



MET 104: Computer Aided Mechanical Drawing

Instructor: Dr. Ali Almandeel
Office: Room 2162 | Building 204H
Office hours:
Monday 2:00pm - 3:00pm
Wednesday 2:00pm - 3:00pm
Books: SolidWorks manual

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COURSE DESCRIPTION:

This class will introduce students to the fundamentals of SolidWorks software. And presents the applications of CAD in generating mechanical engineering drawings. Topics covered include drawing of detailed sub-assembly and assembly with tolerance, casting drawings with surface finish symbols, structural drawings with welding symbols.

COURSE TOPICS:

- Introduction to CAD and background (CAD vs. Manual Drafting)
- Concepts (3D Design and Component Based)
- Terminology
- User Interface (Windows Functions, SolidWorks Document Windows, Function Selection and Feedback)
- Design Process
- Design Intent
- Design Method
- Sketches (Origin, Planes, Dimensions and Relations)
- Features
- Assemblies
- Drawings
- Model Editing

COURSE OBJECTIVE:

At the end of this course, students will be able to set up CAD projects using SolidWorks according to the following standards:

- ASME Y14.5-2009 “Dimensioning & Tolerance”
- ASME Y14.2M-1992 “Line Conventions & Lettering”
- ASME Y14.3M-1994 “Multi-view & Sectional View Drawing”
- ASME Y14.41-2003 “Digital Product Definition Data Practices” Extension of Y14.5

EVALUATION AND GRADING:

▪ Exercises	30%
▪ Midterms	20%
▪ Final exam	50%
▪ Bonus	5%
▪ Total	105%

EXAMINATIONS TIMETABLE:

- Midterm Exam 1: **Wednesday, 17/10/2018**
- Midterm Exam 2: **Wednesday, 21/11/2018**
- Final Exam: According to CTS Office of the Registrar Examination Timetable.