

GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT
COURSE CURRICULUM

Course Title: Architectural Design-I (Fundamentals)
(Code: 3315001)

Diploma Programmes in which this course is offered	Semester in which offered
Architectural Assistantship	First Semester

1. RATIONALE

Architectural design is the core course of the programme. Student has to learn about application of all other courses. This course introduces students to different building components and their measurements. This course helps the students to develop skills to draw plans, elevations and sections of both buildings as well as the layout of the furniture inside, using appropriate scale. This course, in short prepares students for presentation drawings, working drawings, etc. involved in architectural design subject of later semesters of the programme.

2. COMPETENCY

The course content should be taught and implemented with the aim to develop different types of skills leading to the achievement of the following competency:

- i. **Prepare the architectural drawing of different types of buildings to appropriate scale**

3. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	ESE	PA	ESE	PA	200
0	0	8	8	0	80	120	200	

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

4. DETAILED COURSE CONTENTS

Unit	Major Learning Outcomes	Topics and Sub-topics
Unit – I Data collection & drawing of typical wall section	1.1 Draw a typical wall section 1.2 Collect data from market for different building materials 1.3 Conduct market survey and site visits.	1.1 Typical wall section from foundation to parapet level 1.2 Levels and technical terms in the drawing/s. 1.3 Different building materials
Unit– II Measured Drawings of a given small building / building unit	2.1 Prepare measured drawings of a small unit of a public building	2.1 Plans, elevations and sections, of a small unit of a public building e.g. classroom, library, hall, toilets, etc.
Unit– III Measured drawings of a given residential building	3.1 Prepare measured drawings of a small unit of a residential building	3.1 Plans, elevations & sections of a small residential building with at least one section each through staircase and toilets and with all relevant dimensions in the drawings.
Unit– IV Developing given sketches and preparing architectural presentation drawings	4. 1 Sketch and draw architectural presentation drawings to a given scale	4.1 Architectural presentation drawings I a given scale showing openings, wall thickness, all relevant dimensions, appropriate line quality and architectural lettering.

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

Note: There is no lecture in this subject so no marks are allotted to Theory.

6. SUGGESTED LIST OF ASSIGNMENTS (PRACTICAL)

The assignments should be properly designed and implemented with an attempt to develop different types of skills leading to the achievement of the competency – Learning to draw architectural presentation drawings

S. No.	Unit No.	Assignments (Practical)
1	Unit – I	<ul style="list-style-type: none"> • Conduct market survey for building materials and their properties • Conduct site visits for studying and understanding use of building materials • Use architectural drafting instruments, draw a typical wall section
2	Unit– II	<ul style="list-style-type: none"> • Prepare measured architectural drawings of given small building/building unit, including all plans, elevations and sections.
3	Unit– III	<ul style="list-style-type: none"> • Prepare measured architectural drawings of given residential building, including all plans, elevations and sections.
4	Unit– IV	<ul style="list-style-type: none"> • Prepare architectural drawings from given sketch with the following details to given scale, <ol style="list-style-type: none"> 1. Doors & Windows 2. Wall thickness 3. All relevant dimensions 4. Appropriate line quality 5. Architectural lettering

Important Notes:

- The above architectural assignments are for guideline only. The remaining practical hours are for revision and guidance.
- In this subject, sessional work should be related to preparation of actual measured drawings at selected locations with further elaborations on notes on form, functions utility, method of construction, etc.
- In this subject, the entire content is to be taught to individual student in context of his/her individual design with the help of table top discussions and design jury sessions arranged by concerned faculty, from time to time during the semester
- This teaching process is theoretically carried out in design practical classes to enable each individual student's design to be different in both concept and form, so as to enhance each student's individual creative ability.
- For this unique teaching process, each student needs to be attended by the concerned faculty individually and hence this subject should be treated as a 'applied theory' subject.

7. SUGGESTED LIST OF PROPOSED STUDENT ACTIVITIES

Following is the list of proposed student activities like: course/topic based seminars, internet based assignments, teacher guided self learning activities, course/library/internet/lab based Mini-Projects, etc. These could be individual or group-based.

- Identify and study design of buildings from popular websites containing famous architects' works
- Understand various building trades and building materials
- Undertake periodic site visits for understanding construction process
- Undertake visits and study the works of students of architects

8. SUGGESTED LEARNING RESOURCES**A. List of Books**

S.No.	Author	Title of Books	Publication/year
1	Francis D.K.Ching	Form Space & Order	John Wiley & Sons, Latest
2	Rangwala S.C.	Building Construction	Charotar Publishing House, Latest
3	Shah, Kale, Patki	Building Drawing	Tata Mcgraw Hill Publishing, Latest

B. List of Major Equipment/ Instrument

- Measuring Tape
- Architectural Drafting Instruments (especially parallel scale, drawing board, adjustable set squares, etc.)

C. List of Software/Learning Websites:

- www.greatbuildings.com

9. COURSE CURRICULUM DEVELOPMENT COMMITTEE**Faculty Members from Polytechnics**

- **Prof. Bhaskar J. Iyer**, H.O.D Architecture, Govt. Polytechnic, Vadnagar,
- **Prof. (Smt.) U.U. Anerao**, H.O.D Architecture, Govt. Polytechnic for Girls, Ahmedabad
- **Smt. P.A. Trambadia**, Lecturer in Architecture, Govt. Polytechnic for Girls, Ahmedabad
- **Shri. N.M. Chhatwani**, Lecturer in Architecture, Govt. Polytechnic for Girls, Ahmedabad

Expert from Industry

- **Shri. Hemant Wala**, Architect, Ahmedabad

Coordinator and Faculty Members from NITTTR Bhopal

- **Prof. M.C. Paliwal**, Associate Professor, Dept. of Civil Engg., NITTTR, Bhopal.