GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT
COURSE CURRICULUM

Course Title: Architectural Drawing – II

(Code: 3325002)

Diploma Programme in which this course is offered	Semester in which offered
Architectural Assistantship	Second Semester

1. RATIONALE

Architecture Drawing-II is a course which develops one's power of visualization of an object in third dimension by studying the given plan, elevation and side elevation and hence generate architectural drawings. It also develops the perspective drawing skill. Further, this topic also develops one's ability of computing the dimensions so as to be able to represent them in correct manner. This course enables the student to develop necessary skills for preparing technically correct Architectural Presentation Drawings.

2. COMPETENCIES

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 competency**:**

i. **Draw perspective drawing of any given building/ object**
ii. **Draft new drawing and revise the original drawing of the given building**

3. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	ESE	PA	ESE	PA	
4	0	4	8	70	30	40	60	200

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

Note: It is the responsibility of the institute heads that marks for **PA of theory** & **ESE and PA of practical** for each student are entered online into the GTU Portal at the end of each semester within the dates specified by GTU.

4. DETAILED COURSE CONTENTS

Unit	Major Learning Outcomes	Topics and Sub-topics
Unit – 1 **Projections of Solids**	1.a Draw projections of different types of solids in standing position. 1.b Draw projections of different types of solids inclined to one plane only.	**1.1 Different types of solids** like cube, prism, pyramids, cone and cylinder. **1.2 Different terms** like apex, axis, slant edge, meaning and identification of the true length of the base side, true length of the slant edge, true shape of triangular face of pyramids, etc. **1.3 Procedure for drawing Various position of solids** relative to the reference planes, projections of solids: • Standing Position • Inclined to one plane only
Unit– 2 **Sections of Solids**	2.a Draw projections of different types of sections of solids for different positions of the cutting plane.	**2.1 Introduction of**: cutting planes, auxiliary planes, true shape, full section, half section **2.2 Procedure for drawing the projection of sectioned solid** such as cube, prism, pyramid, cone and cylinder) for the given position of the cutting plane
Unit– 3 **Development of Surfaces**	3.a Draw the development of surface of different types of simple solids. 3.b Draw the development of surface of different types of truncated solids.	**3.1 Development of simple and truncated geometrical solids** such as cube, prisms, pyramids, cylinder and cone
Unit – 4 **Perspective Views**	4.a Draw perspective drawings of given problems with respect to, a) Simple objects placed in relation with picture plane and station point like: i) Object touching the picture plane ii) Object in front of picture plane iii) Object behind picture plane b) Simple object keeping eye level at different levels i) Eye level above object. ii) Eye Level below than the given object.	**4.1 Important Terms -** Picture Plane, Station point, Vanishing point, Eye level, Ground level, Central visual ray, etc. **4.2 Perspective drawings**, • One Point Perspective • Two Point Perspective
Unit – 5 **Architectural Rendering Techniques**	5.a Prepare presentation drawings with sciography (Rendering of plans, sections and elevations)	**5.1 Different Rendering Techniques** Different types of rendering techniques showing various rendering patterns, human figures, vehicles, furniture, trees, etc. **5.2 Presentation Drawings with Sciography**

5. SUGGESTED SPECIFICATION TABLE WITH HOURS & MARKS (THEORY)

Unit No.	Unit Title	Teaching Hours		Distribution of Theory Marks			
		TH	PR	R Level	U Level	A Level	Total Marks
1.	Projection of Solids	12	12	00	00	14	14
2.	Sections of Solids	12	12	00	00	14	14
3.	Development of Surfaces	09	09	00	00	14	14
4.	Perspective Views	14	14	00	00	14	14
5.	Architectural Rendering Techniques	09	09	00	00	14	14
	Total	**56**	**56**	**00**	**00**	**70**	**70**

Legends: R = Remember; U = Understand; A = Apply and above levels (Bloom's revised taxonomy)

Note: This specification table shall be treated as only general guideline for students and teachers. The actual distribution of marks in the question paper may vary from above table.

6. SUGGESTED LIST OF EXERCISES/PRACTICAL

The assignments/exercises/practical should be properly designed and implemented with an attempt to develop different types of skills so that students are able to acquire above mentioned competencies

S. No.	Unit No.	Practical/ Exercises	Approx Hours Required
1	01	Prepare sheets of Projection of all the solids in simple position (Min 6 Problems) and Projection of all the solids in inclined position (Min. 6 problems)	12
2	02	Prepare sheets on sections of solids. (Min 8 Problems)	08
3	03	Prepare sheets pertaining to development of surface (Min 6 Problems)	12
4	04	Prepare sheets on One Point & Two Point Perspective (Min 6 Problems)	12
5	05	Prepare one sheet each for Rendering Techniques and Sciography.	. 12
		Total	**56**

Note: The above assignments/exercises are for guideline only. If time is saved, it may be used for more practice/exercises.

7. SUGGESTED LIST OF STUDENT ACTIVITIES

7.1 Identify and sketch objects/buildings in both 2D and 3D forms from surroundings

8. SUGGESTED LEARNING ACTIVITIES

A. List of Books

Sr. No.	Title of Book	Author	Publication
1.	Engineering Drawing (Plane and Solid Geometry)	N.D.Bhatt	Charotar Publishing house, Anand
2.	A text book of Engineering Drawing	Prof. P. J.Shah	S. Chand Publications, New Delhi

B. List of Major Equipment/ Instruments

8.1 Architectural drafting instruments such as:

(a) Triangular Architect's Scale
(b) Parallel bar
(c) Set Squares : 30-60 degree, 45 degree, adjustable
(a) French curves/irregular curves
(b) Lettering guide/ Stencil Template
(c) Technical pen set(Inking Points)
(d) Drafting ink
(e) Mechanical lead pencil- F and HB grade leads.
(f) 6" Divider
(g) Eraser, erasing shield
(h) 6" Compass
(i) Sketch pad
(j) Vinyl portfolio/ carrying case

C. List of Software/Learning Websites

8.2 Engineering Graphics (CD Title): www.cognifront.com, www.howstuffworks.com

9. COURSE CURRICULUM DEVELOPMENT COMMITTE

Faculty Members from Polytechnics

- **Prof. Bhaskar J. Iyer**, H.O.D Architecture, Govt. Polytechnic, Vadnagar
- **Prof. Ushma U. Anerao**, H.O.D Architecture, Govt. Girls Polytechnic, Ahmedabad
- **Prof. (Smt.) Sangita J. Vaghasiya,** Lecturer in Architecture, Govt. Girls Polytechnic, Surat.
- **Prof. Abhijit R. Rathod,** Lecturer in Architecture, Govt. Girls Polytechnic, Ahmedabad

Co-ordinator and Faculty Members from NITTTR Bhopal

- **Prof. M.C.Paliwal,** Associate Professor Deptt. of Civil and Environmental Engg,