



**Technical Examination Board, Gujarat State,  
Gandhinagar**

**Textile Design (Printed)**

Title	14 : Textile Design (Printed)
Level	Trade Certificate Course
Course Duration	Two Year (full time)
Entry Qualification	S. S. C. Pass or Equivalent
With Effect from	June 2023

### Teaching Scheme: FIRST YEAR

Sr. No	Subject Name	Teaching Scheme		Examination Scheme				Term Work Marks	Total Marks
		Theory	Practical	Theory Marks	Hrs.	Practical Marks	Hrs.		
1	Drawing Sketching & Painting	01	09	-	100	0	5	50	150
2	Design & Colour	01	09	50	100	2	12	50	200
3	Elements of Textile	02	-	100	-	3	0	-	100
4	Textile Printing I	02	06	50	50	2	15	50	150
5	Textile Design I	03	-	100	-	3	0	-	100
<b>Total</b>		<b>09</b>	<b>24</b>	<b>300</b>	<b>250</b>	<b>10</b>	<b>22</b>	<b>150</b>	<b>700</b>

Total Week	= 32	Theory = 1 Hrs.
Total Teaching slot/Week	= 33	Practical = 1 Hrs.
Theory Periods	= 09	Total teaching = 33 hrs/week
Practical Periods	= 24	

### Teaching Scheme: SECOND YEAR

Sub Code	Subject Name	Teaching Scheme		Examination Scheme				Term Work Marks	Total Marks
		Theory	Practical	Theory Marks	Hrs.	Practical Marks	Hrs.		
141	Drawing Composition	1	5	-	100	5	0	50	150
142	Design Application	1	8	-	200	0	48	50	250
143	Textile Printing II	2	6	100	50	3	0	50	200
144	Textile Design II	2	8	100	50	5	5	50	200
145	Industrial Training	16 Weeks		-	100	0	0	100	200
<b>Total</b>		<b>06</b>	<b>27</b>	<b>200</b>	<b>500</b>	<b>13</b>	<b>53</b>	<b>300</b>	<b>1000</b>

Total Week	= 32	Theory = 1 Hrs.
Total Teaching slot/Week	= 33	Practical = 1 Hrs.
Theory Periods	= 06	Total teaching = 33 hrs/week
Practical Periods	= 27	

## **14: Textile Design (Printed)**

### **Course Objectives:**

- Use various elements and perspective of drawing, sketching and painting.
- Understanding the method and material used for sketching.
- Study the elements of painting.
- Select proper colour by knowledge of mixture and its effects.
- Understanding the Relevance of art in Indian Culture.

### **Course Subjects: First Year**

Sr. No	Subject Name	Theory in Hrs	Practical in Hrs
1	Drawing Sketching & Painting	32	288
2	Design & Colour	32	288
3	Elements of Textile	64	-
4	Textile Printing I	64	196
5	Textile Design I	96	-
	Total	288	768

### **Course Subjects: Second Year**

Sr. No	Sub Code	Subject Name	Theory in Hrs	Practical in Hrs
1	141	Drawing Composition	24	120
2	142	Design Application	24	192
3	143	Textile Printing II	48	144
4	144	Textile Design II	48	192
5	145	Industrial Training	16 Weeks	
		Total	144	648

<b>First Year</b>	
<b>1 : DRAWING SKETCHING &amp; PAINTING</b>	
<b>Unit-1</b>	<b>THEORY</b>
1.1	<p>Aesthetic experience, pictorial, historical development of Calligraphy, handwriting drawing experiments and exploration, Painting of sculpture, character of the drawing, drawing display a wealth of expressive qualities communicated by means of line, texture, shading and composition, Artist imaginations responses to line a shape or a certain type of shading. The value drawing feelings knowledge and interest in his subject.</p> <p>Introduction to various aspects and techniques of drawing exercise still objects arrangements of objects light and its effect. Tonal and textural values of materials</p>
<b>Unit-2</b>	<b>SKETCHING</b>
2.1	<p>Free hand line drawing exercise from objects studying by proportion and structure sketching both indoor and outdoor. Simple free hand line drawing from birds, animals and human figures to study proportion and anatomical structure, sketching outdoor and landscapes from the nature locations, natural view like trees, leaves, plants, flowers values in nature in proportion perspective views.</p>
<b>Unit-3</b>	<b>PAINTING</b>
3.1	<p>The analysis of Art observation to specific areas or parts of the works visual ideas and the effects of colour line, shades, space, unimaginative use of analysis procedure.</p>
<b>Unit-4</b>	<b>COLOUR</b>
4.1	<p>Red, yellow, blue and so forth is referred to as hue colour properties include warmness and coolness and capacity to expand or contract outlines, number and range of colours and whether one or more hues predominate is shading attained by use of grays and blocks colour or gray mood value, harmony of colour combination.</p>
<b>Unit-5</b>	<b>INDIAN CULTURE</b>
5.1	<p>Religion and its patterns, miniatures and Mogul miniatures, folk art, customs and religions, Temples, churches, mosques – Taoism, Buddhism, Hinduism, Islam, Zoroastrianism, Christianity Motifs – Individual motifs, motif on secular costume</p>

