

GUJARAT TECHNOLOGICAL UNIVERSITY
BRANCH NAME: B. Arch
SUBJECT NAME: Architecture Design Studio - VI
SUBJECT CODE: 2X65001
3rd Year: Semester-VI

Prerequisite:

It is assumed that students have studied about construction materials, technology, building services like water supply and sanitation, electric etc and structural aspects covered in subjects Building Construction & Technology and Structures.

Rationale:

This course aims to familiarize the students with the working drawings or construction documents which are prepared for the actual construction / execution of the buildings. Primary role of this course is to train students to convert design data into construction information and to clearly communicate that information to building construction site.

Teaching and Assessment Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks	University Exam Type
Field work	Lectures	Studio		External exam		Internal exam			
				(ESE)Theory	(ESE) Viva	(PA)Theory	(PA)Viva		
4	2	8	14	NA	40	NA	60	100	JURY

Content:

Sr. No.	Content	Total Hours*	% Weightage*
1	Introduction to working drawings: shop drawings / vendor drawings, working drawings and their significance in the construction of buildings, the essential components of working drawings, notations, drawing standards, specifications etc. Trade literature, Detailing methods etc.	28	25%
2	Developing Key plans, Floor Plans, Part plans, Roof Plan / Terrace Plan, Sections, Elevations etc at suitable scales. Excavation drawings, Foundation drawings, Center-line drawings.	42	
3	Developing elevations, sections, part sections, wall sections integrated with finishing materials, etc Choice of materials, fixtures, fittings, availability and constructional feasibility.	28	15%
4	Integration of building systems and services. Developing Basic internal electrical and plumbing drawings. External Plumbing Layout and details.	14	
5	Developing Site Plan, Site Marking Plan, Site Grading / Leveling Plan. Landscaping plan with appropriate details and schedules	28	25%
6	Door-Window details with material specifications, schedule of joinery, schedule of hardware etc.	28	
7	Construction details for lifts, staircases, escalators etc	28	25%

8	Relevant kitchen/pantry and toilet layout and sanitation drawings showing fixtures and supporting specifications	28	
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*: indicative

References:

- Osamu A. Wakita, Richard M. Linde, Nagy R. Bakhoun (2011), The Professional Practice of Architectural Working Drawings, 4th Edition, John Wiley & Sons; 4th Revised edition
- Jeong, K-Y. (2010) Architecture Annual. Seoul: Archiworld Co.
- Fred A. Stitt (1998), Working Drawing Manual, McGraw-Hill Education
- Building and Construction Authority. (2005). CONQUAS-21. Singapore : The BCA Construction Quality Assessment System
- Jefferis, A. and Madsen, D.A. (2005). Architectural Drafting and Design. 5th Ed. New York: Thomson Delmar Learning.

Course Outcome:

Sr. No.	CO Statement	Marks % Weightage
Upon completion of this course, the students should be able to:		
1	Analyze building systems and services. Analyze constructional feasibility with respect to design parameters.	10%
2	Select from appropriate materials, fixtures, fittings with respect to constructability, availability and resultant aesthetics.	20%
3	Evaluate the character of spaces and built form with respect to building systems and specifications.	10%
4	Identify suitable drawing scale, dimensioning style, enlarged details, part plans, schedule to assist in correct and speedy construction/execution at site.	20%
5	Propose/Prepare a complete set of working drawing of a multi-storey building (of previously prepared design studio project) with proper labeling and dimensioning techniques.	40%

List of Projects/Assignments*:

Lectures/Tutorial work shall consist of exposure to different examples of good working drawing sets by various architects, discussion of appropriateness of construction systems, services integration and specifications with respect to their feasibility and resultant aesthetics, instructions of appropriate drawing standards. Studio project can be any residential/institutional project (any previously prepared design studio project) with focus on creating construction drawings.

*- this is suggestive for common purpose. Studio faculty may decide on this considering student group, studio requirements and institution's philosophy.