SYS 391
COMPUTER-AIDED DESIGN
SPRING 2003

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Office Hours: Mon 1:30–4 (111TB)

TEXT: *Discovering AutoCAD 2000.* M. Dix and P. Riley. Prentice Hall. Englewood Cliffs, New Jersey. 2000.

Basis of Grade:

Homeworks	50%
Project	50%

Course prerequisite: SYS 304

House Rules:

1. It is essential that **all** assignments for this course be completed in accordance with the Code of Academic Integrity. Failure to do so will **not** be tolerated. Cooperative efforts are not permissible, will be considered breaches of the honor code, and will be handled accordingly.

2. Homeworks are due by 4:00 p. m. on the day indicated. Late papers will be penalized. If you must be out of town, it is your responsibility to complete and submit the assignment before leaving. You are expected to do your own work.

3. Homework assignments during the first half of the course will entail the preparation of a set of drawings which must be done using AutoCAD 2000. Homeworks during the second half of the course will involve the solution of optimization problems using Excel and GAMS. Those assignments will be made on a weekly basis at that point in the course.

4. Details of the project will be provided in class. The project will involve the preparation of accurate detailed engineering drawings prepared using

AutoCAD 2000 and the solution of a (related) optimization problem. The completed project is due on Friday, May 2, 2003 at 4:00 p. m. Late papers will **not** be accepted.

5. Class will meet on Thursdays in the computer lab (142 TB) and on Tuedays in Moore 23.

6. **Syllabus and Homework:**

DATE	TOPIC	READING	HOMEWORK
Jan 14	Introduction		
Jan 21		1, 2, 3	
Jan 23			1-1, 2, 3 2-1, 2, 3, 4
Jan 28		4, 5	
Jan 30			3-1, 2, 3, 4, 5 4-1, 3, 4, 5
Feb 4		6	
Feb 6			5-1, 2, 3, 4 6-1, 2, 3, 4, 6
Feb 11		7	
Feb 13			7-1, 2, 3
Feb 18		8	
Feb 20			8-1, 2, 3
Feb 25		9	
Feb 27			9-2, 4, 5
Mar 4	Optimization	10	
Mar 6			10-1, 2

7. **Homework conventions**:

   (a) Use DTEXT to write your name and the drawing number on each drawing.

   (b) Edit files on the C: drive and when finished copy them to the E: drive for storage. This is important because network disturbances may trash your dwg file if they occur during a transfer.

   (c) File naming convention: use 1-1 as the filename for Drawing 1-1, etc.

   (d) In general, your drawing should look like the drawing on the right-hand side in the text. You may need to change the SNAP, LTSCALE, etc., from the text's suggestions in order to do this. Notable exceptions to this rule include: 3-3 to which the missing hidden and center lines should be added; 4-3; in 5-1, add the missing center and hidden lines; 6-1. Your drawing should include all text, dimensioning, hatching, etc., but only after these topics have been covered in the text.

   (e) Starting with the homework from Chapter 4, use the B size template for each drawing. This template, 1B, is described in Ch 4. Make yours exactly the same. It is then edited in Ch 8. Do your drawings in Layer 1, but put center lines in the center line layer, text in the text layer, etc. Observe the center marks in the drawings and use DIMCEN to make your center marks identical.

   (f) In Drawing 7-1, you may not be given all of the critical distances. You should estimate these distances by eye in order to make your drawing look like the one on page 287.