



# GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Diploma in Architecture

Level: Diploma

Branch: Diploma in Architecture

Course / Subject Code : DA01063041

Course / Subject Name : Basic Design

|                         |                                |
|-------------------------|--------------------------------|
| w. e. f. Academic Year: | 2025-2026                      |
| Semester:               | First                          |
| Category of the Course: | Professional Core Courses (PC) |

|                      |   |
|----------------------|---|
| <b>Prerequisite:</b> | Understanding principles of design, Elements, 2D to 3D development skills, sketching skills for architectural creations using appropriate basic skill.  |
| <b>Rationale:</b>    | In the field of Architecture, it is utmost important for one to communicate ideas graphically by stimulating the thinking process. It is therefore requiring to promote a creative and experimental methodology that helps to develop the learning style and cognitive skills of the learner with respect to fundamental principles of design. It is thus for this reason; this course has been introduced here to develop an artistic aptitude in learner to provide a strong platform that enable them to develop creative ideas for developing the better visual concepts in the discipline of architectural design. The course also forms the basis for freehand drawing of object and building with application of principles of design. This course will be useful to the learner in architecture for various studio projects and later on architectural presentation in practice. In addition, the knowledge of different types of design skills enables the designers to design building with artistic forms. |

## Course Outcome:

After Completion of the Course, Student will able to:

| No | Course Outcomes   |
|----|---|
| 01 | Prepare different types of points and lines with different sketching tools, shading techniques and materials. |
| 02 | Sketch different views of buildings and Monuments with light & shadow and Texture.                            |
| 03 | Illustrate different colour theory in composition.  |
| 04 | Prepare Transformation of forms and 3D models.  |

## Teaching and Examination Scheme:

| Teaching Scheme<br>(in Hours) |   |    | Total Credits<br>L+T+P | Assessment Pattern and Marks |        |                      |         | Total<br>Marks |
|-------------------------------|---|----|------------------------|------------------------------|--------|----------------------|---------|----------------|
| L                             | T | P* | C                      | Theory                       |        | Tutorial / Practical |         |                |
|                               |   |    |                        | ESE (E)                      | CA (M) | CA (I)               | ESE (V) |                |
| 2                             | 0 | 4  | 6                      | 70                           | 30     | 20                   | 0       | 120            |



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

## Course Content:

| Unit No. | Content  | No. of Hours | % of Weightage |
|----------|--|--------------|----------------|
| 1.       | <b>Introduction of Basics of sketching Tools, Techniques and Materials.</b>  | 04           | 10             |
|          | 1.1 Introduction of Basic Sketching Tools - Pencil, Pen, Ink pen, Pencil colours, Sketch pen, Markers, Water colour, Pastel colour, Acrylic colour, Charcoal pencil/chalk, Brush, Crayon wax, drawing sheets/paper, Drawing book.<br>1.2 Make different types of points, lines in varied scale, intensity and generate composition with their use.<br>1.3 Sketch different objects by using points and lines.<br>1.4 Make Different types of Shading Techniques in geometrical forms<br>1.4.1 Hatching<br>1.4.2 Cross-Hatching<br>1.4.3 Scribbling<br>1.4.4 Stippling<br>1.4.5 Smooth Shading<br>1.4.6 Contour Lines |              |                |
| 2.       | <b>Elements and Principles of design.</b>  | 08           | 30             |
|          | 2.1 Create a composition using different materials and shading techniques and colour incorporating elements and principles of Design in sketching.<br>2.2 Make a photograph of using different elements and principles of Design.<br><b><u>2.1.1 Architectural Design Elements –</u></b><br>•Materials<br>• Colour<br>• Line<br>• Shape<br>• Mass<br>• Space<br>• Texture<br><b><u>2.1.2 Architectural Design Principles –</u></b><br>•Balance<br>• Contrast<br>• Symmetry<br>• Grouping<br>• Rhythm<br>• Harmony<br>• Asymmetry   |              |                |



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|              |  |           |            |
|--------------|--|-----------|------------|
| <b>3.</b>    | <b>Colour Theory</b>   | 04        | 20         |
|              | 3.1 Colour wheel<br>3.2 Hue, Tint, Shade and Tone Composition<br>3.3 Color Scheme Composition<br>3.3.1 Monochromatic<br>3.3.2 Analogous<br>3.3.3 Complementary<br>3.3.4 Split-Complementary<br>3.3.5 Triadic<br>3.3.6 Tetradic   |           |            |
| <b>4.</b>    | <b>Freehand sketches</b>   | 06        | 20         |
|              | 4.1 Live object sketch of furniture, human figures, modern buildings, historical buildings, and trees with texture, shades and shadow<br>4.2 Sketch Interior and Exterior view of Modern House with texture, shades and shadows<br>4.3 Memory Sketch of any buildings. |           |            |
| <b>5.</b>    | <b>Transformation of Form &amp; Composition</b>  | 08        | 20         |
|              | 5.1 Make a Transformation of Form (Additive, Subtractive and Dimensional)<br>5.2 Make Model of 2D to 3D Geometric composition and their model<br>5.3 Prepare Sketch of 3D composition by using of Shading Techniques.  |           |            |
| <b>Total</b> |  | <b>30</b> | <b>100</b> |

