



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 (First Year)

| COURSE CODE | CATE-GORY | COURSE NAME | TEACHING & EVALUATION SCHEME | | | | | | | | |
|-----------------|-----------|---|------------------------------|---------------|----------------------|-------------------------|----------------------|---|---|---|---------|
| | | | THEORY | | | PRACTICAL | | L | T | P | CREDITS |
| | | | END SEM University Exam | Two Term Exam | Teachers Assessment* | END SEM University Exam | Teachers Assessment* | | | | |
| GUCE 102 | 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

12 Hrs.

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

12 Hrs.

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

12 Hrs.

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.



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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.