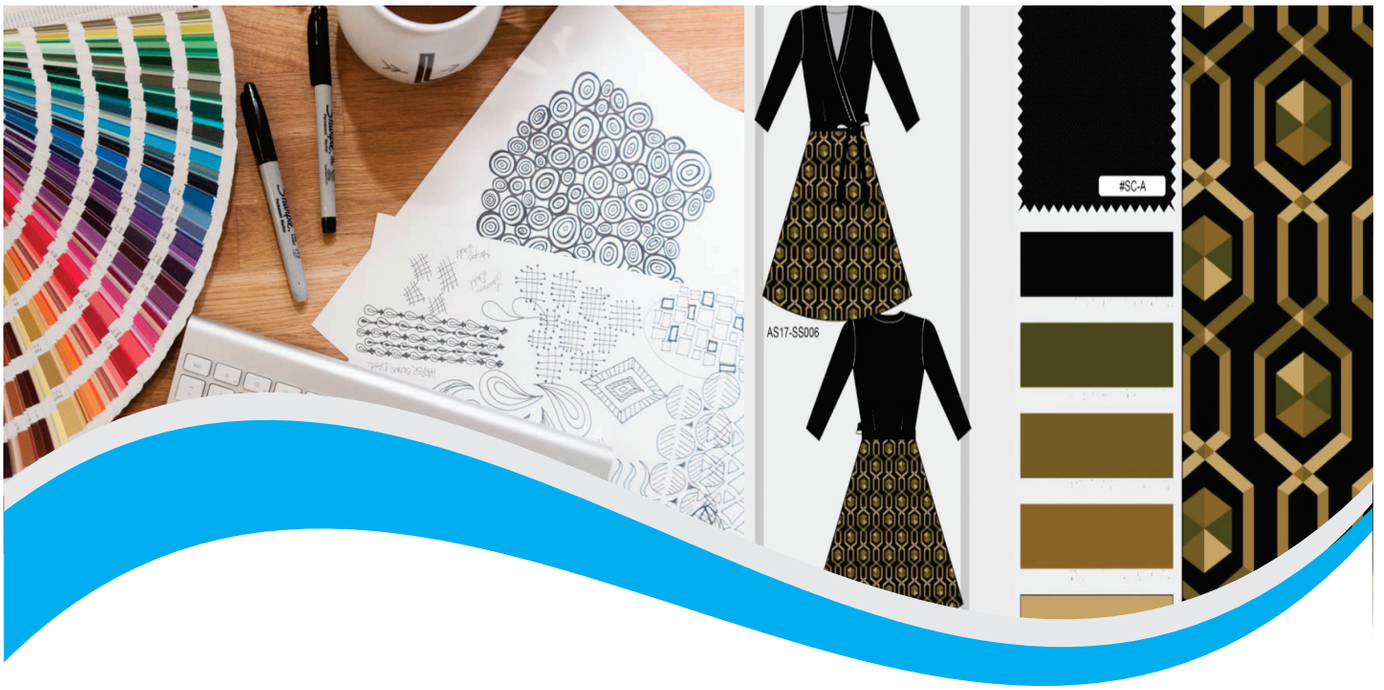

EVALUATION SCHEME
DETAIL SYLLABUS
III, IV, V & VI SEMESTER
DIPLOMA IN
TEXTILE DESIGN

Branch Code : 19

UTTARAKHAND BOARD OF TECHNICAL EDUCATION
INSTITUTE OF RESEARCH DEVELOPMENT & TRAINING
(STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME)

BRANCH NAME: TEXTILE DESIGN **SEMESTER – I**

BRANCH CODE : 19 **(w.e.f. 2025-26)**

Course Code	Course Title	Periods Per Week				EVALUATION SCHEME						Total Marks	Credit Points
						Internal		External					
		TH	T	P	Total	TH	PR	TH		PR			
						MM	MM	MM	Hrs	MM	Hrs		
-	English and Communication Skills - I*	2	1	2	**5**	50	25	50	2:30	20	3:00	**145**	**2**
191002	Drawing and Study of Object	2	-	3	**5**	-	90	-	-	50	3:00	**140**	**3**
191003	Concept of Design & Color	2	-	3	**5**	-	90	-	-	50	3:00	**140**	**2**
191004	Textile Raw Material	2	-	3	**5**	40	40	50	2:30	30	3:00	**160**	**3**
191005	Woven Fabric Design - I	2	-	3	**5**	40	40	50	2:30	30	3:00	**160**	**3**
191006	Indian Traditional Textile Design - I	2	-	3	**5**	40	40	50	2:30	30	3:00	**160**	**3**
101007	Basic Computer Education - I***	-	-	3	**3**	-	20	-	-	25	3:00	**45**	**1**
191051	General Proficiency#	-	-	3	**3**	-	25	-	-	-	-	**25**	**1**
191052	Industrial Exposure (Assessment at Inst. Level)+	-	-	-	**-**	-	25	-	-	-	-	**25**	**1**
		12	**01**	**23**	**36**	**170**	**395**	**200**	-	**235**	-	**1000**	**19**

*** Common with other Engineering diploma programmes.**

***** Common with GT & FD**

#General Proficiency will comprise of various co-curricular activities like games, hobby clubs, seminars, declamation contests, extension lectures, NCC, NSS, cultural activities and discipline etc.

+ Industrial visit compulsory at minimum 2 industry or department.

Note: 1. Each period will be of 60 minutes. 2. Each session will be of sixteen weeks. 3. Effective teaching will be at least 12.5 weeks.

