GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Diploma in Architecture

Level: Diploma

Branch: Architecture

Course / Subject Code : DA03063011

Course / Subject Name : Architectural Design - III

w. e. f. Academic Year:	2026-27
Semester:	Third
Category of the Course:	Professional Core Courses (PC)

Prerequisite:	Students must have a keen interest in Design, construction, and problem-solving skills. They must have prior knowledge of architectural design principles, site planning, understanding of climate, vegetation and environmental sustainability, able to read and prepare basic plans, sections and levels, and have proficiency in drawing/sketching and Mathematics.
Rationale:	Architectural design is the core course of this programme. Public Building Design is in continuation with the course 'Advanced Architectural Design' offered in the second semester. In this course, the knowledge and appropriate application of the relationship between form & space enables the learner to design multiple-volume buildings with relation to each other for public needs and for the given site situation. Knowledge about architectural spaces - both built & open and their use allows them to create functional hierarchy within the site. Knowledge about interlocking spaces & spaces linked by a common space helps the learner in spatial organization on site. Knowledge of repetitive spaces, radial spaces & clustered spaces help the learner to functionally organize a layout. Knowledge of disciplines of structure, design parameters, spatial order helps them create co-relation between space–structure. Understanding about environmental concerns, energy efficiency and structural systems as applicable to kinds of building enables the learner to comprehend how a building practically stands and functions in particular environmental situation. Knowledge of different types of openings and their locations in a building with respect to climate helps them to design suitable architectural elements. The purpose here is also to hone the respective skill-sets of the learners to enable them to approach ensuing design complexities in a strategic way to address their architectural representation capacity for conveying different ideas. Presentation drawings & models help in visualizing and comprehending the overall form and function of given projects. Through various teaching learning experiences and various Public Building projects, their design approaches, methods, principles and techniques of design, the learners will attain industry identified competency by preparing architectural design for a public building based on different architectural design parameters, its presentation drawings and mode.

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Course Outcomes:

After Completion of the Course, Student will able to:

No	Course Outcomes
01	Analyze the collected primary and secondary data of existing public building considering the given parameters.
02	Prepare an architectural design for the public building as per given requirements and site situation.
03	Prepare a set of architectural presentation drawings for the designed public building along with its model and sketches to appropriate scale.

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)	PA/CA (M)	PA/CA (I)	ESE (V)	
4	0	8	12	0	0	100*	100	200

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

Important note – ***The student will not be able to go to the fourth semester as per CoA norms till this subject is cleared.***

The theory portion of this course will be evaluated during the practical/studio hours. No separate external exam (E) will be conducted. Faculties may conduct a time problem to evaluate student's understanding of the theory components. External Viva will be conducted for 'V' component.

Appointment of External Examiners*: Faculties of other degree/diploma architecture colleges/courses can be appointed as External Examiners. Further, professionals with minimum 5 years of relevant experience drawn from the field of practice can also be appointed as External Examiners.*

***For this practical/studio only course, 100 marks under the practical CA has two components i.e. the assessment of core designing of public building, which will be done out of 75marks and the remaining 25 marks are for the Integration of site context, climate, sustainability, and unique architectural expression. This is designed to facilitate attainment of COs holistically, as there is no theory ESE.*

Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	**Primary and Secondary Data collection**	10	17
	1.1 Primary Data Collection: Collect/Prepare primary data of existing public buildings like circulation plan, floor plans, sections, elevations,		