## 2 : DESIGN & COLOUR

Unit-1	THEORY
1.1	Elements Of Art and Principles of Textile Design (Printed), source of inspiration, historical stimuli inorganic organic forms and modern influences , motif arrangements , character techniques and pattern arrangements in design , units of design , naturalistic , stylized and geometric study of traditional motifs and folk art of Indian character pertaining to printed Textile limits of choice of colour , design repeat size for dress material , furnishing bed spreads , wallpaper / matt carpets etc.

## 3 : ELEMENTS OF TEXTILE

Unit-1	Theory
1.1	Classification of textile fibers
1.2	General properties of fiber
1.3	Identification of fibers <ul style="list-style-type: none"> <li>• Microscopic structure</li> <li>• Burning test</li> <li>• Chemical test</li> </ul>
1.4	Basics of Yarn manufacturing: <ul style="list-style-type: none"> <li>• Natural, cotton, silk &amp; wool</li> <li>• Manmade rayon, nylon &amp; Polyester</li> <li>• types of yarn</li> <li>• simple ply card</li> <li>• simple &amp; novelty( Fancy ) yarn</li> <li>• direction of twist in yarn "S" &amp; "Z"</li> <li>• Yarn counts, denier Tex their definition and system.</li> </ul>
1.5	Fabric Structure: <ul style="list-style-type: none"> <li>• Types of weaves &amp; weaving</li> <li>• Basic weaves &amp; its variation               <ul style="list-style-type: none"> <li>○ Plain weaves – rib &amp; basket</li> <li>○ Twill weaves – right &amp; left</li> <li>○ Satin weave – Satin &amp; Sateen</li> </ul> </li> </ul>
1.6	Use of point in designing, definition of design, draft, peg-plan, denting- Plan, construction of plan, weaves, its Plan, construction of plan, weaves, its Ornamentations and derivatives
1.7	various types of draft

<b>Unit -2</b>	<b>DYEING</b>
2.1	Outline of the process of bleaching cotton cloth comprising shearing, singeing, desiring scouring and bleaching. Dyeing of cotton with direct, zinc, sulphur vat. Solubilized vat reactive dyes, aniline black colours.
<b>Unit -3</b>	<b>PRINTING</b>
3.1	Printing of cotton fabric with direct vat Solubilized vat, azoic reactive aniline black and pigment colours, steaming of prints

#### 4 : TEXTILE PRINTING - I

<b>Unit-1</b>	<b>Methods of printing</b>
1.1	Classification block printing, block making, capered / composite stuffed / cast colours pads floating sieve. Taby printing tables surface peg – printing – vegetable print.
<b>Unit-2</b>	<b>Block printing</b>
2.1	Block making coppered/Composite stuffed/ cast, colours pads, floating sieve. Taby printing tables surface peg-printing-vegetable print.
<b>Unit-3</b>	<b>Stencil Printing</b>
3.1	Composition with block-disadvantage of stencil repeats – advantage of stencilling material for stencils – preparation of stencil – cutting operation – application of colour – aerograph printing – printing table – printing striped shirting
<b>Unit-4</b>	<b>Screen Printing</b>
4.1	History – screen – printing, table – gumming machine – washing machine – reeling machine – size of screen repeats – guides – the squeegee – preparation of screen – mounting – transferring the design – application of lacquer – stencil screens and resist coating – doctor blade coating – wheeler & brush coating drying ovens and hardening – photo mechanical process – special features of screen printing P.V.A. etc. – plate of flat burst printing

#### 5 : TEXTILE DESIGN - I

<b>Unit-1</b>	<b>THEORY</b>
1.1	<ul style="list-style-type: none"> <li>• The history of Textile Production.</li> <li>• The materials-dyes-yarn.</li> <li>• The techniques of textile decoration loom woven and hand woven</li> </ul>