UTTARAKHAND BOARD OF TECHNICAL EDUCATION
INSTITUTE OF RESEARCH DEVELOPMENT & TRAINING
(STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME)

BRANCH NAME: TEXTILE DESIGN **SEMESTER – II**

BRANCH CODE : 19 **(w.e.f. 2025-26)**

Course Code	Course Title	Periods Per Week				EVALUATION SCHEME						Total Marks	Credit Points
						Internal		External					
		TH	T	P	Total	TH	PR	TH		PR			
						MM	MM	MM	Hrs	MM	Hrs		
-	English And Communication Skills-II*	2	1	2	**5**	50	25	50	2:30	25	3:00	**150**	**2**
192002	Drawing & Rendering	-	-	4	**4**	-	40	-	-	50	3:00	**90**	**2**
192003	Principle of Design	-	-	5	**5**	-	40	-	-	50	3:00	**90**	**2**
192004	Yarn Manufacturing	2	-	3	**5**	40	40	50	2:30	40	3:00	**170**	**3**
192005	Indian Traditional Textile Design-II	2	-	3	**5**	40	40	50	2:30	40	3:00	**170**	**3**
192006	Woven Fabric Design-II	2	-	3	**5**	40	40	50	2:30	40	3:00	**170**	**3**
102007	Basic Computer Education II**	-	-	3	**3**	-	60	-	-	50	3:00	**110**	**2**
192051	General Proficiency#	-	-	4	**4**	-	25	-	-	-	-	**25**	**1**
192052	Industrial Exposure (Assessment at Inst. Level)+	-	-	-	**-**	-	25	-	-	-	-	**25**	**1**
	TOTAL	**08**	**01**	**27**	**36**	**170**	**335**	**200**	-	**295**	-	**1000**	**19**

*** Common with other Engineering diploma programmes.**

***** Common with GT & FD**

#General Proficiency will comprise of various co-curricular activities like games, hobby clubs, seminars, declamation contests, extension lectures, NCC, NSS, cultural activities and discipline etc.

+ Industrial visit compulsory at minimum 2 industry or department.

Note: 1. Each period will be of 60 minutes. 2. Each session will be of sixteen weeks. 3. Effective teaching will be at least 12.5 weeks.

FIRST SEMESTER
(Detailed Syllabus)

'TEXTILE DESIGN '

ENGLISH AND COMMUNICATION SKILLS-I

Subject Code : **No. of Credits :** 2 (TH:2,T:1,P:2)

I. RATIONALE:

In the era of globalization, the most commonly used medium to express oneself is the English language, especially in the industry, where almost all the service manuals, installation and commissioning manuals of the various equipment are in English and the technologist has to interpret them correctly. English is the dire need, not only for the Indian industry, but also worldwide, where the diploma engineers have the opportunity to take up jobs. Therefore, the basic English reading and writing skills have become almost mandatory for employment in the industry. Hence, English language has become quite a necessity for engineering diploma students. This course is therefore designed to help the students to learn the correct grammatical structures and use the relevant vocabulary while reading and writing.

II. INDUSTRY/EMPLOYER EXPECTED OUTCOME:

The aim of this course is to help the student to achieve the following industry identified outcome through various learning experiences: "Communicate in written and oral form of English effectively at workplace".

III. COURSE LEVEL LEARNING OUTCOMES (COS) FOR ENGLISH AND COMMUNICATION SKILLS-I:

Students will be able to achieve & demonstrate the following COs on completion of course based learning:

CO1 - Develop an understanding of Basic English grammar and sentence structure.

CO2- Enhance vocabulary and language proficiency to accurately comprehend and interpret professional and technical texts.

CO3- Develop skills to create impactful speeches utilizing persuasive language.

CO4 - Use relevant words in writing and delivering short and long speeches.

CO5- Deliver effective presentations in English using appropriate body language.

IV. THEORY LEARNING OUTCOMES AND ALIGNED COURSE CONTENT FOR ENGLISH AND COMMUNICATION SKILLS-I

Sr. No	Theory Learning Outcomes (TLOs) aligned to COs		Learning content mapped with Theory Learning Outcomes (TLOs) and COs.	Suggested Learning Pedagogies.	No of Lecture	CO
1	Writing Skills (Theory) 1a. Use relevant articles in constructing sentences. 1b. Apply prepositions to construct meaningful sentences. 1c. Identify Conjunctions to connect phrases and clauses in the specified sentences. 1d. Use correct form of tenses in given situation. 1e. Identify the active and passive voice from the specified passage/list. 1f. Apply direct and indirect speech for the given situation	Speaking Skills (Practical) 1g. Formulate grammatically correct sentences for the specified situation. 1h. Use relevant Prepositions for the situation mentioned. 1i. Apply relevant conjunctions to use idiomatic language for the given situation. 1j. Apply the relevant voice in formal communication for the given passage. 1k. Use relevant narrations for the given situation.	**UNIT – I Applied Grammar** 1.1 Articles: definite and indefinite 1.2 Prepositions: Definition, Types and usage 1.3 Conjunctions: Definition, coordinating and subordinating. 1.4 Active and Passive voice. 1.5 Direct and Indirect Speech. 1.6 Tenses: Present Tense (Simple, Continuous, Perfect) 1.6.1 Past Tense (Simple, Continuous, Perfect) 1.6.2 Future Tense (Simple) 1.7 Connectors: And, But, Or, Nor, Though, Although, If,Unless, Otherwise, Because, as, Therefore, So, Who, Whom, Whose, Which, Where, When, why, What	Chalk and board, Improved lecture, Tutorial, Assignment and Demonstration	11	CO 1