	furniture layout and related drawings while secondary data from books, journals, magazines, internet, etc. **1.2 Secondary Data Collection**: Graphically analyse collected data of existing public building with respect to all architectural design parameters like area, lighting & ventilation, form, space design, circulation, structure, façade and inter-connectivity. **1.3 Formulation of Design Requirements:** Formulate design requirements for the given design project.		
2.	**Development of Concept and locating the building on site**	8	13
	2.1 Design development: Prepare conceptual alternatives for design considering various design parameters for further development of given project **2.2 Conceptual Design :** Graphical representation of functional co-relationships between given requirements – Bubble Diagram **2.3 Derivation of Form :** Derivation of a form with regard to functional requirements by developing activity-space relationship **2.4 Building orientation on site with respect to :** Form & Space, Margins, Wind direction, Natural light & ventilation, Openings, Qualities of architectural space, Structural system **2.5 Land-building relationship :** principles for creating a hierarchy of spaces with reference to Site topography, Site surroundings, Climatic considerations		
3.	**Preparing Sketch Design**	8	13
	3.1 Use of spatial ordering principles : Order of spaces based on organizing principles like Axial, Symmetrical, Clustered, Grid, Centralized, Linear **3.2 Two-Dimensional Graphical Representation**: Development of plan, sections, elevations in sketch form with spatial relationships **3.3 Environmental concerns and energy efficiency :** Development of design considering parameters like environment and energy efficiency **3.4 Light, space and form :** as essentials of architecture **3.5 Materials and Finishes**: Development of elevations and sections with consideration of levels as well as building materials		
4.	**Design & Development of Drawings**	10	17
	4.1 Development of floor plans, sections, elevations and spatial relationships at appropriate scale **4.2** Development of elevations and sections with respect to building finishes fenestrations and levels **4.3** Development of site layout with road network and landscaping **4.4** Axonometric/isometric view of the designed building as well as of the site layout		

5	**Space – Activity Relationship**	8	13
	5.1 Furniture Layout drawings for various activities / functions of the house based on given requirements **5.2** Site layout drawing for various activities/functions based on given requirements		
6	**Final Presentation of Drawings and Models**	16	27
	6.1 Final presentation drawings with rendering **6.2** Preparation of a model		
	Total	**60**	**100**

Suggested Specification Table with Marks (Theory):

Distribution of Theory Marks (in %)					
R Level	**U Level**	**A Level**	**N Level**	**E Level**	**C Level**
15 %	**20 %**	**65 %**	**0**	**0**	**0**

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

***Note** - However this course should be considered as an **applied theory** course where the theory portion is evaluated during the practical/studio hours, no separate exam will be conducted. Faculties may prepare a time problem to analyse student's understanding about theory components.*

References/Suggested Learning Resources:

(a) Books:

S. No.	Title of Book	Author	Publication with place, year and ISBN
1	Principles of three Dimensional Design	Wucius Wong	New York, Van Nostrand Reinhold Co., 1977. ISBN : 0442295618 9780442295615, 1 March 1977
2	Principles of three Dimensional Design	Michael Crosbie), Donald Watson	McGraw Hill Education; ISBN-10. 9781259002892 ISBN-13. 978-1259002892, 8th edition (1 July 2017)
3	Daylighting – Natural light in Architecture	Derek phillips	Architectural press, An Imprint of Elsevier, Burlington ISBN 0750663235, First Publication 20041
4	Visual Dictionary of Architecture	Francis D.K.Ching	John Wiley & Sons, United States ISBN-10 : 8126535644, ISBN-13 : 978-8126535644, Second edition (23 April 2012)
5	Architecture - Form, Space & Order	Francis D.K.Ching	John Wiley & Sons, United States ISBN-10 : 047023153X, ISBN-13 : 978-0470231531 3rd Edition Set (25 September 2007)
6	Neufert, Architects' Data	Ernst Neufert	Wiley-Blackwell, United Kingdom, ISBN-10 : 111928435X , ISBN-13 : 978-1119284352, 5th edition (12 July 2019)

S. No.	Title of Book	Author	Publication with place, year and ISBN
7	Contemporary Indian Architecture- After the Masters	Bhatt Vikram, Peter Scriver	Grantha Corporation - 1 January 1999 ISBN-10 : 0944142192, ISBN-13 : 978-0944142196
8	Architecture + Design	Journal/Magazine	Burda Media India, ISSN: 0970-2369
9	Inside Outside	Journal/Magazine	Business India Group, ISSN: 0970-1761
10	Indian Architect and Builder	Journal/Magazine	Jasubhai Media Pvt. Ltd., ISSN:0971-5509
11	David Adjaye: Making Public Buildings	Thames & Hudson	Garden Grove, California ISBN 10- 0500342245, ISBN 13- 9780500342244

