



GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Diploma Engineering

Level: Diploma

Branch: Textile Designing

Subject Code : DI04059041

Subject Name : Computer Aided Textile Design

| | |
|--------------------------------|---------|
| w. e. f. Academic Year: | 2025-26 |
| Semester: | 4th |
| Category of the Course: | PCC |

| | |
|----------------------|--|
| Prerequisite: | Basic knowledge of textile design concepts and hand drawing for textile motifs along with fundamental computer skills for operating graphic software. |
| Rationale: | Computer Aided Textile Design (CATD) has transformed the textile industry by replacing lengthy manual designing with fast, accurate and visually rich digital tools. Modern software such as CorelDraw and Adobe Photoshop enable designers to digitize motifs, repeats, textures, and entire saree or pallav designs directly from scanned artwork or photographs. This course develops a strong foundation in digital textile design skills so that students can convert hand-drawn artwork, samples, motifs, and images into workable textile designs ready for printing or digital simulation. |

Course Outcome:

After Completion of the Course, Student will able to:

| No | Course Outcomes | RBT Level |
|----|---|-----------|
| 01 | Understand terminology and tools used in CAD software (CorelDraw & Photoshop). | U |
| 02 | Create textile designs based on given requirements using vector and pixel-based tools. | C |
| 03 | Simulate printed designs on garments and textile products. | N |
| 04 | Digitize, edit, recolor and prepare separations of motifs/saree designs using software tools. | N,A |

*Revised Bloom's Taxonomy (RBT)

Teaching and Examination Scheme:

| Teaching Scheme (in Hours) | | | Total Credits L+T+ (PR/2) | Assessment Pattern and Marks | | | | Total Marks |
|----------------------------|---|----|---------------------------|------------------------------|-------|----------------------|--------|-------------|
| L | T | PR | C | Theory | | Tutorial / Practical | | |
| | | | | ESE(E) | PA(M) | PA(I) | ESE(V) | |
| 0 | 0 | 6 | 3 | 00 | 00 | 50 | 50 | 100 |



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Suggested Specification Table with Marks (Theory):

| Distribution of Theory Marks (in %) | | | | | |
|-------------------------------------|---------|---------|---------|---------|---------|
| R Level | U Level | A Level | N Level | E Level | C Level |
| - | - | - | - | - | - |

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

SUGGESTED LEARNING RESOURCES

| S. No. | Title of Book | Author | Publication with place, year and ISBN |
|--------|---|---------------------|---|
| 1 | How to Use Adobe Photoshop 7 | Daniel Giordan | Que Publishing Indiana, ISBN No :- 0-7897-2770-6 |
| 2 | Corel Draw 10 Learning e-Book | E -Book | E -Book |
| 3 | Print, make, wear _ creative projects for digital textile design- | Melanie Bowles | Laurence King Publishing (2015), ISBN :- 978-1780674704 |
| 4 | Corel Draw Training Guide | Satish Jain | BPB Publications (2018) ISBN No :- 9789387284005 |
| 5 | Adobe Photoshop for Textile Design | Frederick L Chipkin | Origin inc. (2012) ISBN No :- 978-0972731768 |

5. SUGGESTED LEARNING WEBSITES

1. <https://www.javatpoint.com/coreldraw-basics>
2. <http://dcac.du.ac.in/documents/E-Resource/2020/Metrial>
3. <https://www.vandelaydesign.com/>
4. <https://www.photoshopesentials.com/basics/>
5. <https://helpx.adobe.com/in/photoshop/how-to/ps-basics-fundamentals.html>
6. <https://www.testgorilla.com/>
7. <https://www.coreldraw.com/en/learn/tutorials/>



