

3/4 B.Tech. SIXTH SEMESTER

CE6L2

COMPUTER AIDED BUILDING DRAWING

Credits: 2

Lecture: --

Internal assessment: 25 marks

Lab: 3 periods/week

Semester end examination: 50 marks

Pre-requisites: Computer aided drawing, building drawing

Learning objectives:

1. To gain knowledge of fundamentals of building drawing based on national building code, enabling students to prepare them using AutoCAD.
2. To acquire skills in planning and detailing various types of buildings.

Course outcomes:

After performing the experiments listed in the syllabus, the students will have skills on:

1. Prepare working drawings for individual components like windows by auto cad software.
2. Prepare working drawings for individual components like fully paneled and paneled and glazed doors with wooden panel and RCC panel.
3. Develop the skills of create a drawing of steel roof truss, king and queen post trusses.
4. Develop the skills of drawing plans, sections and elevations of single and two stored residential building, office building, institutional building.
5. Design and draw various buildings with the given data as 3D modeling

UNIT I

Fully Paneled Window

Fully Paneled and Glazed Window

UNIT II

Fully Paneled Door with wooden panel

Fully Paneled Door with RCC frame

Paneled and glazed door with wooden panel

UNIT III

Steel roof truss

King post and Queen post trusses

UNIT IV

Single and multiple storied residential building - Plan, Elevation and Cross section

Framed office building- Plan, Elevation and Cross section

Institution building- Plan, Elevation and Cross section

UNIT V

3D view of a single floor residential building

3D view of a dog legged stair case

3D view of a spiral stair case

Learning resources:

Text books:

1. A Course in Civil Engineering Drawing, (4th edition) Sikka V.B., S.K.Kataria & Sons, New Delhi, 1998.
2. Building Drawing with an Integrated Approach to Built Environment, (4th edition) by Shah, M.G., Kale C.M. and Patki S.Y., Tata McGraw-Hill, 2008.

Reference codes:

1. IS: 962 – 1967 Code of Practical for Architectural and Building Drawing
2. IS: 4021 – 1983 Specification for Timber Door, Window and Ventilator Frames
3. IS: 6523 – 1983 Specification for Precast Reinforced Concrete Door and Window Frames
4. IS: 1003 – 1977 Part I, II Specification for Timber Panelled and Glazed Shutters
5. IS: 2191 – 1983 Part I, II Specification for Wooden Flush Door Shutters
6. IS: 6198 – 1983 Specification for Ledged, Braced and Battened Door and Window Frames.