

COURSE TITLE : **BUILDING PLANNING AND DRAWING**
COURSE CODE : **4001**
COURSE CATEGORY : **A**
PERIODS/WEEK : **5**
PERIODS/SEMESTER : **90**
CREDITS : **3**

TIME SCHEDULE

MODULE	TOPIC	PERIODS
I	Roof Doors and Windows	17
	Test I	1
II	Planning of buildings as per NBC and KBR	21
	Test II	1
III	Development of building drawings	29
	Test III	1
IV	Building Service Plan Culvert	19
	Test IV	1
	TOTAL	90

Rationale:

Building drawing is a means of communication between owner architect, engineer and contractor. Civil engineering diploma holder has to supervise various construction processes and execute civil engineering structures. A civil engineer is required to understand and prepare the drawings. He has to interpret drawings so that he can execute the works. Civil engineer should be competent to convert his ideas into the drawing. Drawing helps in detailing the structures with quality parameters. Drawings are essential for drafting specifications and tender documents. The knowledge of this subject is useful for building construction, estimating and costing, surveying, projects etc.

OBJECTIVES

On completion of the course the student should be able

MODULE 1.

Types of Roofs: -

- 1.1.0 To draw the elevation of a coupled roof by showing all the members.
- 1.1.1 To draw the elevation of closed coupled roof by showing all the members.
- 1.1.2 To draw the elevation of a single collar roof by showing different members.
- 1.1.3 To draw the elevation of a double collar roof by showing different members.

Doors and Windows: -

- 1.2.0 To draw the elevation and sectional plan of a fully paneled door by showing important members
- 1.2.1 To draw the elevation and sectional plan of a fully glazed window of three panels, showing Important members

MODULE II

- 2.1.0 To perform planning of building as per NBC & KBR. - Residential and public
- 2.1.1 To draw the plan, section and elevation of buildings (residential and public) for the given plinth area and requirements .

MODULE III

- 3.1.0 To draw the detailed plan, section and elevation of buildings- given the line diagram.

Building with flat roof: -

- 3.1.1 To prepare the plan, section and elevation of an office building with two rooms and a verandah with R.C.C. flat roof

3.1.2 To prepare the plan and elevation of a residence with two bedrooms, one hall, a kitchen, a store, a common bath and a sit out and with R.C.C. flat roof

Buildings with tiled roof: -

3.2.0 To draw the elevation, section and plan showing roof line of a hall with hip roof

3.1.1 To draw the elevation, section and plan showing the roof lines of a hall with gabled roof

Building with sloped and flat roofs: -

3.3.0 To draw the elevation, section and plan of a two storied building with two rooms and a verandah and stair on the ground floor with flat roof and another two rooms and verandah on the first floor with sloping roof.

MODULE IV

4.1.0 To prepare building service plan.

4.1.1 To draw the layout plan showing existing water supply, electricity, and drainage and sewerage main lines.

4.1.2 To draw the layout plan of existing and proposed water supply, drainage, sewerage lines within the plot.

4.2.0 To prepare drawings of culvert.

4.2.1 To draw the plan longitudinal section and elevation of a slab culvert with return wing wall.

4.2.3 To draw the plan longitudinal section and elevation of a slab culvert with splayed wing wall.

CONTENT OUT LINE

MODULE I

Roofs: -

Coupled roof ii) Couple closed roof iii) Single collar roof iv) Double collar roof

Doors and Windows: -

i) Fully Panelled Door ii) Fully Glazed Window iii) Half glazed and Panelled door.

MODULE II

Planning of building as per NBC & KBR. - plan residential and public building for the given plinth area and requirements by applying the rules. Viz – Two & Three bedded residence, an office building, A primary school building and a public health center.

MODULE III

Development of Building drawings. Draw the detailed plan, section and elevation of buildings- given the line diagram,

Building with flat roof: -

Prepare the plan, section and elevation of an office building with two rooms and a verandah with, R.C.C. flat roof.

Prepare the plan and elevation of a residence with two bed rooms, one hall, kitchen, store, a common bath and a sit out with R.C.C. flat roof.

Buildings with tiled roof: -

Draw the elevation, section and plan showing roof line of a hall with hip roof.

Draw the elevation, section and plan showing the roof lines of a hall with gabled roof.

Building with sloped and flat roofs: -

To draw the elevation, section and plan of a two storied building with two rooms and a verandah and stair on the ground floor with flat roof and another two rooms and verandah on the 1st floor with sloping roof.

MODULE IV

Prepare the service plan showing, 1) the layout of existing and proposed water supply electricity drainage and sewerage main lines from or to which connections are proposed to be given with dimensions and specifications. 2) The layout of existing and proposed water supply drainage and sewerage lines within the plot with dimensions specifications and description of installation. 4) The north direction.

Plan longitudinal section and elevation of a slab culvert with return wing wall..

Plan longitudinal section and elevation of a slab culvert with splayed wing wall.

REFERENCES

1. Civil Engg: Drawing Balagopal and RS Prabhu – Spades
2. Time Savers standards for Building types – Joseph Deciarra and John Callender
Tata Mc Graw Hill
3. NBC, KMBR