	<p>textile- resist dying printing and painting.</p> <ul style="list-style-type: none"> <li>• The West-embroidery appliqué-bead work-split-ply camel girths-block printing printed or painted tie and dye work-brocade weaving.</li> <li>• The North the Punjab &amp; Haryana-Jammu &amp; Kashmir-Himachal Pradesh-Uttar Pradesh.</li> <li>• East &amp; South – The east Bengal &amp; Bihar-Assam and the Hill States of the North east Orissa. The South-Ikat of Andhra Pradesh, Kalamkari work of south eastern India. The Silk Industry of Kanchipuram-Kerala Karnataka-Goa &amp; Maharashtra-Banjara Embroidary. <ul style="list-style-type: none"> <li>◦ Comparative study of various styles both Indian &amp; International Textiles of ancient Egypt. Ancient Persia, Greek, Rome, Spain, France, China, Japan, England, Netherland, Indonesia etc.</li> <li>◦ Floral-Geometric-conversational-ethic-art movements and period styles-key to captions.</li> </ul> </li> </ul>
<b>Unit-2</b>	<b>ASTHETICS</b>
2.1	<ul style="list-style-type: none"> <li>• What is design? Development of Textile Design (printed) from aesthetic point of view.</li> </ul> <p>Appreciation or a good textile deign.</p> <p>Motifs:</p> <ul style="list-style-type: none"> <li>• Indian as well as or outside India.</li> <li>• Effect of printed colours on the human mind.</li> <li>• Decoration of fabric by dyeing-printed and its effect on human mind.</li> <li>• Present and fashions in Indian clothing from Aesthetic point.</li> </ul>
<b>Unit-3</b>	<b>COMPUTER THEORY</b>
3.1	<ul style="list-style-type: none"> <li>• Introduction to basic components of computer and its functions.</li> <li>• Introduction to computer.</li> <li>• Introduction to Windows.</li> <li>• Working on computer design</li> </ul>
<b>Unit-4</b>	<b>COMPUTER APPLICATION</b>
4.1	<p>Designing for freehand textile designing and creative possibilities– Graphic utilization for textile printed design and production system – the composition or repeat.</p> <p>Coloring:</p> <ul style="list-style-type: none"> <li>• The command colour is a function.</li> <li>• Help of a colour.</li> <li>• Theoretically it is possible to show million colours on the screen.</li> <li>• For the different colour ways of design in design views and colour views</li> </ul>

<b>Second Year</b>	
<b>141 : DRAWING COMPOSITION</b>	
<b>Unit-1</b>	<b>THEORY</b>
1.1	<ul style="list-style-type: none"> <li>• Analysis of composition and component of the composition with clarity or unclarity approach.</li> <li>• Different possible composition from - Form and Style Formal and stylistic analysis.</li> <li>• Developing awareness of inter relationship of different expressions, relative values of design concepts.</li> <li>• Exposure to variety of 2 Design and 3 Design printed Textile Design point of view.</li> <li>• Various type of rendering technique in different mediums.</li> <li>• Balancing function of each colour.</li> <li>• Activation of space Motifs pattern form and colour to create illusions.</li> <li>• Study of Design, exercise for the printed design</li> </ul>

<b>142 : DESIGN APPLICATION</b>	
<b>Unit-1</b>	<b>THEORY</b>
1.1	<ul style="list-style-type: none"> <li>• Analysis of Design Application in Fabrics printed.</li> <li>• Visualized Design though Screen printing process point of view.</li> <li>• Dress Material – furnishing material and Saree material, Designs of Aesthetic interest and functions values.</li> <li>• Textile Design printed from Professional field.</li> <li>• Creative / Textile Designer – Tracers, colour – Matching.</li> <li>• Activation of design - tracing - Repeat and repetition from all over types of cross, simple, mirror etc. Types of Repetition in CAD.</li> </ul>

<b>143 : TEXTILE PRINTING II</b>	
<b>Unit-1</b>	<b>THEORY</b>
1.1	<ul style="list-style-type: none"> <li>• Roller printing – History bells model –modern four colour printing machine sideway- Tangential movement- radial motion circumferential movement –radial motion circumferential movement - box wheel doctors lapping blanket grey bump grey furnishers colour box design rollers – mandrel engraving the die the mill etc. the engraving machine defects of roller printing.</li> </ul>



	<ul style="list-style-type: none"> <li>• Styles of printing.</li> <li>• Dyed styles (b) Azoic styles (c) Discharge style</li> <li>• Flat bed screen printing – (Automatic, semi-Automatic)</li> <li>• Rotary screen printing (Automatic)</li> <li>• Batik printing.</li> <li>• Special method of Textile Printing</li> <li>• Flock printing, Khadi printing, Emboss printing, hand Printing effects.</li> <li>• Transfer Printing</li> <li>• Vapour phase/Hot roller Transfer printing</li> </ul>
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### 144 : TEXTILE DESIGN II

