

<b>Devi Ahilya Vishwavidhyalaya, Indore, India</b>			
<b>Institute of Engineering &amp; Technology</b>			
<b>Subject code and name</b>	<b>Type</b>	<b>L-T-P</b>	<b>Credits</b>
8VLRC2: Building Planning & Architecture	<b>L</b>	<b>T</b>	<b>P</b>
	PE	<b>3-1-1</b>	<b>4+1(P)</b>

### **Learning Objectives:**

1. To have the knowledge of various building components.
2. To understand the fundamental principles and concepts of planning and architecture for buildings. □
3. To study about different views of layout. □
4. To learn the development controls covered by building bye laws and national building code for buildings.

### **COURSE CONTENTS**

#### **Unit - I**

Drawing of Building Elements- Drawing of various elements of buildings like various types of footing, open foundation, raft, grillage, pile and well foundation, Drawing of frames of doors, window, various types of door, window and ventilator, lintels and arches, stairs and staircase, trusses, flooring, roofs etc.

#### **Unit - II**

Building Planning- Classification of buildings, Provisions of National Building Codes and Rules, Building bye-laws, open area, Setbacks, FAR terminology, Design and drawing of Building, Design concepts and philosophies, Preparing sketch plans and working drawings of various types of buildings like residential building, institutional buildings and commercial buildings, site plans, presentation techniques, pictorial drawings, perspective and rendering, model making, introduction to computer aided design and drafting, Applying of principle of architectural composition (i.e. unity, contrast, etc.), Principles of planning, orientation in detailed drawings.

#### **Unit - III**

Building Services- Introduction of Building Services like water supply, sewerage and drainage systems, sanitary fittings and fixtures, plumbing systems, principles of internal & external drainage systems, principles of electrification of buildings, intelligent buildings, elevators & escalators their standards and uses, air-conditioning systems, fire fighting systems, building safety and security systems, ventilation and lightening and staircases, fire safety, thermal insulation, acoustics of buildings.

#### **Unit - IV**

Principles of architectural composition- Unity, balance, proportion, scale, rhythm, harmony, accentuation and contrast. Organising Principles in architectural- Symmetry, hierarchy, axis, linear, concentric, radial, and asymmetric grouping, primary and secondary masses, Role of colour, texture, shapes/forms in architecture. Architectural space and mass, visual and emotional effects of geometric forms, space activity and tolerance space. Forms related to materials and structural systems. Elements of architecture: Functions – Pragmatic utility, circulatory function, symbolic function, Physiological function. Structure – Physical structure, Perceptual structure.

#### **Unit - V**

Concepts of master plan, structure plan, detailed town planning scheme and action plan, estimating future needs - planning standards for different land use, allocation for commerce, industries, public amenities,

