

**MECH 300: Introduction to Mechanical Design**

**Instructor:**

Dr. F. C. Lai (Rm 220)

Office Hours: 08:00 - 10:00 Tue/Fri or by appointment

**Textbook:**

Introduction to Solid Modeling Using SolidWorks 2014, William E. Howard and Joseph C. Musto, McGraw Hill, 2015.

Mechanical Design Engineering Handbook, Peter R.N. Childs, Elsevier, 2014

**Course Description:**

Provides knowledge of design graphics and manufacturing processes by conventional and computer-aided methods. 3 credit hours.

**Course Outline:**

I. SolidWorks

1. Part Models

- Flange, Pulley
- Wide Flange Beam, Bracket
- Card Holder, Swept Parts, Handlebars
- Ribbed Flange, Cap Screw

2. Assembly Models

- Door Assembly
- Hatch Assembly

3. Engineering Drawings

- eDrawings
- Assembly Drawings
- 2D Layouts

II. Applications

- Solutions of Vectors Problems
- Analysis of Mechanisms
- Rapid Prototyping

III. Design Methods

**Grade:**

Homework (8) .....	30%
Exam (2) .....	20%
Project .....	50%

(In Absolute Scale)

90+ .....	<b>A</b>
80 - 89 .....	<b>B</b>
70 - 79 .....	<b>C</b>
60 - 69 .....	<b>D</b>
59- .....	<b>F</b>