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|----------------------------------|----------------------------------------------------------|
| <b>Subject Code : 1ET1060405</b> | <b>Subject Title : Building and Town Planning</b>        |
| <b>Pre-requisite Subject</b>     | Elements of drawing, Building components and their types |

**Course Objective:**

1. To develop a basic knowledge about how to get the maximum benefit from building and its services.
2. To enable the students to understand the planning and drawing of residential buildings & Public Building.
3. To avar the students about the preparing various types of drawings like, orthographic, perspective, working drawings etc.

| Teaching Scheme (Hours per week) |          |           |        | Evaluation Scheme (Marks) |                       |                       |                       |             |
|----------------------------------|----------|-----------|--------|---------------------------|-----------------------|-----------------------|-----------------------|-------------|
| Lecture                          | Tutorial | Practical | Credit | Theory                    |                       | Practical             |                       | Total (T+P) |
|                                  |          |           |        | University Assessment     | Continuous Assessment | University Assessment | Continuous Assessment |             |
| 4                                | 2        | -         | 6      | 70                        | 30                    | -                     | -                     | 100         |

| Subject Contents         |                                                                                                                                                                                                                                                                                                                                                             |             |            |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| Sr. No                   | Topic                                                                                                                                                                                                                                                                                                                                                       | Total Hours | Weight (%) |
| <b>Building Planning</b> |                                                                                                                                                                                                                                                                                                                                                             |             |            |
| 01                       | <b>Introduction to building drawing:</b><br>Definition, need and importance of drawing in civil engineering, drawing sheets, graphical and numerical scale, lines, lettering and dimensioning, types of building, building components, section of wall through door/window, sketches of building components, conventional signs, symbols and abbreviations. | 4           | 08         |
| 02                       | <b>Building Bye-Laws:</b><br>Objectives, applicability and importance of building bye-laws as per National Building Code, F.S.I., Standards for residential buildings, Building by-laws of local authority, standards for industrial, public, commercial and institutional buildings.                                                                       | 6           | 10         |
| 03                       | <b>Submission &amp; Detailed drawings: and Building Services</b><br>Concept of line plan, detail plan, key plan, site plan, layout plan, working drawing, structural drawing foundation plan, submission drawing, furniture arrangement, etc. Building services like water supply, drainage, electrification etc. for modern buildings                      | 6           | 08         |
| 04                       | <b>Planning of Residential Buildings:</b><br>Orientation of building, principles of building planning- architectural principle of planning, plan, elevation and section of the building, development of detailed plan from line diagram, standard guidelines for planning a building                                                                        | 8           | 12         |
| 05                       | <b>Planning of Public buildings:</b><br>Buildings for different purposes like Education, Health, Recreation, Industry and Transportation.                                                                                                                                                                                                                   | 4           | 08         |
| 06                       | <b>Perspective Drawing:</b><br>Definition and concept, different types of perspective views.                                                                                                                                                                                                                                                                | 4           | 08         |
| <b>Town Planning</b>     |                                                                                                                                                                                                                                                                                                                                                             |             |            |
| 01                       | <b>History of Town Planning:</b><br>History, Ancient Planning in India, Origin and Growth of towns, Satellite Town, Ribbon development, Fundamental principles of town planning                                                                                                                                                                             | 5           | 08         |
| 02                       | <b>Civic Surveys:</b> Introduction, Purpose, Uses, Types, Data required and presentation.                                                                                                                                                                                                                                                                   | 3           | 04         |
| 03                       | <b>Elements of City Planning:</b> Zoning and its classification, height zoning, Urban land use models, housing, Urban road Patterns, Master plan, Town centres, Public utility services, Civic, centers, Shopping Center, Town Planning Schemes, CBD.                                                                                                       | 5           | 08         |
| 04                       | <b>Neighborhood Planning:</b> Concept, importance, Principles of neighborhood planning, features of neighborhood unit, components                                                                                                                                                                                                                           | 2           | 06         |
| 05                       | <b>Slums:</b> Introduction, causes, characteristics, effects, slum clearance                                                                                                                                                                                                                                                                                | 2           | 06         |

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|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----|
| 06 | <b>Smart City:</b> Introduction, concepts, features, requirements, identifying the smart cities, smart cities in India.                                             | 4 | 08 |
| 07 | <b>Earthquake Resistant Buildings:</b> symmetry, simplicity, continuity, consideration of locating staircase and overhead water tank, most sensitive to earthquake. | 3 | 06 |

#### Course Outcome:

After successful completion of the course, student will be able to:

1. understand and interpret civil engineering drawings.
2. understand principles of building planning, principles of architectural planning, building Bye laws, town planning and perspective drawing.
3. prepare working drawings, foundation plans and other executable drawings with proper details for residential buildings

#### List of Reference Books:

1. National Building Code-2005, New Delhi, India.
2. Gurucharan Singh, Building Planning, Designing and scheduling, Standard Book House, New Delhi
3. M. G. Shah, C. M. Kale and S. Y. Patki, Building Drawing with an integrated approach to Built Environment, Tata McGraw-Hill.
4. Y. S. Sane, Planning, designing building, Allies Book Stall
5. Y. N. RajaRao, Planning and Designing of residential building, Standard Publishers.
6. Rangwala, S.C., Town planning, Charotar Publishing House, Anand.
7. G. K. Hiraskar, Town Planning.

#### Drawing sheets (A1 Size):

1. **Residential Planning:** Two storied Building: Plans, elevation, section, lay-out plan, key plan, site plan, area table, schedule of opening. Scale-1:100.
2. **Public Building:** Ground Floor plan, typical floor plan, elevation, section, lay-out plan, key plan, site plan, area table, schedule of opening.
3. **Working Drawing:** sheet should accommodate min. five types with sectional details. ( Furniture plan, Drainage lay out, Toilet Detail, Wood work detail, Kitchen detail, Electrical plan etc).
4. **Perspective Drawing:** One Point as well as Two point perspective of sheet -1 planning.

#### List of Open Source Software/learning website:

1. ocw.mit.edu
2. nptel.ac.in

#### Web Materials:

1. <http://edudel.nic.in>
2. <http://bis.org.in/other/quake.htm>
3. [http://www.vastu-design.com/india\\_homes.htm](http://www.vastu-design.com/india_homes.htm)
4. <http://www.thepeninsulaneighborhood.com/ThePlan.html>
5. [http://www.historytution.com/indus\\_valley\\_civilization/town\\_planning.html](http://www.historytution.com/indus_valley_civilization/town_planning.html)