

GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)**Competency-focused Outcome-based Green Curriculum-2021 (COGC-2021)**

Semester - IV

Course Title: Interior Design & Detailing

(Course Code: 4345002)

Diploma programme in which this course is offered	Semester in which offered
Architectural Assistantship	4 th Semester

1. RATIONALE

In the modern world, interior designing is not restricted only to luxury hotels but now most of the commercial establishments ranging from shops, showrooms, corporate offices, clubs, cafeterias, beauty salons, residences, schools and hospitals go for interior designing to enhance the aesthetic and functional value of interior space. Thus, interior design is an ever-growing field. Students can get good self-employed in this field with the appropriate skillset. Interior design is a creative and imaginative task, which being a combination both science and art, helps a designer to fulfil the aspirations of people using the internal space with aesthetic vision. Interior designers work with clients and other design professionals to develop design solutions that are safe, functional, with aesthetic value and within budget.

This course helps one understand the properties of different materials and fittings and how they should be used appropriately. It also incorporates knowledge of effects of different types of finishes in interior spaces and how and where they should be used. The curriculum will provide various opportunities to use computer aided design, and the concepts of lighting, colour, modern materials, furnishings and finishes which are in vogue. This also includes false ceiling, artistic flooring and modular kitchen.

2. COMPETENCY

The course content should be taught and curriculum should be implemented with the aim to develop required skills so that the students are able to acquire the following competencies:

- **Design and craft cohesive interior spaces with attention to details so as to serve various functional needs and aspirations of a client**

3. COURSE OUTCOMES (COs)

The practical exercises, the underpinning knowledge and the relevant soft skills associated with the identified competency are to be developed in the learner for the achievement of the following course outcomes in cognitive, psychomotor and affective domains:

- a. Collect primary and secondary data for a given Interior Design project of a residential unit.
- b. Prepare a furniture plan, sectional elevations and 3D views for a given residential unit.
- c. Select appropriate materials and finishes for a given Interior Design project of a residential unit.
- d. Design elements of the interior space for a given residential unit.

4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P/2)	Examination Scheme				
				Theory Marks		Practical/Studio Marks		Total Marks
L	T	S	C	CA	ESE	CA	ESE	
0	0	6	3	00	00	50	50	100

(*): For this practical/studio only course, 50 marks under the practical CA should be done by assessment of process of designing an interior design project with all design parameters. This is designed to facilitate attainment of COs holistically. Thus, this course should be considered as an **Applied 'Theory' Course** where the theory portion has to be taught during the practical/studio hours.

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

5. SUGGESTED PRACTICAL/STUDIO EXERCISES

The following practical outcomes (PrOs) are the sub-components of the COs. They are crucial for that particular CO at the 'Precision Level' of Dave's Taxonomy related to 'Psychomotor Domain'.

S. No.	Practical Outcomes (PrOs)	Unit No.	Approx. Hrs. required
1	Collect Primary Data: Collect data of an existing residential unit (bungalow or apartment) which includes floor plans with furniture, false ceiling and flooring layouts, electrical layout and sectional elevations so as to analyse the same with design parameters, environmental and energy efficiency concerns. Collect Secondary Data: Collect similar data of an residential unit (bungalow or apartment) from books, magazines, internet, etc.	I	12
2	Furniture layout: Prepare furniture layout drawing as well as interior sectional elevations for the given residential unit.	II	12
3	False ceiling layout: Prepare a false ceiling layout and construction detail drawings for the given residential unit.	II	12
4	Flooring layout: Prepare flooring pattern and construction detail drawings for the given residential unit.	III	12
5	Kitchen, bedroom and drawing room details: Prepare all kitchen detail drawings including layout, folded elevations, construction details, 3D views and model for the given residential unit.	IV	24
6	Detailing of furniture: Prepare all detailed drawings including construction details for a given piece of furniture (for e.g. sofa set, double or single bed, wardrobe etc.) for the given residential unit.	IV	12
	Total Hrs.		84

Note

- i. More **Practical/Studio Exercises** can be designed and offered by the respective course teacher to develop the industry relevant skills/outcomes to match the COs. The above table is only a suggestive list.
- ii. Study report, data collection and analysis report must be assigned in a group. Teacher has to discuss about type of data (which and why) before group start their site visits.
- iii. The following are some **sample** 'Process' and 'Product' related skills (more may be added/deleted depending on the course) that occur in the above listed **Practical/Studio Exercises** of this course required which are embedded in the COs and ultimately the competency.

