

## Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore Shri Vaishnav Institute of Technology and Science Choice Based Credit System (CBCS) in Light of NEP-2020 Civil Engineering Department Generic Elective (Undergraduate Program)

2024

COURSE CODE	CATE- GORY	COURSE NAME	TEACHING &EVALUATION SCHEME								
			THEORY			PRACTICAL					
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	LT	Т	Р	CREDITS
GUCE 301	GE	Building Planning and Construction	60	20	20	0	0	4	0	0	4

 $Legends: \ L \ - \ Lecture; \ T \ - \ Tutorial/Teacher \ Guided \ Student \ Activity; \ P \ - \ Practical; \ C \ - \ Credit;$ 

**\*Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

### **Course Educational Objectives (CEOs):**

The students will be able to:

- 1. Apply the knowledge of engineering fundamentals to understand, the characteristics of basic civil engineering materials.
- 2. Develop plan, section and apply bylaws and investigate causes and remedies for cracks, have an insight to cost effective construction

#### **Course Outcomes (COs):**

The students should be able to:

- 1. Understand provisions of national building code, bye laws and architectural composition
- 2. Describe building services with their line plan.
- 3. Do Planning and drawing of building plans efficiently.
- 4. Understand the cracks developed in members and remedial measures for the same

## Syllabus

### UNIT I

**Planning of Building**: Introduction to National Building Code, Building byelaws and terminologies, principles of planning, Plan section and Elevation of building, Sub-structure, and Super structure, Doors and windows: location of doors and windows, types of doors, types of windows, Staircase: requirements of good staircase, types.

### UNIT II

**Building Amenity**: Introduction and application: -Building Amenities like water supply and drainage, electrification, fire safety, thermal insulation: sun shading devices, acoustics of building. Line plan of building services like Water supply system and Electrification of building.

### UNIT III

**Interior Design**: Functional requirement of interior designer, basic elements of interior design, Design problems: Interior design for spacious rooms, comfortable rooms, theme rooms, living area, cooking area, drinking area dining area, home offices, sleeping area, bathrooms, public/private buildings.

Chairperson Board of Studies Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore Chairperson Faculty of Studies Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

### **Controller of Examinations**

Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore Joint Registrar Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

# 12 Hrs.

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### UNIT IV

### 12 Hrs.

**Building Material and Construction:** Cement: introduction, ingredients of cement, grade of concrete, properties. Steel: definition, types of steel, uses of steel, market forms of steel used in construction, brick masonry, stone masonry.

### UNIT V

### 12 Hrs.

**Building Maintenance:** Different types of Deterioration in building, Deterioration of concrete, deterioration of masonry works, prevention of cracks and leaks, cost effective construction, anti-termite treatment in building.

### **Text Books:**

- 1. R.S. Malik & G.S. Meo, Building Design and Drawing, Computech Publications Limited.
- 2. S.V Deodhar, Building Science & Planning, Khanna Publishers, Delhi.
- 3. Rangwala, Building Construction, Charotar Publishing House Pvt. Ltd, 2016

### **References:**

- 1. Shah, Kale & Patki; Building Design and Drawing; TMH
- 2. Gurcharan Singh & Jagdish Singh Building Planning, Design and Scheduling, Standard Publishers Distributors.

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