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Suggested Course Practical List:

| S. No. | Practical Outcomes (PrOs) | Approx. Hrs. required |
|--------|--|-----------------------|
| 1. | <u>Introduction to Vector Image</u> | |
| | • System requirement | 01 |
| | • Creating up Windows for Corel Draw | 02 |
| | • Memory requirement & Display Setting | 01 |
| 2. | <u>Basic Shapes:-(Grey Scale)</u> | |
| | • Circles, Square, Rectangles and Polygons | 02 |
| | • Ellipses , Arcs , Pie, Stars | 02 |
| | • Spiral , Grid , Arrow , Call Out | 02 |
| 3. | <u>Advance Shape (Coloured)</u> | |
| | • Shape by using Interactive Tool , Blending tool ,Lens | 02 |
| | • Shape by Contouring the Object , Distorting the Objects | 02 |
| | • Shape by using Envelope tool , Extruding of the Object , Drop Shadow | 02 |
| 4. | <u>Croquis Design</u> | |
| | • 8 Head , 10 Head & 12 Head | 02 |
| | • Basic Skirt, Sleeve , Pant , Yoke | 02 |
| 5. | <u>Butti Design (Minimum- 4)</u> | |
| | • Butti Design by Hand on Drawing Sheet | 02 |
| | • Scanning of Design by Scanner | 02 |
| | • Create Design on Scanned Image | 02 |
| 6. | <u>Butta Design (Minimum -2)</u> | |
| | • Butta Design by Hand on Drawing Sheet | 02 |
| | • Scanning of Design by Scanner | 02 |
| | • Create Design over Scanned Image | 02 |
| 7. | <u>Calendar</u> | |
| | • Creation of Calendar of One Month | 02 |
| | • Creation of Calendar of One Year | 02 |
| 8. | <u>Logo Design (Minimum- 4)</u> | |
| | • Logo Design by Hand on Drawing Sheet | 02 |
| | • Scanning of Design by Scanner | 02 |
| | • Create Design on Scanned Image | 04 |
| 9. | <u>Introduction to Pixel Image</u> | |



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| | | |
|-----|---|----|
| | • System requirement | 01 |
| | • Creating up Windows for Photoshop | 02 |
| | • Memory requirement & Display Setting | 01 |
| 10. | Butti Design (Minimum- 2) | |
| | • Butti Design by Hand on Drawing Sheet | 02 |
| | • Scanning of Design by Scanner | 02 |
| | • Create Design on Scanned Image | 04 |
| | • Do colour Separation & Print Negatives of Each Colour | 02 |
| 11. | Butta Design (Minimum -1) | |
| | • Butta Design by Hand on Drawing Sheet | 02 |
| | • Scanning of Design by Scanner | 02 |
| | • Create Design over Scanned Image | 04 |
| | • Do colour Separation & Print Negatives of Each Colour | 02 |
| 12. | Photo Editing | |
| | • Click your own Picture & Import in Photoshop | 02 |
| | • Face Change , Dress Change , Back Ground Change | 02 |
| 13. | Plaids | |
| | • Plain Weave , Twill Weave | 02 |
| | • Even , Uneven | 02 |
| 14. | Saree Design | |
| | • Scanning of Saree Design by Scanner | 02 |
| | • Create Design over Scanned Image | 04 |
| | • Do colour Separation & Print Negatives of Each Colour | 02 |
| | Total | 84 |

List of Laboratory/Learning Resources Required:

| | | |
|---|--|---------|
| 1 | Corel Draw , Adobe Photoshop softwares | 1 to 14 |
| 2 | A3 Size Scanner , A3 Size Colour Printer ,A3 size Drawing Sheet , Water colors and colour pencils for filling color , Tracing paper | 1 to 14 |

Suggested Project List:

1. Product development through fashion illustration in apparels and accessories
2. Saree Design Analysis – Motif ,Repeat , Colours, in the Saree Design
3. Make portfolio having collection of different types of Saree Design with colour separation



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Suggested Activities for Students:

- a) Make Unique & beautiful design by using various tools of the software
- b) Undertake micro-projects in teams
- c) Development of new logo or design
- d) Visit any textile company & undergo their design making department

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