2	2a. Answer the given questions of the specified passage. 2b. Formulate sentences using the given new words. 2c. Describe in a paragraph about the given object / product. 2d. Use correct syntax to construct meaningful sentences for the given situation. 2e. Answer the questions on the given unseen passage. 2f. Improve language skills & expand vocabulary	2f. Pronounce the words correctly in the given passage. 2g. Give oral instructions with correct pronunciation and intonation for the given situation. 2h. Answer the questions orally on the given unseen passage with correct pronunciation.	**UNIT – II** **2.1 Comprehension Passages** Unseen passages from different sources. **2.2 Translation** Translate- Hindi to English (Vice-Versa)	Chalk and board, Improved lecture, Tutorial, Assignment and Demonstration	8	CO 2
3	3a. Differentiate the given types of paragraphs with justification. 3b. Formulate a paragraph in words with synchronized sentence structure on the given situation/topic. 3c. Explain the theme of given paragraph precisely.	3d. Summarize the given paragraph with correct pronunciation and intonation. 3e. Take part in debateswith correct pronunciation,intonation and using verbal and non-verbal.	UNIT – III Paragraph and Dialogue Writing 3.1 Paragraph writing 3.2 Types of paragraphs i. Technical ii. Descriptive iii. Narrative iv. Compare and contrast 3.3 Dialogue writing i. Greetings ii. Development of dialogue iii. Closing sentence	Chalk and board, Improved lecture, Tutorial, Assignment and Demonstration	8	CO 3

4	4a. Use relevant words to correctly express for the given themes/ situation. 4b. Use correct synonyms and Antonyms to write paragraphs forgiven themes/situations. 4c. Use the correct collocations in the given sentences. 4d. Use the correct prefix and suffix in the given Sentences.	4e. Speaking specified formal situations with correct pronunciation. 4f. Speak in specified informal situations with correct Pronunciation.	**Unit–IV Vocabulary Building** 4.1. Words often confused 4.2. Collocations 4.3. Prefix and suffix 4.4. Synonyms and Antonyms	Chalk and board, Improved lecture, Tutorial, Assignment and Demonstra-tion	10	CO 4
5	5a. Cultivate / Develop habit of being presentable 5b. Formulate speeches for occasions 5c. Prepare power point presentation 5d. Use appropriate body language for effective communication	5e. Undertake public speaking with correct pronunciation, intonation and using verbal and non-verbal gestures for the given theme / situation. 5f. Give extempore talks with correct pronunciation, intonation and using verbal and non-verbal gestures for the given theme / situation.	**Unit- V Presentation Skills** 5.1 Dressing & Grooming: i. Dressing for the occasion ii. Proper grooming 5.2 Speech Writing: i. Situation ii. Salutations iii. Introduction of the topic iv. Description/Bod v. Conclusion 5.3 Power Point Presentation: i. Layout ii. Font size iii.Color combination 5.4 Kinesics: i Facial expressions ii Eye contact iii Postures iv Gestures	Chalk and board, Improved lecture, Tutorial, Assignment and Demonstra-tion	11	CO 5

V. LABORATORY LEARNING OUTCOME (LLO) ENGLISH AND COMMUNICATION SKILLS-I:

Sr. No.	Practical / Laboratory Learning Outcome (LLO)	Laboratory Experiment / Practical Titles	No. of Hrs.	Relevant Cos
1	**LLO 1.1** Use transcription in correct form **LLO 1.2** Learn to differentiate vowel, diphthong and consonants	Write 20 words using phonetic transcription	4	CO1
2	**LLO 2.1** Learn correct pronunciation by using headphones in language lab	Practice pronunciation as per RP using language lab	4	CO1
3	**LLO 3.1** Articulate ideas clearly and effectively. **LLO 3.2** Improve grammar, punctuation	a. Write two paragraphs of 75 words each b. Extempore	4	CO2
4	**LLO 4.1** Promote the development of effective communication skills **LLO 4.2** Improve non –verbal communication Skills **LLO 4.3** Enhance interpersonal skills **LLO 4.4** Build confidence	Enact Role Plays as per situation and context	4	CO5
5	**LLO 5.1** Acquire the ability to convey complex ideas in clear and concise manner **LLO 5.2** Expand technical vocabulary **LLO 5.3** Enhance the written communication Skills	Describe any three technical objects using correct grammar	4	CO4
6	**LLO 6.1** Notice and articulate specific elements, colors, shapes, & other visual aids **LLO 6.2** Express observations & interpretations clearly and concisely **LLO 6.3** Enhance vocabulary	Describe a given picture (Any Two)	4	CO4
7	**LLO 7.1** Express information in coherent and engaging manner **LLO 7.2** Build confidence	Introduce oneself and others	4	CO3
8	**LLO 8.1** Build confidence in public speaking **LLO 8.2** Enhance the skills in planning and prioritization	Deliver oral presentations using correct grammar and appropriate body language	4	CO3

VI. SUGGESTIONS OF WEIGHTAGE TO LEARNING FOR ASSESSMENT PURPOSE:

Sr. No.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	Applied Grammar	CO1	11	20
2	II	Introduction (self & Others), Comprehensive Passage	CO2	08	15
3	III	Paragraph And Dialogue Writing	CO3	08	20
4	IV	Vocabulary Building	CO4	10	20
5	V	Presentation Skills	CO5	11	25
Grand Total				**48**	**100**

VII. SUGGESTED COS - POS MATRIX FORM:

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life long Learning
CO1	1	1	-	-	-	2	1
CO2	1	1	-	-	-	2	1
CO3	1	1	-	-	-	2	1
CO4	1	1	-	-	-	2	1
CO5	1	1	-	-	-	2	1

VIII. SUGGESTED LEARNING RESOURCES:

Sr. No.	Author	Title	Publisher with ISBN Number
1	Effective English with CD	Kumar, E. Suresh; Sreehari, P.; Savithri, J.	Pearson Education, Noida, New Delhi, 2009 ISBN:978-81-317-3100-0
2	English Grammar At Glance	Gnana murali, M.	S. Chand and Co. New Delhi, 2011 ISBN:9788121929042
3	Essential English Grammar	Raymond murphy	Cambridge University Press, New Delhi, III edition, 2011, ISBN:9780-0-521-67580-9
4	Living English Structure	Allen, W.S.	Pearson Education, New Delhi, Fifth edition, 2009, ISBN:108131728498,99

IX. SOFTWARE / LEARNING WEBSITES:

a. https://www.britishcouncil.in/english/learn-online
b. http://learnenglish.britishcouncil.org/en/content
c. http://www.talkenglish.com/
d. languagelabsystem.com
e. www.wordsworthelt.com

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DRAWING AND STUDY OF OBJECT

Subject Code : 191002 **No. of Credits :** 3 (TH:2,T:0,P:3)

I. RATIONALE:

A student of textile design must have keen observation and drawing skills to derive design inspiration from nature and objects around them. This course imparts foundational knowledge of drawing techniques, textures, and shading across different surfaces—laying a visual groundwork for future textile pattern creation.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

Students will develop the ability to illustrate realistic and stylized forms of objects and nature, which can be used for textile prints, motifs, or woven compositions.

