

ME 252 - Mechanical Engineering Drawing

Hour: Lecture: 2 Hrs.

Tutorial: 2 Hrs.

Credit: 3.

Coordinator: Mostafa Rostom

Text Book:

- Notes prepared and edited (from several related text books, standards and codes in use) to cover the syllabus

Reference Books:

- Boundy, “engineering Drawings”, McGraw – Hill Co, Latest Edition
- Jackson, “Advanced Technical Drawing”, Longman, Latest Edition
- Ralph Grobowski, "The illustrated AutoCAD 2008 Quick reference", 2007, Autodesk Press.
- Sham Tickoo, "Auto CAD 2008: A problem solving approach", 2007, Autodesk Press.

Specific course information

- a. AutoCAD basics – Object construction and manipulation – Geometric construction – Layers, text generation and dimensioning – Section views, hatching and construction of blocks – Solid modeling – Assembly drawing with applications in Mechanical, Industrial and Marine Engineering – Free hand sketching – Conventional representation of Mechanical elements – Surface finish and machining symbols – Fits and tolerances – Welding and hydraulic symbols.
- b. Prerequisite: ME 151
- c. Designation: Required

Specific goals for the course

- Design a system, process, or component to meet desired needs subject to given constraints. Analyze and evaluate alternative solutions.
- Identify, formulate, and solve engineering problems. Make appropriate and necessary assumptions. Suggest and evaluate new approaches.
- Recognize the need for and demonstrate ability to engage in lifelong learning.

Course instruction outcomes

- The students will be able to make detail and assembly drawings with enough care and accuracy and according to appropriate conventions.
- The students will be familiar with More applications to Mechanical Engineering Drawing – to relate the applications of drafting techniques to mechanical Engineering practice.
- The students will be able To provide sufficiently understanding to conventional representation of different M/C elements, using current standards and Codes.

Student outcomes:

C, E, I

Topics Covered

- AutoCAD basics
- Object construction and manipulation
- Geometric construction
- Layers, text and dimensioning
- Section views, hatching and construction of blocks
- Solid modeling, primitives and Boolean operations
- Creating solid models from 2D polylines
- Viewing, modifying and editing solids, solid modeling exercises
- Assembly drawing with applications in Mechanical, Industrial and Marine Engineering – Assembly drawing exercises
- Free hand sketching
- Fits and Tolerances
- Applications on Fits and Tolerance on Drawings
- Conventional representation of Mechanical elements
- Surface finish and machining symbols - Assembly drawing exercises
- Welding and hydraulic symbols

Course / credit hours	Math & Basic Sciences	Engineering Topics	General Education
Mechanical Eng. Drawing (ME252)/3		3	