(b) Open source software and website:

1. www.greatbuildings.com
2. www.architecturalrecord.com
3. www.archdaily.com
4. www.dezeen.com
5. www.archpaper.com
6. www.architectmagazine.com
7. www.archello.com
8. www.designboom.com

Suggested Course/Studio Practical List:

S. No.	Practical Outcomes (PrOs)	Unit No.	Approx. Hrs. required
1	**Collect Primary Data:** Collect data of an existing public building like Circulation plan, Floor Plans, sections, elevations and furniture layout with indoor outdoor connectivity, space organization etc. to an appropriate scale to analyse the same with **design parameters, land-building relationship, environmental and energy efficiency concerns.** **Collect Secondary Data**: Collect similar data of an existing public building From Books, Magazines, Internet, etc.	I	8
2	Graphical analysis and comparison of similar type of Public Building with respect to all architectural design parameters like area, light ventilation, form, space, circulation, structure, skin and indoor-Outdoor connectivity. Preparation of pie charts, sketches and their **appraisal.** Then formulation of requirements for proposed design project.	I	8
3	Prepare conceptual alternatives for design considering design requirements, derive of form for building, **orientation of building on site with respect to** form & space, margins, wind direction, natural light & ventilation, openings,	II	16

	qualities of architectural space, structural system etc. **Use** principles for creating a hierarchy of spaces with reference to site topography, site surroundings, climatic etc.		
4	Prepare flow diagram, conceptual drawing like sketch design, block models, site plan, floor plans, elevations, sections and sketches for the given Public Building Project including environmental and energy efficiency parameters.	III	16
5	Prepare a set of design drawing based on the given requirements with considerations of principles of design, relationship between human feelings and architectural form.	IV	16
6	Prepare site layout with parking, proper circulation and other features.	V	8
7	Prepare furniture layout for the designed building.	V	8
8	Prepare a set of final presentation drawings including all given parameters in plans, sections, elevations and internal views for the designed building	VI	24
9	Draw an axonometric/isometric/perspective view of the designed building.	VI	8
10	Make a model of the designed project to scale.	VI	8
	Total Hrs.		**120**

List of Laboratory/Learning Resources Required:

S. No.	Equipment Name with Broad Specifications	PrO.No.
1	Measuring Tape, Laser measure tape, Drawing Sheets, Tracing papers	1-10
2	Other Instruments: Parallel, Set squares (45˚ and 30˚-60˚), Triangular scale, 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.	1-10
3	Interactive board with LCD overhead projector	1-10
4	Desktop PCs with latest configuration	1-10

Suggested Project List:

- **Collection and understanding:** Collect different types of building drawings and understand various terminology and representation of building elements in Plan, Elevations, Sections and Views
- Undertake an **Architectural Apprenticeship** to gain practical exposure of the actual on-going projects or undertake a design project in consultation with the teacher.
- **Collection of anthropometric data:** Collect anthropometric data in Indian scenario to understand human body structure and its relevance to dimensional design
- **Market survey:** Survey of different building (construction/finishing) materials/ Technologies available in the market.

Suggested Activities for Students:

a) Undertake periodic site visits to relate to the present architectural practices.
b) Identify and explore the design parameters for the locally available Public buildings.
c) Collect samples of alternative Green building material and prepare a report.
d) Attend Interactive sketching workshops.
e) Visit and explore art exhibitions and libraries
f) Teacher guided self-learning activities.
g) Give seminar on the relevant topic under consideration.
h) Develop Power point presentation or animation for demonstrating architectural concepts, Climatic/Site analysis, Design methodology and laying and fixing the construction materials.
i) Prepare portfolio of Architectural Design for Public Buildings
j) Participate in model making workshops.

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