III. COURSE LEVEL LEARNING OUTCOMES (COs):

By the end of this course, students will be able to:

CO1: Illustrate objects with varying shapes and surface textures using different techniques.

CO2: Create visual compositions inspired by natural elements like leaves, flowers, and fruits.

CO3: Understand and draw fabric folds and drapery.

CO4: Apply different drawing media creatively for visual storytelling in design.

IV. THEORY LEARNING OUTCOMES AND MAPPED COURSE CONTENT:

S. N.	Theory Learning Outcomes (TLOs)aligned to COs.	Learning content mapped with Theory Learning Outcomes (TLOs) and COs.	Suggested Learning Pedagogies	No of Hrs	Relevant Cos
1	**TLO1.1:** Identify and illustrate forms of basic shaped objects. **TLO1.2:** Explain characteristics of transparent, opaque, glazed, and rough surfaces.	**UNIT I:** Introduction to shapes and object surfaces	Visual demonstration, object observation	10	CO1
2	**TLO2.1:** Observe and interpret natural elements in design.	**UNIT II:** Study of nature – leaves, flowers, fruits, vegetables	Real object sketching, comp-osition exercises	8	CO2
3	**TLO3.1:** Understand folds and fabric draping in visual art.	**UNIT III:** Drapery study	Draping cloth demonstration & sketching	6	CO3
4	**TLO4.1:** Use various drawing media to stylize and shade.	**UNIT IV:** Drawing tools and media: pencil, ink, watercolour, colour pencil	Mixed media application exercises	8	CO4

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL / TUTORIAL EXPERIENCE

S. N.	Practical / Laboratory Learning Outcome (LLO)	Laboratory Experiment / Practical Title	No of Hrs	Relevant Cos
1	**LLO1.1:** Draw basic shaped objects using pencil and ink.	Round (pot, kettle), square (box), stylized using: a) Pencil shading, b) Black pen & ink	10	CO2
2	**LLO2.1:** Draw various natural forms using pencil and watercolour.	Composition of leaves, stems, and flowers	10	CO2
3	**LLO3.1:** Illustrate fruits and vegetables with stylization.	Fruits and vegetables using various media	10	CO3
4	**LLO4.1:** Sketch objects of inspiration using colour media.	Sketching fishes, butterflies, jewelry, toys, masks using pencil colour	18	CO2

VI. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table)

S. N.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	Introduction to Shapes and Surfaces	CO1	10	30%
2	II	Nature Study	CO2	8	30%
3	III	Drapery	CO3	6	20%
4	IV	Use of Media	CO4	8	20%
Total				**32**	**100%**

VII. SUGGESTED COs – POs MATRIX FORM

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	**PO-2 Problem Analysis**	**PO-3 Design/ Development of Solutions**	**PO-4 Engineering Tools**	**PO-5 Engineering Practices for Society, Sustainability and Environment**	**PO-6 Project Management**	**PO-7 Life long Learning**
CO1	3	2	2	2	2	1	2
CO2	3	2	3	2	3	1	2
CO3	2	2	3	2	2	1	2
CO4	2	2	3	3	3	2	3
Legend: 3 – High; 2 – Medium; 1 – Low							

VIII. SUGGESTED LEARNING MATERIALS / BOOKS

S.N.	Author	Title	Publisher with ISBN Number
1	Bhatnagar, Parul	Foundation Art & Design	Rajat Publications
2	Betty Edwards	Drawing on the Right Side of the Brain	Tarcher/Putnam, ISBN: 9780874774245
3	Andrew Loomis	Drawing the Head and Hands	Titan Books, ISBN: 9780857680976

XV. SUGGESTED LEARNING WEBSITES & PORTALS

S.N.	Link / Portal	Description
1	https://www.pinterest.com	Inspiration boards for object sketching
	https://www.youtube.com	Drawing tutorials and sketching techniques
	https://www.skillshare.com	Courses on drawing and rendering
	https://www.drawspace.com	Online lessons on object drawing

*****

CONCEPT OF DESIGN & COLOR

Subject Code : 191003 **No. of Credits :** 2 (TH:2,T:0,P:3)

I. RATIONALE:

An understanding of basic design elements, principles, and colour theory is essential for any textile designer. This course enables students to visualize and develop motifs using lines, shapes, textures, and colours for fabric and textile compositions.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

The student will develop the ability to create balanced motifs and designs, experiment with colour schemes, and generate texture concepts for use in textile printing, weaving, or embroidery.

III. COURSE LEVEL LEARNING OUTCOMES (COs):

After successful completion of this course, the student will be able to:

CO1: Understand the elements and tools of design.

CO2: Create motifs using lines, dots, and geometric forms.

CO3: Demonstrate understanding of the colour wheel and colour schemes.

CO4: Create textures and apply them in design compositions.

