|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **B. TECH 1st** **SEMESTER** | **L** | **T** | **P** | **C** |
| **-** | **-** | **3** | **1.5** |
| **20CE1L01: Building Planning And Drawing Lab** |

**COURSE OUTCOMES**

Students are able to

1. understand the building bye-laws, plan various buildings as per the building by-laws.
2. plan the individual rooms with reference to functional and furniture requirements.
3. prepare different sign conventions and bonds
4. learn the skills of drawing building elements like doors and windows.
5. develop the skills of Drawing Plans, Sections and Elevations of different buildings.

**SYLLABUS:**

**UNIT-I**

**BUILDING BYELAWS AND REGULATIONS:** Introduction - terminology - objectives of building Bye laws - floor area ratio - floor space index - principles under laying building bye laws - classification of buildings - open space requirements - built up area limitations- height of buildings- wall thickness - lightening and ventilation requirements.

**UNIT -II**

**RESIDENTIAL AND PUBLIC BUILDINGS**

**Residential buildings:** Minimum standards for various parts of buildings -requirements of different rooms and their grouping- characteristics of various types residential buildings.

**Public buildings:** Planning of educational institutions, hospitals, dispensaries, office buildings, banks, industrial buildings, hotels & motels, buildings for recreation.

**UNIT-III**

**SIGN CONVENTIONS AND BONDS :** Brick, stone, plaster, sand filling, concrete, glass, steel, cast iron, copper alloys, aluminum alloys etc., lead, zinc, tin etc., earth, rock, timber and marbles. English bond and Flemish bond- odd and even courses for one, one-half, two and two & half brick walls in thickness at the junction of a corner.

**UNIT- IV**

**DOORS, WINDOWS, VENTILATORS AND ROOFS:** Panelled door, panelled and glassed door, glassed windows, paneled windows, swing ventilators, fixed ventilators, coupled roof, collar roofs. King Post truss, Queen Post truss Sloped and flat roof buildings: drawing plans, Elevations and Cross Sections of given sloped roof buildings.

**UNIT-V**

**PLANNING AND DESIGNING OF BUILDINGS:** Draw the Plan, Elevation and sections of a Residential & Public buildings from the given line diagram.

**Text /Reference Books:**

1. Planning and Design of buildings by Y.S. Sane.
2. Planning, designing and scheduling by Gurucharan Singh and Jagadish Singh
3. Building planning and drawing by M. Chakravarthi.
4. ‘A’ Series & ‘B’ Series of JNTU Engineering College, Anantapur.
5. Building drawing by Shah and Kale.