

ENGINEERING DRAWING (LAB) EE-215

Pre-requisite: None

Credit Hours 01

Contact Hours 48

RECOMMENDED BOOKS

- “Elementary Engineering Drawing”, 50th Edition N.D. Bhatt

REFERENCE BOOKS

- “First Year Engineering Drawing”, A.C. Parkinson, 6th Edition

OBJECTIVE OF COURSE

The objective of this course is to familiarize the students with fundamental principles of Engineering Drawing. So that they can work in team with civil and mechanical engineers. Basic concepts related to both manual drawing and computer aided design are given so that students can apply them in their projects and professional lives.

S.No	CLO/PLOs mapping	Domain	PLO
01	Apply the basic knowledge of mathematics and engineering drawing to understand engineering drafts and designs	C1,C3	01
02	Identify , formulate and analyze problems related to Engineering Drawing	C1,C4	02
03	Use technology to make minimize manual work in drawing.	P3	02
04	Utilize PRO-E tools for making Engineering Designs.	P3	05

COURSE CONTENTS

Drawing Instruments Introduction

- Introduction
- Drawing Board

- T-Square
- Set Square
- Large Scale Compass with interchangeable pencil and pen legs
- Lengthening bar
- Inking Pen
- Scales
- Protractors
- French curves

Sheet Layout And Free-Hand Sketching

- Sheet sizes
- Margin
- Border lines
- Title Block
- Folding Marks
- Scales and scale drawing
- Sketching or Freehand
- Sketch straight lines
- Sketching procedure
- Steps in sketching

Lines Lettering and Dimensioning

- Introduction
- Lines and it's types
- Lettering and it's types
- Dimensioning

Geometrical Construction

- Introduction
- Bisecting a line
- Draw parallel lines
- Divide a line
- Divide a circle
- Bisect and trisect angles
- Tangents
- Polygons

Orthographic projections

- Introduction
- Principles of Projection
- Methods of Projection
- Planes of projections
- Four Quadrants
- First angle projection
- Third Angle projection

Computer Aided Engineering Design

- Introduction to CAD, CAM
- Basics of Software Proe)
- 2-Dimension Drawing

- Lines, rectangles, circle, multi-line, copy, move, stretch, rotate Transform (DFT)
- Extrude
- Revolve
- Round
- Champher
- Sweep
- Halical Sweep
- Variable Section Sweep