IV. THEORY LEARNING OUTCOMES AND MAPPED COURSE CONTENT:

S. N.	Theory Learning Outcomes (TLOs)aligned to COs.	Learning content mapped with Theory Learning Outcomes (TLOs) and COs.	Suggested Learning Pedagogies	No of Hrs	Relevant Cos
1	**TLO1.1:** Describe design elements.	**UNIT I:** Elements of Design & Tools	Lecture, Demonstration	7	CO1
2	**TLO1.2:** List art materials and their uses. **TLO2.1:** Create line and dot-based motifs.	**UNIT II:** Line and Dot-based Motif Formation	Hands-on, Exercises	5	CO2
3	**TLO3.1:** Develop motifs from geometric shapes.	**UNIT III:** Geometric Motif Development & Optical Illusions	Pattern making, Drawing	5	CO2
4	**TLO4.1:** Understand colour theory and create colour wheel.	**UNIT IV:** Colour Wheel & Colour Theory Primary, Secondary, Tertiary, VIBGYOR	Chart making, Practical Mixing	7	CO3
5	**TLO5.1:** Apply different colour schemes. **TLO5.2:** Demonstrate texture using various media.	**UNIT V:** Colour Schemes and Textures	Application with mediums	8	CO4

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL / TUTORIAL EXPERIENCE

S. N.	Practical / Laboratory Learning Outcome (LLO)	Laboratory Experiment / Practical Title	No of Hrs	Relevant Cos
1	**LLO1.1:** Draw line and dot-based motifs using various tools.	Motif development using HB, 2B, 4B, 6B, sketch pen, and poster colour	10	CO2
2	**LLO2.1:** Develop designs using geometric shapes and illusions.	Circle, triangle, square motifs & optical illusions	10	CO2
3	**LLO3.1:** Create colour wheel and rainbow chart.	Mixing primary, secondary, sub-secondary colours	10	CO3
4	**LLO4.1:** Demonstrate various colour schemes.	Achromatic, monochromatic, polychromatic charts	9	CO3
5	**LLO5.1:** Create 25 texture samples in a texture file.	Application of textures using brush, sponge, pen, etc.	9	CO4

VI. SUGGESTED MICRO PROJECTS / ASSIGNMENTS:

Each project aims to integrate theory with practical visualization and presentation skills.

S. N.	Micro Project Title	Description	Aligned COs
1	Element Poster	Create a poster highlighting the 7 elements of design (line, shape, colour, texture, space, value, form) using real-life image cutouts and sketching.	CO1
2	Motif Bank Development	Develop a visual collection (manual or digital) of motifs based on line types (vertical, diagonal, spiral, zigzag) and geometrical shapes.	CO2
3	Colour Wheel Composition	Make a handmade colour wheel including primary, secondary, tertiary, and VIBGYOR colour representation.	CO3
4	Texture Collage	Prepare a collage of 10–15 different textures using materials like threads, paper, fabric, sponge, etc., and annotate their visual impact.	CO4
5	Colour Scheme Wall Chart	Create a comparative display of achromatic, monochromatic, and polychromatic colour schemes using sketch pens or poster colours.	CO3, CO4

VII. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE: (Specification Table)

S. N.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	Elements and Tools of Design	CO1	7	20%
2	II	Line and Geometric Motifs	CO2	10	30%
3	III	Colour Theory & Wheel	CO3	7	20%
4	IV	Colour Schemes & Textures	CO4	8	30%
Total				**32**	**100%**

VIII. SUGGESTED CO's – PO's MATRIX FORM

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	**PO-2 Problem Analysis**	**PO-3 Design/ Development of Solutions**	**PO-4 Engineering Tools**	**PO-5 Engineering Practices for Society, Sustainability & Environment**	**PO-6 Project Management**	**PO-7 Life long Learning**
CO1	3	2	2	1	2	1	2
CO2	3	2	3	2	2	2	2
CO3	3	2	3	2	2	1	2
CO4	3	2	3	3	3	1	2
Legend: High = 3, Medium = 2, Low = 1							

IX. SUGGESTED LEARNING MATERIALS / BOOKS

S.N.	Author	Title	Publisher with ISBN Number
1	A. C. Halse	The Use of Colour in Art	Prentice Hall
2	Itten, Johannes	The Art of Color	John Wiley & Sons
3	Nita Leland	Exploring Color	North Light Books, ISBN: 9781581804460
4	Shirish Deshpande	Basics of Drawing and Design	Jyotsna Prakashan

X. LEARNING WEBSITES & PORTALS:

S.N.	Link / Portal	Description
1	https://www.colourlovers.com	Colour palettes and tools
	https://www.pinterest.com	Motif and design inspiration
	https://www.canva.com	Digital colour tools
	https://www.skillshare.com	Creative classes on colour and design

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TEXTILE RAW MATERIAL

Subject Code : 191004 **No. of Credits :** 3 (TH:2,T:0,P:3)

I. RATIONALE:

To ensure a strong foundation in textile material science, students must understand various types of textile fibres and their properties. This course aims to equip students with knowledge about identification, classification, structure, and end uses of both natural and synthetic fibres to support fabric design and production processes.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

Graduates are expected to demonstrate proficiency in identifying textile raw materials through physical and chemical tests, and understanding their suitability for different textile applications in terms of performance, durability, and aesthetics.

III. COURSE LEVEL LEARNING OUTCOMES (COs):

By the end of this course, students will be able to:

CO1: Classify textile fibres and describe their sources and basic structure.

CO2: Perform identification and analysis of natural fibres.

CO3: Explain properties and uses of natural and synthetic fibres.

CO4: Apply microscopic, chemical, and burning tests for fibre identification.

CO5: Explain grading systems and special features of wool, silk, and cotton.

