

VOC 134: Engineering Drawing

Learning Objectives: The subject mainly focuses on use of drawing instruments, developing imagination and translating ideas. Developing the sense of drawing sequence and use of drawing instruments effectively.

Learning Outcomes: After successful completion of this course students are in position to prepare engineering drawings manually with given geometrical dimensions using prevailing drawing standards and drafting instruments.

Module I: Introduction to engineering drawing

Drawing equipments, instruments and materials, instrument types, specifications, Lines, Lettering and dimensioning, types of lines, Geometric construction, Numerals and Greek alphabets, Dimensioning methods.

Module II: Projections of point, Lines and Planes

Introduction to projection, Reference planes, orthographic projections, 1st angle and 3rd angle projection and their symbols, projections of point, projections of lines, Projections of planes, Projection of planes parallel to one of the reference planes, Projection of plane inclined to one reference plane and perpendicular to another.

Module III: Orthographic Projections

Types of projections-orthographic, perspective, isometric and oblique: concept and applications, Methods of projections, Conversion of simple pictorial views into Orthographic views, B.I.S. code of practice.

Module IV: Isometric Projections

Isometric axis, lines and planes, Isometric scales, Isometric view and isometric drawing, Difference between isometric projection and isometric drawing, isometric view from orthographic views of objects.

Module V: Tutorials, assignments and presentation based on Module I to IV

References:

1. “Elements of Engineering Drawing” , N.D. Bhatt, Charotar Publishing House.
2. “Engineering Drawing” , P.J.Shah, S.Chand, New Delhi.
3. “Fundamentals of Engineering Drawing” , W.J.Luzzadar, Prentice-hall of India Pvt. Ltd.- New Delhi.
4. “Fundamentals of Drawing” , K.R.Gopalkrishna, Subhash Publications, Bangalore.
5. “Engineering Drawing” , M.B.Shah, B.C.Rana, Pearsons.
6. “Fundamentals of Engineering Drawing” , French & Vierck, McGraw-Hill Publication.