

Branch Name:	Civil Engineering
Program Code:	ET401
Course Name:	2ET4010202
Course Code:	Building Drawing
Pre-requisite Course:	--

RATIONALE:

Drawing is very important subject especially for civil engineers. This is also considered as a language of engineering communication. Basic and primary features of Engineering Drawing are being taught in Basic Engineering Drawing, this course has been designed in such a way that a technician can produce more detailed Civil Engineering Drawing related to construction of single storied , double storied residential buildings, public buildings and other simple civil engineering structures. Application of building regulation and by-laws as per local authorities will also be taught in this course, knowledge of which is must for planning buildings so that plan is approved by local civic authorities.

COURSE OBJECTIVE:

The course content should be taught and implemented with the aim to develop different types of skills so that students are able to acquire following competencies

1. To understand the principle of planning for residential & Public building
2. To understand the regulations as per National Building Code
3. To identify the functional requirements and building rules
4. To understand the sketches and working drawings

TEACHING AND EVALUATION SCHEME:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)			
Lecture	Tutorial	Practical	Credit	Theory		Practical	
				University Assessment	Continuous Assessment	University Assessment	Continuous assessment
2	-	4	4	60	40	40	60

DETAILS OF COURSE CONTENTS:

S. NO.	TOPIC	Total Hrs.	WEIGHTAGE
1	Introduction to building drawing 1.1. Types of drawing like index map, key plan, village map, site plan, layout plan 1.2. Types of Projection in Building drawing 1.3. Graphical and numerical scale, lines, lettering and dimensioning 1.4. Working drawing, large scale drawing Enlarges scale drawing. 1.5. Symbols, Conventions and Abbreviations 1.6. Sizes of various standard papers 1.7. Reading and interpreting building drawing	04	15

2	Building, regulation, byelaws and Principal of Planning 2.1. Building bye laws for Residential building 2.2. Principles underlying building bye laws. 2.3. Colour code for alteration and addition in existing building 2.4. Approval procedure with respect to bye laws 2.5. Basic information of Gujarat Real Estate Authority (RERA-2016)	06	20
3	Planning of Residential Building 3.1. Concept plan and drawing of various residential building. 3.2. Concept plan of Buildings for different purposes like Education, Health, Recreation, Industry and Transportation. 3.3. Given situation & plot area, preparation of detailed drawing of residential building with details of Line plan, Detailed plan, ground floor plan, First floor plan, elevation and section 3.4. Model preparation of simple building.	08	35
4	Constructional details drawing of buildings 4.1. Drawings of Parts of buildings such as staircases, chajjas, Projections, columns, pier, slabs, footings etc. 4.2. Provisions in Drawings for building services like air conditioning, plumbing, water supply, elevators and lifts. 4.3. Show building service like water supply, sanitary, electrification on line plan. 4.4. Detail drawing of RCC beam, column, foundation and slab.	04	15
5	Perspective Drawings 5.1. Introduction of perspective view and other related terms. 5.2. Perspective view of single room residential building and simple public buildings 5.3. Elements of perspective drawing.	06	15

COURSE OUTCOME:

On the completion of the course student will be able to:

1. Implement the regulations for layout planning and preparation of drawings
2. Prepare building drawings for residential building and other buildings
3. How to apply various types of scales as per needs.
4. Apply the Bye laws and Principles of Planning for residential and other public buildings.
5. Generate perspective view of simple building by different methods

LIST OF PRACTICAL:

The exercises/practical/experiments should be properly designed and implemented with an attempt to develop different types of skills leading to the achievement of the competency. Following is the list of exercises/practical/experiments for guidance.

SR. No.	Experiment
1	Interpretation of building drawings approved under local authority.
2	Draw symbols, conventions and Abbreviations in sketch book.
3	Study of building by-laws act and national building code (NBC).
4	Draw detail of wall foundation section in sketch book.
5	Draw detail plan on drawing sheet plan, elevation and section.
6	Draw working drawings sheet for single storied residential building GF& FF plan with elevation, section.
7	Prepare concept plan of any other type of building considering local bye laws: high school building, Shopping centre, Hospital and Industrial Building in sketch book.
8	Develop perspective view of single room residential building with steps.
9	Visit a residential building and observe the existing building service and Draw line plan for above services in sketch book
10	Prepare a model of a simple building using card board

LIST OF REFERENCES:

1. Civil engineering drawing by Gurcharansingh, B. D. KatariaSons , Ludhiana
2. Urban Development Authority, Building Bye laws; Local Authority like AUDA
3. Planning and Designing of residential building, Y. N. Raja Rao, Standard Publishers.
4. National building code of India.

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Implement the regulations for layout planning and preparation of drawings.	3 Applying 2 Understanding
CLO2	Use building drawing Symbols, Conventions and Abbreviations	3 Applying 1 Remembering
CLO3	Apply the Bye laws and Principles of Planning for residential and other public buildings.	3 Applying 2 Understanding
CLO4	Prepare detail drawings for single and two storied residential building and public building	6 Creating 3 Applying
CLO5	Develop building models & Generate perspective view of simple building by different methods	5 Evaluate 4 Analyzing
CLO6	provide scope and provisions for building components and services	2 Understanding 1 Remembering

Course Learning Outcomes	Program Outcomes (Pos)											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CLO1		H		L							M	
CLO2	H					M				L		
CLO3			H				M				L	
CLO4	M		H			L						
CLO5			H			M			L			
CLO6				H	M							L

H: High, M: Medium, L: Low