IV. THEORY LEARNING OUTCOMES AND MAPPED COURSE CONTENT:

S. N.	Theory Learning Outcomes (TLOs)aligned to COs.	Learning content mapped with Theory Learning Outcomes (TLOs) and COs.	Suggested Learning Pedagogies	No of Hrs	Relevant Cos
1	**TLO1.1** Explain fibre classification and sources.	**UNIT I:** Introduction to world's sources of textile fibres (natural and manmade) and their utilization general classification of fibres, yarn, thread.	Lecture, Presentation	6	CO1
2	**TLO2.1** Analyze fibre structure using lab methods.	**UNIT II:** Physical and chemical identification of textile fibres and its structure.	Demonstration, Lab discussion	3	CO2
3	**TLO3.1** Describe properties of cotton, wool, flax.	**UNIT III:** Structure and nature of cotton, wool, flax	Charts, Models	3	CO3
4	**TLO4.1** Compare usage of different fibres.	**UNIT IV:** Introduction and end use of cotton, wool, silk, bast-jute, flex, fibres.	Discussion, Sample review	4	CO3
5	**TLO5.1** Examine synthetic fibres and their utility.	**UNIT V:** Structure, properties and use of lycra, vicsoce, rayon, nylon, polyester, acrylic, glass fiber.	Lecture with physical samples	5	CO3
6	**TLO6.1** Understand cotton grading.	**UNIT VI:** Grading systems for cotton	Video, Expert talk	3	CO5
7	**TLO7.1** Identify wool varieties and grades.	**UNIT VII:** Introduction to wool-merino, mohair, cashmere, camel. Sorting and grading of wool. introduction to wool fibre and elementary idea of different wool.	Charts, Sample Analysis	4	CO5
8	**TLO8.1** Describe silk varieties and processing.	**UNIT VIII:** Introduction to natural silk, properties and use of various type of silk, silk reeling, throwing and weighting.	Demonstration, Video	4	CO5

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL / TUTORIAL EXPERIENCE

S. N.	Practical / Laboratory Learning Outcome (LLO)	Laboratory Experiment / Practical Title	No of Hrs	Relevant Cos
1	**LLO1.1:** Apply microscopic, chemical, and burning tests.	Identification of natural fibres: cotton, wool, silk, jute	12	CO2, CO4
2	**LLO2.1:** Analyze natural fibres.	Physical and chemical identification of natural fibers, cotton, wool, silk jute.	12	CO2, CO3
3	**LLO3.1:** Analyze synthetic fibres.	Identification of polyester, nylon, acrylic fibres	12	CO3, CO4
4	**LLO4.1:** Observe fibre structure.	Cross-sectional & longitudinal microscopic study	12	CO2, CO4

VI. SUGGESTED MICRO PROJECT / ASSIGNMENT/ ACTIVITIES FOR SPECIFIC LEARNING / SKILLS DEVELOPMENT (SELF LEARNING)

- Prepare a comparative chart of natural vs synthetic fibres with their properties.
- Collect and document fibre samples and conduct burn/microscopic tests.
- Create a visual chart of fibre sources with end-product applications.
- Prepare a report on cotton/wool grading based on field or video observations.

VII. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table)

S. N.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	I – Introduction to fibres	CO1	6	20%
2	II	II – Identification methods	CO2	3	10%
3	III	III – Natural fibre properties	CO3	7	20%
4	IV-V	IV, V – Fibre uses & synthetics	CO3	5	20%
5	VI-VII	VI, VII – Grading cotton/wool	CO5	7	20%
6	VIII	VIII – Silk study	CO5	4	10%
		Total		**32**	**100**

VIII. SUGGESTED CO's – PO's MATRIX FORM

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability & Environment	PO-6 Project Management	PO-7 Life long Learning
CO1	3	2	1	1	2	1	2
CO2	3	3	2	3	2	1	2
CO3	3	2	2	2	3	1	2
CO4	3	3	2	3	2	1	2
CO5	3	2	2	2	2	1	2

IX. SUGGESTED LEARNING MATERIALS / BOOKS

S.N.	Author	Title	Publisher with ISBN Number
1	Corbman, B.P.	Textiles: Fibre to Fabric	McGraw-Hill, ISBN: 9780070672183
2	Gohl, E.P.G. & Vilensky, L.D.	Textile Science	CBS Publishers, ISBN: 9788123908940
3	Wynne, A.	Textile Fibres: Natural and Synthetic	Woodhead, ISBN: 9781855734849
4	Sara J. Kadolph	Textiles	Pearson Education, ISBN: 9780132129032

X. SUGGESTED LEARNING WEBSITES & PORTALS

S.N.	Link / Portal	Description
1	https://www.textilelearner.net	Textile fibre identification and testing
2	https://nptel.ac.in	Free textile science and engineering courses
3	https://www.fibre2fashion.com	Industry insights on fibers and fabrics
4	https://www.textileschool.com	Fibre classification and structure tutorials

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WOVEN FABRIC DESIGN-I

Subject Code : 191005 **No. of Credits :** 3 (TH:2,T:0,P:3)

I. RATIONALE:

The students of textile design are expected to possess knowledge and skills related to various fabric structures and advanced weaving techniques. This course introduces learners to types of fabric structures, loom parts and motions, drafting, denting, and different weave constructions including plain, mat, and rib. Students will also develop practical skills in weave drafting and ornamentation using point paper and fabric samples.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

Students will be able to identify, draft, and analyze basic to advanced woven fabric structures and variations. They will also be able to interpret weave patterns and understand loom mechanisms relevant to the textile industry.

III. COURSE OUTCOMES (COs):

After completing this course, the students will be able to:

CO1: Describe basic fabric structures and classify different types of fabrics.

CO2: Identify and explain various parts of a handloom and their functions.

CO3: Explain loom motions (primary and secondary) in fabric construction.

CO4: Apply the concept of warp, weft, drafting, lifting, and denting on point paper.

CO5: Construct plain weaves and their derivatives such as rib and mat weaves.

CO6: Analyze the effect of weave variations like hopsack and reversible structures.

CO7: Develop ornamental effects on plain weaves using stripe and check patterns.

