SCALE for the printout. Indicate the scale in the drawing.
7	February 22	*Freehand Sketching for CAD* Sketch an isometric pictorial of the object shown in Exercise 4.3, #8. Sketch an oblique pictorial of your microwave oven or TV.

8	March 8	BASE.DWG after completing Chapter 25 Chapter 31, Problems 2,3,4,5,6,7 pp 469-470 Chapter 29, Problem 8, pp 446-447 Dimension your computer lab drawing (major dimensions only).
9	March 15	WORKSHOP.DWG after completing Chapter 32 3D.DWG after completing Chapter 36 3D2.DWG after completing Chapter 37 3D3.DWG after completing Chapter 38
10	March 22	REGION2.DWG after completing Chapter 44 SHAFT.DWG after completing Chapter 46 COMPOS.DWG after completing Chapter 47 TABLE.DWG after completing Chapter 48
11	March 29	Make a PowerPoint presentation showing all drawings you have made in the course. Save the presentation as SHOW.PPT.
12	April 5	
13	April 12	