Sr. No.	Sample Performance Indicators for the PrOs	Weightage in %
Assessment should be done on the basis of demonstration of,		
1	Skills	40
2	Learning Process	20
3	Communication	20
4	Learning Attitude	20
Total		100

6. MAJOR EQUIPMENT/ INSTRUMENTS REQUIRED

These major equipment with broad specifications for the PrOs is a guide to procure them by the administrators to usher in uniformity of practicals in all institutions across the state.

S. No.	Equipment Name with Broad Specifications	PrO. No.
1	Measuring Tape, Laser measure tape, Drawing Sheets, Tracing papers	1
2	Drawing Board (A1 size @ 23"X32") with other Other Instruments like Parallel, Set squares (45° and 30°-60°), Adjustable set square, Triangular scale, Tracing papers, Drawing Sheets	1-6
3	Interactive board with LCD overhead projector	1-6
4	Desktop PCs with latest configuration	1-6

7. AFFECTIVE DOMAIN OUTCOMES

The following **sample** Affective Domain Outcomes (ADOs) are embedded in many of the above-mentioned COs and PrOs. More could be added to fulfil the development of this competency.

- a) Work as a leader/a team member.
- b) Follow ethical practices.
- c) Social and Functional Competence of design.
- d) Participate in class discussions and present the design effectively, Generate new ideals.
- e) Practice environmentally friendly methods and design processes.

The ADOs are best developed through the laboratory/field based exercises. Moreover, the level of achievement of the ADOs according to Krathwohl's 'Affective Domain Taxonomy' should gradually increase as planned below:

- i. 'Valuing Level' in 1st year

- ii. 'Organization Level' in 2nd year.
- iii. 'Characterization Level' in 3rd year.

8. UNDERPINNING THEORY

The major underpinning theory is given below based on the higher level UOs of *Revised Bloom's taxonomy* that are formulated for development of the COs and competency. If required, more such UOs could be included by the course teacher to focus on attainment of COs and competency.

Unit	Unit Outcomes (UOs) (4 to 6 UOs at different levels)	Topics and Sub-topics
Unit – I Primary and Secondary Data collection	<p>1a. Collect/Prepare primary data of existing interior design project like circulation plan, floor plans, sections, elevations, furniture layout and related drawings while secondary data from books, journals, magazines, internet, etc.</p> <p>1b. Graphically analyse the collected data of existing interior design project with respect to all interior design parameters like material, lighting, colour, texture, space design, furnishings and finishes.</p> <p>1c. Formulate design requirements for the given design project.</p>	<p>1.1 Introduction to existing residential interior design projects like bungalow, apartment, row house, etc.</p> <ul style="list-style-type: none"> • Primary data collection: With the help of site visit/visits of the existing interior design project, take all the required measurements and prepare all drawings, photos, sketches, etc. • Secondary Data Collection: Collection of data from books, magazines, internet, etc. and presentation of the same <p>1.2 Formulation of requirements from data analysis</p>
Unit– II Furniture Layout	<p>2a. Understand the space planning principles related to interior design.</p> <p>2b. Understand the application of various materials and finishes used in interior design.</p>	<p>2.1 Development of furniture layout of a residential unit as per given requirements.</p> <p>2.2 Development of sectional elevations with respect to furniture layout.</p>
Unit – III False Ceiling & Lighting	<p>3a. Understand the principles of designing of a false ceiling for a given residential unit with respect to furniture layout.</p> <p>3b. Understand the importance of lighting and electrification with respect to furniture & false ceiling layouts.</p>	<p>3.1 Understand the various types of false ceiling materials.</p> <p>3.2 Construction details of all ceiling materials.</p> <p>3.3 Finishing material details.</p> <p>3.4 Use of various types of lighting fixtures in the ceiling.</p>