IV. THEORY CONTENT AND LEARNING OUTCOMES MAPPING:

S. N.	Theory Learning Outcomes (TLOs)aligned to COs.	Learning content mapped with Theory Learning Outcomes (TLOs) and COs.	Suggested Learning Pedagogies	No. of Lectures	Relevant Cos
1	**TLO1.1:** Classify fabric types. **TLO1.2:** Explain fabric structures.	Introduction to fabric structure. Classification of woven, non-woven, knitted, braided, net, lace.	Lecture, Charts, Presentation	7	CO1
2	**TLO2.1:** Describe loom parts.	Parts of handloom – slay, reed, heald shaft, treadle, etc.	Lecture, Charts, Presentation	3	CO2
3	**TLO3.1:** Explain loom motion.	Introduction to loom motions – primary and secondary	Lecture, Charts, Presentation	3	CO3
4	**TLO4.1:** Define drafting & denting order.	Warp & weft; construction on graph; types of draft, lifting, denting.	Lecture, Charts, Presentation	3	CO4
5	**TLO5.1:** Construct basic weaves.	Construction of Plain weave and its derivation in the form of Mat Weave and Rib Weave.	Lecture, Charts, Presentation	8	CO5
6	**TLO6.1:** Analyze weave variation effects.	Variation of Hopsack and Mat weave design with warp face, weft face and reversible effects.	Lecture, Charts, Presentation	4	CO6
7	**TLO7.1:** Apply ornamental techniques.	Ornamentation of plain weave with various methods.	Lecture, Charts, Presentation	4	CO7

V. PRACTICAL EXERCISES (LAB LEARNING OUTCOMES):

S. N.	Practical / Laboratory Learning Outcome (LLO)	Laboratory Experiment / Practical Title	No of Hrs	Relevant Cos
1	**LLO1.1:** Draw basic weaves using point paper	Construction of plain weave and its variation on graph	12	CO4, CO5
2	**LLO2.1:** Identify fabric structure types	Identification of woven, knitted, and non-woven fabrics	12	CO1
3	**LLO3.1:** Create ornamentation on paper	Stripe and check placement on plain weave	12	CO7
4	**LLO4.1:** Collect and categorize samples	Collection and mounting of plain weave samples	12	CO6

VI. MICRO PROJECTS / ASSIGNMENTS :

- Prepare a chart showing classification of different fabric structures with fabric swatches.
- Design a series of rib and mat weave variations with warp/weft face analysis.
- Create a small portfolio of plain weave ornamentations using stripe and check designs.
- Build a loom parts model or diagram with labelled parts (reed, slay, shaft, etc.).

VII. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table)

S. N.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	Introduction of Fabric Structure and Classification	CO1	7	20%
2	II	Parts of Handloom	CO2	3	10%
3	III	Loom Motions – Primary and Secondary	CO3	3	10%
4	IV	Warp, Weft, Graph Construction, Draft, Lifting and Denting Order	CO4	3	15%
5	V	Plain Weave Construction & Derivatives (Rib, Mat)	CO5	8	20%
6	VI	Variations: Hopsack, Mat Weave with Warp/Weft Face & Reversible Structures	CO6	4	10%
7	VII	Ornamentation of Plain Weave	CO7	4	15%
Total				**32**	**100**

VIII. CO-PO MAPPING MATRIX:

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	**PO-2 Problem Analysis**	**PO-3 Design/ Development of Solutions**	**PO-4 Engineering Tools**	**PO-5 Engineering Practices for Society, Sustainability & Environment**	**PO-6 Project Management**	**PO-7 Life long Learning**
CO1	3	2	2	1	2	1	2
CO2	3	3	2	2	2	1	2
CO3	3	2	2	2	2	1	2
CO4	3	2	3	2	2	1	2

CO5	3	2	3	2	3	1	2
CO6	2	2	3	2	3	1	2
CO7	2	2	3	2	3	2	3
Legend: 3 – High 2 – Medium 1 – Low							

IX. SUGGESTED LEARNING MATERIALS / BOOKS:

S.N.	Author	Title	Publisher with ISBN Number
1	Gokarneshan, N.	Fabric Structure and Design	New Age International, ISBN: 9788122420634
2	Watson, E.	Textile Design and Colour	Longmans Green, London
3	Grosicki, Z.J.	Textile Science	CBS Publishers, ISBN: 9788123908940
4	Ajgaonkar, D.B.	Knitting and Weaving Technology	Universal Publishing
5	Hollen, Norma & Saddler	Textiles	Macmillan Publishing, ISBN: 9780023546218
6	Nisbet, H.	Grammar of Textile Design	D. B. Taraporevala Sons & Co., Mumbai
7	Kadolph, Sara J.	Textiles (11th Ed.)	Pearson, ISBN: 9780132129032

X. LEARNING WEBSITES & ONLINE RESOURCES:

S.N.	Link / Portal	Description
1	https://www.textilelearner.net	Tutorials on weaves, loom parts, fabric structures
2	https://www.nptel.ac.in	MOOC platform with textile-related video lectures and notes
3	https://www.fibre2fashion.com	Industry insights on weaving, materials, and innovation
4	https://www.textileschool.com	Fabric classification, weave construction, textile glossary
5	https://www.teonline.com	Reference for looms, yarns, and textile technology

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INDIAN TRADITIONAL TEXTILE DESIGN -I

Subject Code : 191006 **No. of Credits :** 3 (TH:2,T:0,P:3)

I. RATIONALE: -

The students of textile design must develop an aesthetic sense to appreciate beauty in traditional fabrics and creatively incorporate these insights into modern textile development. This course introduces learners to India's rich heritage of handloom and traditional woven textiles. Students will study design motifs, production techniques, textures, colors, and regional variations of India's iconic fabrics.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:-

Students will be able to identify, replicate, and apply traditional Indian motifs and fabric styles into textile product development. They will also understand historical, cultural, and technical contexts behind these heritage textiles, enabling them to contribute to sustainable and contemporary fabric design practices.

III. COURSE LEVEL LEARNING OUTCOMES (COs)

After completing this course, students will be able to:

CO1: Describe the historical significance and construction of Indian traditional fabrics.

CO2: Identify regional characteristics such as motifs, textures, and color schemes of Indian textiles.

CO3: Replicate and apply traditional design elements from Indian handloom styles.

