

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

EG 2080 Introductory Computer Aided Design

Winter, 2002

3(2-0-2)UT

U of A Equivalent – Eng g 208

Course Outline

This course provides an introduction to microcomputers and microcomputer-aided design for non-engineering students. Introduction to multiview drawing for a variety of applications will be included. 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	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Term Work</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>Midterm Exam</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>Project</td> <td style="text-align: right;">30%</td> </tr> <tr> <td>Final Exam</td> <td style="text-align: right;">30%</td> </tr> </table>	Term Work	20%	Midterm Exam	20%	Project	30%	Final Exam	30%
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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
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	<p><i>Freehand Sketching for CAD Exercise 2.1 – Sketching Basics</i> <i>Freehand Sketching for CAD Exercise 2.3 – Student Profile</i></p> <p>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.</p> <p>Send an email to santiago@ee.ualberta.ca, informing me that you have uploaded maps.dwg. Do not attach the drawing file.</p>	maps.dwg

January 17	<p>page 32, no. 4 ENGINE.DWG after completing chapter 4 page 47, no. 2, fig. 4-12 page 50, no 12, fig. 4-22</p>	<p>prb3-3.dwg engine.dwg prb4-2.dwg prb4-12.dwg</p>
January 24	<p>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 <i>Freehand Sketching for CAD Exercise 4.2 – 3, 4, 8</i> <i>Freehand Sketching for CAD Exercise 4.3 – 2, 4, 6</i></p>	<p>gasket.dwg prb6-5.dwg bike.dwg prb9-1.dwg snap.dwg</p>
January 30	<p><i>Freehand Sketching for CAD Exercise 4.4 – 4, 9, 11</i> 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</p>	<p>prb14-2.dwg prb14-3.dwg gasket.dwg prb15-9.dwg prb16-11.dwg</p>
February 7	<p>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</p>	<p>mykitchen.dwg title.dwg</p>
February 14	<p><i>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.</i> 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.</p>	<p>tmp1.dwg tmp1.dwt staird.dwg</p>
March 7	<p>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)</p>	<p>base.dwg prb29-8.dwg prb31-17.dwg mykitchen1.dwg</p>
March 14	<p>WORKSHOP.DWG after completing Chapter 32 3D.DWG after completing Chapter 36 3D2.DWG after completing Chapter 37 3D3.DWG after completing Chapter 38</p>	<p>workshop.dwg 3d.dwg 3d2.dwg 3d3.dwg</p>
March 21	<p>REGION2.DWG after completing Chapter 44 SHAFT.DWG after completing Chapter 46 COMPOS.DWG after completing Chapter 47 TABLE.DWG after completing Chapter 48</p>	<p>region2.dwg shaft.dwg compos.dwg table.dwg</p>
March 28	<p>Make a PowerPoint presentation showing all drawings you have made in the course. Save the presentation as SHOW.PPT</p>	<p>show.ppt</p>