MEM 201

Fundamentals of Computer Aided Design

Course Outline and Introduction

Instructor: Robert Chang

Department of Mechanical Engineering and Mechanics
College of Engineering
Drexel University
rcc34@drexel.edu
CAD

**D as Drafting:**
CAD = Computer-Aided Drafting for Engineering graphics

**D as Design:**
CAD = Computer-Aided Design

**For D as Drafting:**
You Will Learn: Basics of Engineering Graphics
2D/3D View and Drawing concepts
Dimensioning and Tolerances
Computer-aided drafting and design by AutoCAD
**Design Process**

1. Identify the design problem.
2. Generate ideas for possible solutions.
3. Evaluate potential solutions.
4. Design iteration.
5. Implement and document a solution.

**Graphical Method**

1. Hand sketches to *communicate* and *visualize* the problem.
2. *Visualize* conceptual solutions models (sketches or drawings).
3. CAD models to *communicate* details for design evaluation.
4. CAD model for design iteration.
5. CAD model with working drawings to *document* the solution.
AUTOCAD™ 2008

- Popular CAD software engineering drafting applications.

- Easy to use interface, a variety of accompanying products, good technical support, International presence and has been around for over 20 yrs.

- Text Book- “Engineering Graphics with AutoCAD 2008” by James D. Bethune
Samples of CAD Model
Example of Working Drawing
Points to remember

• Course Syllabus
• Lecture Notes will be emailed
• Homeworks are due 1 week after it has been assigned
• Upload your homework to your course folder or submit directly to instructor
• **NO FOOD AND DRINKING IN THE LAB**
Assignment for Week 1

• Use Internet search to search at least three enabling CAD software, their vendors and major applications. One of the CAD software must be AutoCAD. Please also include AutoDESK company product information, AutoCAD technical support, and AutoCAD related products into the summary report.

• A 2 page type written report on your finding (maximum).

• Please do not copy from the website!

• Submit as electronic copy, and upload to your folder