Unit	Unit Outcomes (UOs) (4 to 6 UOs at different levels)	Topics and Sub-topics
Unit – IV Flooring Detail	4a. Understand the principles of designing of a false ceiling for a given residential/commercial unit with respect to furniture layout.	4.1 Understand various types of interior flooring materials with respect to their use in interior space and their properties. 4.2 Construction details of flooring materials. 4.3 Understand types of finishing e.g. polishing for stone, etc.
Unit – V Kitchen, Bed room & Drawing room detailing	5a. Understand the design parameters for preparing a kitchen, bedroom and drawing room layout and its details.	5.1 Prepare all detailed kitchen, bedroom and drawing room layout drawings with sectional & folded elevations (platform, supports, fascia, below & above platform storage, dado, etc.).
Unit – VI Detailing of furniture	6a. Comprehend and apply the design parameters for preparing detailed drawings of any given piece of furniture.	6.1 Prepare all detailed drawings for any one piece of furniture e.g. Sofa set, Double or Single Bed, Wardrobe, etc.

9. SUGGESTED SPECIFICATION TABLE FOR QUESTION PAPER DESIGN

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
I	Primary and Secondary Data collection		Not Applicable			
II	Furniture Layout					
III	False Ceiling & Lighting					
IV	Flooring Detail					
V	Kitchen, Bed room & Drawing room Detailing					
VI	Detailing of furniture					
Total						

Legends: R=Remember, U=Understand, A=Apply and above (Revised Bloom's taxonomy)

Note: This specification table provides general guidelines to assist learners for their learning and to teachers to teach and question paper designers/setters to formulate test items/questions to assess the attainment of the UOs. The actual distribution of marks at different taxonomy levels (of R, U and A) in the question paper may slightly vary from above table.

10. SUGGESTED LEARNER ACTIVITIES

Other than the classroom and laboratory learning, following are the suggested learner-related **co-curricular** activities which can be undertaken to accelerate the attainment of the various outcomes in this course. Learners should perform following activities in group and prepare reports of about 5 to 7 pages for each activity. They should also collect/record physical evidences for their (learner's) portfolio which may be useful for their placement interviews.

Students should survey the market for above mentioned interior finishing materials, collect data and samples of different materials used for false ceilings, flooring, furniture, etc., understand their fixture details and analyze them by making a presentation and/or an interactive group discussion. These could be done individually or in a group. For such data collection and other study, students need to go out of the institute to markets, shops, industries or interior sites. Students should go for site visits and prepare a report on it. Such visits should be organized by concerned faculty member/s who should compulsorily accompany the students for this purpose.

The practical/exercises should be properly designed and implemented with an attempt to develop different types of practical skills (Course Outcomes in psychomotor and affective domain) so that learners are able to acquire the competencies (Programme Outcomes).

Note: Here only Course Outcomes in psychomotor domain are listed as practical/exercises. However, if these practical/exercises are completed appropriately, they would also lead to development of Programme Outcomes/Course Outcomes in affective domain as given in a common list at the beginning of curriculum document for this programme. Faculty should refer to that common list and should ensure that learners also acquire those Programme Outcomes/Course Outcomes related to affective domain.

11. SUGGESTED SPECIAL INSTRUCTIONAL STRATEGIES (if any)

These are sample strategies, which the teacher can use to accelerate the attainment of the various outcomes in this course:

- a) Massive open online courses (**MOOCs**) may be used to teach various topics/sub topics.
- b) Guide learner(s) in undertaking micro-projects.
- c) **'L' in section No. 4** means different types of teaching methods that are to be employed by teachers to develop the outcomes.
- d) About **20% of the topics/sub-topics** which are relatively simpler or descriptive in nature is to be given to the learners for **self-learning**, but to be assessed using different assessment methods.
- e) With respect to **section No.10**, teachers need to ensure to create opportunities and provisions for **co-curricular activities**.
- f) Guide learners on how to address issues on sketching, model making, etc.
- g) Use relevant video/animation films to explain various concepts and processes related to basic Architectural design themes for Public Buildings.
- h) Use different instructional strategies in classroom teaching.
- i) Use the relevant architectural assignments in the given situation.
- j) Guide learners on form, functions utility, method of construction, etc. to facilitate them to prepare actual measured drawings.

- k) Use the technique of table top discussions along with design jury sessions to teach the relevant content to the learners.
- l) Adopt various strategies to enhance each learner's individual creative ability especially with reference to concept and form

12. SUGGESTED DESIGN MICRO-PROJECTS

Only one micro-project is planned to be undertaken by a learner that needs to be assigned to him/her in the beginning of the semester. In the first four semesters, the micro-project are group-based (group of 3 to 5). However, **in the fifth and sixth semesters**, the number of learners in the group should **not exceed three**.

