GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Diploma in Architecture

Level: Diploma

Branch: Architecture

Course / Subject Code: DA01063021

Course / Subject Name: Architectural Drawing - I

w. e. f. Academic Year:	2025-26
Semester:	First
Category of the Course:	Professional Core Courses (PC)

Prerequisite: Zeal to learn the subject.

Rationale:	The subject, basic architectural drawing is designed to impart fundamental skills of using drawing instruments, essential for all the drawing-oriented subjects. It also helps in imparting skill of using various types of Architectural letters, Gothic letters and different types of lines. This skill can be developed by drawing geometrical constructions used at various levels in drawing plans, elevations and sections of the building. The topic, Orthographic projection will help students to understand various architectural terminology like plan, elevation, side elevation including drawing in first angle method and of projection by drawing plans, elevations and side elevations of plane, geometrical and complex objects. It is essential for the students to prepare presentation drawings of a building.

Course Outcomes:

After Completion of the Course, Student will able to:

No	Course Outcomes
01	Draw various geometrical shapes with dimensions using different drafting tools.
02	Prepare basic architectural drawings with appropriate lettering, graphics and dimensioning.
03	Draw orthographic views from a given isometric/axonometric views of simple objects and vice versa.

Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+P	Assessment Pattern and Marks				Total Marks
				Theory		Tutorial / Practical		
L	T	P	C	ESE (E)	CA (M)	CA (I)	ESE (V)	
3	0	2	5	70	30	20	0	120

Legends: L-Lecture; T – Tutorial/Teacher Guided Theory Practice; P -Practical; C – Credit, CA - Continuous Assessment; ESE -End Semester Examination.

GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Diploma in Architecture

Level: Diploma

Branch: Architecture

Course / Subject Code: DA01063021

Course / Subject Name: Architectural Drawing - I

Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1	**Practice of Drafting Techniques:** 1a. Use various types of drafting instruments associated with the drafting techniques.	4	11
2	**Lines, lettering and dimensioning:** 2a. Use different types and intensities of lines in a given drawing. 2b. Use different lettering styles in a given drawing. 2c. Use relevant techniques for the dimensions in a given drawing.	5	11
3	**Geometrical Constructions:** Carryout geometrical constructions using drafting tools and techniques.	6	22
4	**Orthographic Projections**: Theory of projections such as object projectors, planes of projections (views), direction of vision Identify the quadrant in which the object is located 4a. Draw the projection of points, lines in various positions with respect to H.P & V.P. 4b. Draw the projection of planes placed in various position with respect to H.P. & V.P 4c. Draw the orthographic projections using the first angle method from the given pictorial (isometric) view	15	22
5	**Isometric and axonometric views:** Concept of pictorial drawing 5. a Draw Isometric and Axonometric views of geometrical forms, building components and furniture.	15	22
	Total	45	100

Suggested Specification Table with Marks (Theory):

Unit No.	Unit Title	Distribution of Theory Marks						
		R Level	U Level	A Level	N Level	E Level	C Level	Total Marks
I	Practice of drafting Techniques	1	3	3	0	0	0	07
II	Lines, lettering and dimensioning	1	3	3	0	0	0	07
III	Geometrical Constructions	2	6	6	0	0	0	14
IV	Orthographic Projections	5	8	8	0	0	0	21
V	Isometric and axonometric views	5	8	8	0	0	0	21
	Total	14	28	28	0	0	0	70
	%	20	40	40	0	0	0	100

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

References/Suggested Learning Resources:

(a) Books:

S.No.	Title of Book	Author	Publication with place, year and ISBN
1	Engineering Drawing	N.D.Bhatt	Charotar Publishing House; Anand, 2014. ISBN : 9789380358963
2	Textbook of Engineering Drawing	P.J. Shah	Chand, New Delhi. 2013 ISBN : 9788121941822
3	Engineering Drawing	M.B. Shah, B.C. Rana	Pearson's. 2009 ISBN: 9788131759714
4	Engineering Drawing	Basant Agrawal, C. M. Agrawal	McGraw-Hill, 2019 ISBN : 9789353167448

(b) Open source software and website:

- https://www.youtube.com/results?search_query=engineering+drawing
- https://youtu.be/MT1T31GtGpg
- https://youtu.be/WEwkepkv6mg
- https://youtu.be/trJQIvatIpI
- https://nptel.ac.in/courses/112/103/112103019
- https://nptel.ac.in/courses/112/105/112105294
- https://en.wikipedia.org/wiki/Engineering_drawing i)
- https://www.slideshare.net/search/slideshow?searchfrom=header&q=engineering+drawing
- https://www.scribd.com/search?content_type=tops&pa

Suggested Course Practical List:

Unit No.	Practical Outcomes (PrOs)	Approx. Hrs. required
1	1.1 Practice drafting techniques by using the drafting instruments like drawing board, parallel scale, adjustable setsquares, compass, different grade of pencils, rubber, clips, clutch pencils, scales, stencils, inking pens, circle templates, French curves etc.	2
2	2.1Types of lines and intensities of lines. 2.2Lettering including single stroke letters and Gothic letters 2.3Dimensioning terms and annotations, placing of dimension and unit of dimensions in drawings.	2

3	3.1 Draw a perpendicular to a given line with different conditions. 3.2 Draw a line through a given point parallel to a given straight line. 3.3 Divide a given straight line into any number of equal parts by various methods. 3.4 Trisect the given right angle. 3.5 Construction of different types of regular polygons given the length of a side. 3.6 Construct an ellipse by concentric method, arcs of circles method, oblong method, and loop & thread method.	4
4	4.1 Projection of points, lines when placed in various positions with respect to H.P & V.P. 4.2 Projection of planes when placed in various position with respect to H.P. & V.P 4.3 Orthographic Projection of objects , given a pictorial (isometric) view in the first angle method	10
5	5.1 Draw Isometric and Axonometric views of geometrical forms, building components and furniture.	10
	Total	**30**

List of Laboratory/Learning Resources Required:

S. No.	Equipment Name with Broad Specifications
1	Drawing instruments for class room teaching (Large Size).
2	Drawing Board (A1 : 23”x32” Size)
3	Other Instruments: Parallel, Set squares (45˚ and 30˚-60˚), Roller Scale, Protractor, Drawing Compass, Dividers, Drawing Pencils, Circle Master, French Curves, Stencils (8-6-4 mm, All in One), Eraser, Drawing sheets, Drawing Pins/Clips, Sheet Container and Drawing instrument box.
4	Interactive board with LCD overhead projector
5	Plotter: Print resolution Up to 1200 x 600 dpi, 16 MB Memory

Suggested Project List:

1. Prepare models of different forms and shapes.
2. List the symbols, annotations and dimensions used in drawings.
3. List the type of scales used by comparing the size of component on drawing sheet with the actual component.

Suggested Activities for Students:

4. Take two simple objects in your vicinity and sketch 3D isometric of them. Also draw 2D orthographic projections of them (all views).
5. Download the soft copy of plan, section and elevation of any building. Read and interpret this drawing.

* * * * * * *