Unit-1	THEORY
1.1	<ul style="list-style-type: none"> <li>• Fundamentals of Computer aided design concept of :</li> <li>• Transition</li> <li>• Rotation</li> <li>• Size – variation in design</li> <li>• Study of Software package for different printing design ( like JAYSYNTH )</li> <li>• Scanners &amp; its use</li> <li>• Software like AUTO-CAD, CORAL-DRAW, photo shop and latest design software running in textile industry commands like</li> <li>• use for colour matching</li> <li>• Perception of colour</li> <li>• Description of colour</li> <li>• Chromaticity</li> <li>• Colour measuring instruments (Spectrophotometer), colour matching cabinet</li> <li>• Additive and subtraction colour mixing law.</li> <li>• Market survey – During the Practical training the students may go for market survey once week.</li> </ul>

### 145 : INDUSTRIAL TRAINING

The students will have to undergo practical training for 16 weeks in second term of 2<sup>nd</sup> year in a textile mill, where different types of printing method to be learned and need to submit the training report.

#### Suggested List of Practicals

Sr. No	Practical Category
FIRST YEAR	

	<b>DRAWING SKETCHING &amp; PAINTING</b>
1	Practical based on the above theory
	<b>DESIGN &amp; COLOUR</b>
2	Practical work carried out during the year should be 15 specimen submitted in a portfolio. Study in water / poster colour, charcoal, water proof ink, crayons, oil pastel.
	<b>TEXTILE PRINTING - I</b>
3	Practical work based on the above theory, Batik & Tie & Die
4	Block-stencil screen Batik & Tie & Die effect on cloths.
5	Practical experience in methods of printing
<b>SECOND YEAR</b>	
	<b>DRAWING COMPOSITION</b>
6	Practical work based on the above theory organizations as aids to his visualization, composition concepts with their functional applications
	<b>DESIGN APPLICATION</b>
	Practical work based on the above silk Screen printing Theory
7	Design (sketch) Tracing Size: 6" x 6", 9" x 9", 9" x 12" Mini
8	Tracing – size: suitable to repeat and repetition
9	Dress – Furnishing Saree Body and Border with Pallav 3                      3                      3 + 3                      (2 - 3) Total = 9 Tracing
	<b>TEXTILE PRINTING - II</b>
10	Practical work based in the above theory.
11	Prepare a Project work
12	Style of printing with Chemicals Recipe and Prescription of after printing process
	<b>TEXTILE DESIGN - II</b>
13	Practical work based on the above theory.
14	Study of different creative methods in Computer aided Textile printed designs

15	Evolving forms and their organization into designs in view of Technical computer aided printed design scope and limitation with colour rendering
16	Visualization of design concepts for objects. Tracing, Hatching-Texture and paper printed, colour design
17	Design and Production preparation System.

### Reference books:

- How to Draw & Paint – By Walter T. Foster (Quarto Publishing Group USA, ISBN:1560105003)
- Color Harmony-2 – By Bride M. Whelan (Rockport Publisher, USA, 1994, ISBN-1-56496- 066-8)
- Fibers to Fabrics by Carbman
- Handloom Technology by Banerjee
- Design of Woven fabrics by Blinov, Publisher – MOSCOW
- Principles of Printing – By D.G. Kale (Mahajan Brothers, Ahmedabad)
- Two thousand years of textiles;: The figured textiles of Europe and the Near East Hardcover – January 1, 1972 by Adèle Coulin Weibel, Publisher- Hacker Art Books; Facsimile Ed edition (January 1, 1972)
- Traditional Indian Textiles by John Gillow, Nicholas Barnard
- Textile Designs:200 Years of Patterns for Printed Fabrics arrange: "200 Years of Patterns for Printed Fabrics arranged by Motif, Colour, Period and Design" by Susan Meller

### Subject Course Committee

Sr. No	Name	Designation & Address
1	Shri Shailesh Goswami	I/C HOD, Textile Design, GGP Surat
2	Shri Pritesh Rana	Lecturer, Textile Design, GGP Surat

### Invited Experts

Sr. No.	NAME	ADDRESS
1	Shri S. M. Oza	Principal, K. J. Desai, GTI Viramgam
2	Shri P. V. Bhanderi	I/C Principal & Instructor, Lady N.R.Tata Technical Institute, Nargol