The micro-project could be industry application based, internet-based, workshop-based, laboratory-based or field-based. Each micro-project should encompass two or more COs which are in fact, an integration of PrOs, UOs and ADOs. Each learner will have to maintain dated work diary consisting of individual contribution in the project work and give a seminar presentation of it before submission. The duration of the microproject should be about **14-16 (fourteen to sixteen) learner engagement hours** during the course. The learners ought to submit micro-project by the end of the semester to develop the industry-oriented COs.

A suggestive list of micro-projects is given here. This has to match the competency and the CO. Similar micro-projects could be added by the concerned course teacher:

- a. Undertake an **Architectural Apprenticeship** to gain practical exposure of the actual on-going projects.
- b. Undertake a design project in consultation with the teacher.

13. SUGGESTED LEARNING RESOURCES

S. No.	Title of Book	Author	Publication with place, year and ISBN
1	Time Saver Standards for Interior Design	Joseph De Chiara Julius Panero Martin Zelnik	McGraw Hill Education; ISBN : 0-07-016299-9 ISBN : 0-07-112589-2
2	A & I Competition Architecture Interior	YI	ARCHI (1 January 2012) ISBN-10 : 8957705023 ISBN-13 : 8957705025-978
3	Advanced Interior Design (3 Volumes set)	Damdi & Designers	Damdi Publishing Company (1 November 2009) ASIN : 8991111505 ISBN-10 : 8991111106 ISBN-13 : 8991111103-978
4	Architecture of the Home	Ola Nylander	Academy Press; 1st edition (29 August 2002) ISBN-10 0470847875 : ISBN-13 : 978-0470847879

S. No.	Title of Book	Author	Publication with place, year and ISBN
5	Color in Interior Design	John Pile	McGraw-Hill Professional (16 June 1997) ISBN-10 : 0070501653 ISBN-13 : 978-0070501652
6	Interior Design Illustrated	Francis D.K.Ching Corky Binggeli	Wiley; 4th edition (13 March 2018) ISBN-10 : 9781119377207 ISBN-13 : 978-1119377207
7	Interior Planning & Design Project	Journal/Magazine	Burda Media India ISSN: 0970-2369
8	Inside Outside	Journal/Magazine	Business India Group ISSN: 0970-1761
9	Residential Interior Design	Maureen Mitton Courtney Nystuen	Wiley; 3rd edition (17 June 2016) ISBN-10 : 9781119013976 ISBN-13 : 978-1119013976
10	Space Design	Archiworld	ARCHI (1 January 2015) ISBN-10 : 8957701494 ISBN-13 : 978-8957701492

14. SOFTWARE/LEARNING WEBSITES

- www.greatbuildings.com
- www.architecturalrecord.com
- www.archdaily.com
- www.dezeen.com
- www.archpaper.com
- www.architectmagazine.com
- www.archello.com
- www.designboom.com

15. PO-COMPETENCY-CO MAPPING

Semester I	Architectural Design Fundamentals (Course Code: 4315001)								
	POs and PSOs								
Competency & Course Outcomes	PO 1 Basic & Discipline specific knowledge	PO 2 Problem Analysis	PO 3 Design/development of solutions	PO 4 Engineering Tools, Experience & Testing	PO 5 Engineering practices for society, sustainability & environment	PO 6 Project Management	PO 7 Life-long learning	* PSO 1 Planning & Design	#PSO 2 Execution

Legend: '3' for high, '2' for medium, '1' for low and '-' for no correlation of each CO with PO/PSO.

Competency	<ul style="list-style-type: none"> Design and craft cohesive interior spaces with attention to details so as to serve various functional needs and aspirations of a client 								
a) Collect primary and secondary data for a given Interior Design project of a residential unit.	2	1	1	1	1	1	1	-	-
b) Prepare a furniture plan, sectional elevations and 3D views for a given residential unit.	2	1	-	-	1	1	-	-	-
c) Select appropriate materials and finishes for a given Interior Design project of a residential unit.	2	1	-	-	1	1	-	-	-
d) Design elements of the interior space for a given residential unit.	2	3	1	2	1	1	-	-	-

16. COURSE CURRICULUM DEVELOPMENT COMMITTEE

GTU Resource Persons

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