Grande Prairie Regional College
Department of Science and Technology

EG 2090 Introductory Computer Aided Design

Winter, 2002
3(2-0-2)UT
U of A Equivalent – Eng g 209

Course Outline

This course provides an introduction to microcomputers and microcomputer-aided drafting and design, with emphasis on advanced applications. Introduction to technical sketching for a variety of applications. Using AutoCAD on Windows NT workstations will be covered.

Note: This course cannot be taken for credit if you are registered in Engineering or Science.

Instructor	Jaime P. Santiago J209 539-2865 jsantiago@gprc.ab.ca
Lecture	W 6:30 – 8:30 p.m. 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 6:30 – 8:30 p.m. 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 time.
Textbook	Applying AutoCAD 2000, A Step-By-Step Approach by Terry T. Wohlers Glencoe McGraw-Hill Freehand Sketching for CAD by G. S. Hoye University of Alberta
Assignments	Due at the end of the class on Thursdays unless otherwise specified. There is a 20% per day penalty for late assignments.
Marks Distribution	Term Work 20% Midterm Exam 20% Project 30% Final Exam 30%

Lecture Topics

Date	Sketching Topics	Date	AutoCAD Topics
		January 3	Course introduction, Windows NT login, file management, FTP, Web browser, Email
January 9	Introduction to Design	January 10	Chapters 1, 2, 3, 4, 5 plus Snap, Ortho and some Object Snap (OSNAP) settings
January 16	Orthographic Projection	January 17	Chapters 6, 7, 9, 10, 11
January 23	Pictorial Sketching	January 24	Chapters 12, 13, 14, 15, 16
January 30	Sectional Views	January 31	Chapters 17, 18, 19, 20
February 6	Dimensioning	February 7	Chapters 21, 22, 23, 24
February 13	Scales	February 14	Chapters 25, 26, 27, 29, 31
February 20	Perspective Sketching	February 21	**Midterm Exam**
February 27	**No class, Winter Break**		
February 28			
March 6	Work on Project	March 7	Chapters 32, 36, 37, 38
March 13	Work on Project	March 14	Chapters 39, 40, 41, 42, 43
March 20	Work on Project	March 21	Chapters 44, 45, 46, 47
March 27	Work on Project	March 28	Chapters 48, 49
April 3	**Project Presentations**	April 4	**Project Presentations**
April 10	**Project Presentations**	April 11	**Project Presentations**

Assignments

All assignments drawing files must be uploaded to the FTP server. A printout with your name, problem number and filename must also be handed in to the instructor. No assignment will be marked unless both electronic file and plots are submitted.

Date Due	Problems	Filenames
January 10	*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 subdirectory of the acad2000 directory. Add you name using the MTEXT command and 20 point font size. Save the drawing as maps.dwg (be sure to use SAVEAS and not SAVE) in your working directory. Upload the modified file to the FTP server. Print the drawing and hand in to your instructor. Send an email to santiago@ee.ualberta.ca informing me that you have uploaded maps.dwg. Do not attach the drawing file.	maps.dwg

January 17	page 32, no. 4 ENGINE.DWG after completing chapter 4 page 47, no. 2, fig. 4-12 page 50, no 12, fig. 4-22	prb3-3.dwg engine.dwg prb4-2.dwg prb4-12.dwg
January 24	GASKET.DWG after completing chapter 6 page 79, no. 5, fig. 6-13 BIKE.DWG after completing chapter 9 page 121, no. 1, fig. 9-9 SNAP.DWG after completing chapter 11 *Freehand Sketching for CAD* Exercise 4.2 – 3, 4, 8 *Freehand Sketching for CAD* Exercise 4.3 – 2, 4, 6	gasket.dwg prb6-5.dwg bike.dwg prb9-1.dwg snap.dwg
January 30	*Freehand Sketching for CAD* Exercise 4.4 – 4, 9, 11 page 199, no. 2, fig. 14-6 page 200, no. 3, fig. 14-7 GASKET.DWG after completing chapter 15 page 221, no. 9, fig. 15-20 page 241, no. 11, fig. 16-22	prb14-2.dwg prb14-3.dwg gasket.dwg prb15-9.dwg prb16-11.dwg
February 7	Sketch the floor plan of your kitchen or the kitchen you wish to have Make an AutoCAD drawing of your sketch Make a FULLSIZE printout of TITLE.DWG after completing Chapter 18	mykitchen.dwg title.dwg
February 14	*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. TMP1.DWG after completing Chapter 21. TMP1.DWT after completing Chapter 22. STAIRD.DWG after completing Chapter 23. Use a standard scale for the printout. Indicate the scale used in the drawing.	tmp1.dwg tmp1.dwt staird.dwg
March 7	BASE.DWG after completing Chapter 25 pages 446-447, Chapter 29, no. 8 (download drawing) pages 469-470, Chapter 31, nos. 1-7 Dimension the drawing of you kitchen (major dimensions only)	base.dwg prb29-8.dwg prb31-17.dwg mykitchen1.dwg
March 14	WORKSHOP.DWG after completing Chapter 32 3D.DWG after completing Chapter 36 3D2.DWG after completing Chapter 37 3D3.DWG after completing Chapter 38	workshop.dwg 3d.dwg 3d2.dwg 3d3.dwg
March 21	REGION2.DWG after completing Chapter 44 SHAFT.DWG after completing Chapter 46 COMPOS.DWG after completing Chapter 47 TABLE.DWG after completing Chapter 48	region2.dwg shaft.dwg compos.dwg table.dwg
March 28	Make a PowerPoint presentation showing all drawings you have made in the course. Save the presentation as SHOW.PPT	show.ppt