### Suggested Specification Table with Marks (Theory):

| Unit No.     | Unit Title  | Distribution of Theory Marks |         |         |         |         |         | Total |
|--------------|---|------------------------------|---------|---------|---------|---------|---------|-------|
|              |   | R Level                      | U Level | A Level | N Level | E Level | C Level |       |
| I            | Introduction of Basics of sketching Tools, Techniques and Materials | 3                            | 2       | 2       | 0       | 0       | 0       | 07    |
| II           | Elements and Principles of design                                   | 5                            | 8       | 8       | 0       | 0       | 0       | 21    |
| III          | Colour Theory   | 2                            | 6       | 6       | 0       | 0       | 0       | 14    |
| IV           | Freehand sketches   | 2                            | 6       | 6       | 0       | 0       | 0       | 14    |
| V            | Transformation of Form & Composition                                | 2                            | 6       | 6       | 0       | 0       | 0       | 14    |
| <b>Total</b> |   | 14                           | 28      | 28      | 0       | 0       | 0       | 70    |
| <b>%</b>     |   | 20                           | 40      | 40      | 0       | 0       | 0       | 100   |

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



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## References/Suggested Learning Resources:

### (a) Books:

1. Architecture: Form, Space and Order by Francis D.K.Ching; John Wiley & Sons, Inc. New York ISBN:0471286168; ISBN: 978-1-118-74508-3, (4th Edition, 2014)
2. Architecture in Pen and Ink by John Chen; McGraw-Hill, Inc. New York, October 1994 Edition; ISBN-13: 978-0070110793; ISBN-10: 0070110794
3. Rendering with Pen & Ink by Frank Allison Hays; Architecture Book Pub. Co./latest ISBN-10: 1274236975; ISBN-13: 978-1274236975
4. A Visual Dictionary of Architecture by Francis D.K.Ching; John Wiley & Sons, Inc. New York; ISBN:0471286168; ISBN-10:111816495
5. Design Drawing by Francis D.K.Ching with Steven P.Juroszek; John Wiley & Sons, Inc. New York ISBN:1119508592, 9781119508595
6. How to Draw: Drawing and Sketching Objects and Environments from Your Imagination by Scott Robertson, Thomas Bertling; Design Studio Press; ISBN:9781933492735, 1933492732

### (b) Open source software and website:

- [www.nptel.iitm.ac.in](http://www.nptel.iitm.ac.in)
- [www.khanacademy](http://www.khanacademy)
- <https://in.pinterest.com>
- <https://swayam.gov.in>
- [www.strathmoreartist.com](http://www.strathmoreartist.com)

## Suggested Course Practical List:

| Sr. No. | Practical Outcomes (PrOs)  | Unit No. | Approx. Hrs. required |
|---------|--|----------|-----------------------|
| 1.      | Draw different types of point, line and shapes in various intensity.                           | 1        | 02                    |
| 2.      | Prepare composition by using types of lines and points.  | 1        | 02                    |
| 3.      | Prepare sketch of objects by using lines and points.   | 1        | 02                    |
| 4.      | Prepare Shading Techniques in geometrical forms.   | 1        | 02                    |
| 5.      | Prepare composition, patterns, graphics and different visual forms using design elements.      | 2        | 04                    |
| 6.      | Prepare composition, patterns, graphics and different visual forms by using design principles. | 2        | 04                    |
| 7.      | Prepare a Photograph of photograph of using different elements and principles of Design.       | 2        | 02                    |



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| Sr. No. | Practical Outcomes (PrOs)  | Unit No. | Approx. Hrs. required |
|---------|--|----------|-----------------------|
| 8.      | Prepare colour wheel   | 3        | 04                    |
| 9.      | Prepare Hue, Tint, Shade, Tone compositions.   | 3        | 04                    |
| 10.     | Prepare geometrical and non-geometrical composition of colour schemes  | 3        | 04                    |
| 11.     | Prepare Live sketch of furniture, human figures, modern buildings, historical buildings, and trees with texture, shades and shadow | 4        | 06                    |
| 12.     | Prepare sketch of Interior and Exterior view of Modern House with texture, shades and shadows                                      | 4        | 06                    |
| 13.     | Prepare memory sketch of any Modern building and Historical monuments.   | 4        | 06                    |
| 14.     | Prepare Transformation of Form (Additive, Subtractive and Dimensional)   | 5        | 04                    |
| 15.     | Prepare 2D Geometrical to 3D Geometrical Composition and their model.  | 5        | 04                    |
| 16.     | Prepare Sketch of 3D Geometrical composition with lights and shades.   | 5        | 04                    |
|         | Total  |          | 60                    |

### List of Laboratory/Learning Resources Required:

| Sr. No. | Equipment Name with Broad Specifications   | PrO. No. |
|---------|--|----------|
| 1.      | 1 Portable A1 or A2 Drawing Board, A Metal Ruler with A Cutting Edge. Black Lead Drawing Pencils in HB to 4B, Charcoal, Various Pens for Sketching i.e Fine liners, Felt Tips & Colored Markers. Sketchbooks in A5, A4 & A3 Sizes. Colour i.e Pencil and water colour etc. | 1 to 16  |

### Suggested Project List:

- Document the campus activity through the outdoor sketching.
- Prepare photography portfolio displaying elements of design in architecture.
- Prepare photography portfolio displaying principles of design in architecture.

### Suggested Activities for Students:

- Visit of historical sites and draw sketches of Monuments, Modern Building and surroundings
- Organize interactive sketching workshops and Organize live sketching trip
- Visit of art exhibitions.
- Attend Interactive sketching workshops.
- Attend Model making workshops.
- Prepare portfolios of Basic Design sketching and drawing.

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