CO4: Develop aesthetic appreciation and documentation skills related to Indian woven and tribal textiles.

IV. THEORY LEARNING OUTCOMES AND ALIGNED COURSE CONTENT

S. N.	Theory Learning Outcomes (TLOs)aligned to COs.	Learning content mapped with Theory Learning Outcomes (TLOs) and COs.	Suggested Learning Pedagogies	No of Hrs	Relevant Cos
1	**TLO1.1:** Describe the historical and design significance of Jamdani.	Jamdani	Chalk- board, seminar, chart.	4	CO1, CO2
2	**TLO2.1:** Identify motifs and technique used in Patola weaving.	Gujarati Patola	Chalk- board, seminar, chart.	3	CO1, CO2
3	**TLO3.1:** Illustrate features and narrative themes in Baluchari fabrics.	Baluchari	Chalk- board, seminar, chart.	3	CO1, CO2
4	**TLO4.1:** Recognize characteristics and softness of Dacca Muslin (Mulmull).	Dacca Mulmull	Chalk- board, seminar, chart.	3	CO1, CO2
5	**TLO5.1:** Explain the weaving method and color themes of Paithani sarees.	Paithani Saree	Chalk- board, seminar, chart.	3	CO1, CO2
6	**TLO6.1:** Describe fabric texture, border types, and regional details of Maheshwari sarees.	Maheshwari Saree	Chalk- board, seminar, chart.	3	CO1, CO2
7	**TLO7.1:** List zari motifs, brocade techniques, and centers of Banarasi production.	Banarasi Saree	Chalk- board, seminar, chart.	3	CO1, CO2
8	**TLO8.1:** Identify ikat patterns and resist dye techniques of Pochampally.	Pochampally	Chalk- board, seminar, chart.	3	CO1, CO2
9	**TLO9.1:** Understand weaving types, patterns, and historical context of Indian carpets.	Study of Carpet & Floor Covering	Chalk- board, seminar, chart.	4	CO1, CO2
10	**TLO10.1:** Examine the symbolism and aesthetic appeal of Indian tribal textile art.	Tribal Fabric	Chalk- board, seminar, chart.	3	CO1, CO4

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL / TUTORIAL EXPERIENCE

S. N.	Practical / Laboratory Learning Outcome (LLO)	Laboratory Experiment / Practical Title	No of Hrs	Relevant Cos
1	Replication of motifs from Indian woven styles	Develop ability to replicate Indian woven motifs	16	CO3
2	Assignment on historical designs	Analyze cultural contexts and document designs	16	CO1, CO4
3	Presentation of assignments	Improve presentation and visual documentation skills	16	CO4

VI. SUGGESTED MICRO PROJECT / ASSIGNMENT/ ACTIVITIES FOR SPECIFIC LEARNING / SKILLS DEVELOPMENT (SELF LEARNING)

- Create motif charts from any two traditional Indian fabrics using sketch/embroidery.
- Prepare a poster/presentation on the origin, motifs, and centers of Banarasi or Patola weaving.
- Visit a handloom center or artisan and document their weaving process and traditional methods.
- Design a modern cushion cover or scarf using tribal fabric motifs as inspiration.

VI. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table)

S. N.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	Jamdani	CO1, CO2	4	10%
2	II	Gujarati Patola	CO1, CO2	3	10%
3	III	Baluchari	CO1, CO2	3	10%
4	IV	Dacca Mulmull	CO1, CO2	3	10%
5	V	Paithani Saree	CO1, CO2	3	10%
6	VI	Maheshwari Saree	CO1, CO2	3	10%
7	VII	Banarasi Saree	CO1, CO2	3	10%
8	VIII	Pochampally	.CO1, CO2	3	10%
9	IX	Study of Carpet and Floor Covering	CO1, CO2	4	10%
10	X	Tribal Fabric	CO1, CO4	3	10%
			Total	**32**	**100%**

VII. SUGGESTED CO's – PO's MATRIX FORM

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability & Environment	PO-6 Project Management	PO-7 Life long Learning
CO1	3	2	2	2	3	1	2
CO2	3	2	2	2	3	1	2
CO3	3	2	3	2	2	1	2
CO4	3	2	2	2	3	2	3
Legend: 3 – High, 2 – Medium, 1 – Low							

VIII. SUGGESTED LEARNING MATERIALS / BOOKS

S.N.	Author	Title	Publisher with ISBN Number
1	Rta Kapur Chishti	Handcrafted Indian Textiles: Tradition and Beyond	Roli Books, ISBN: 9788174365738
2	Jasleen Dhamija	Sacred Textiles of India	Niyogi Books, ISBN: 9789381523180
3	Martand Singh & Rahul Jain	Textiles and Dress of Gujarat	Mapin Publishing, ISBN: 9788189995374
4	Gillow, John & Barnard, Nicholas	Traditional Indian Textiles	Thames & Hudson, ISBN: 9780500287751
5	Kax Patel	Indian Textile Techniques	Vakils Feffer & Simons

XV. SUGGESTED LEARNING WEBSITES & PORTALS

S.N.	Link / Portal	Description
1	https://www.craftrevival.org	Repository of Indian traditional crafts including textiles
2	https://www.fibre2fashion.com	Textile and weaving industry insights
3	https://www.indianculture.gov.in	Ministry of Culture portal on Indian heritage textiles
4	https://www.youtube.com	Videos on Jamdani, Patola, Banarasi weaving, and more
5	https://textilelearner.net	Fabric structure, weave analysis, textile design

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BASIC COMPUTER EDUCATION - I

Subject Code : 101007 **No. of Credits :** 1 (TH:0,T:0,P:3)

I. RATIONALE:

Basic computer education has great influence in all aspects of life. Almost all workplaces and living environments are being computerized. In order to prepare diploma holders to work in these environments, it is essential that they are exposed to various aspects of information technology such as understanding the concept of information technology and its scope, operating a computer, using various tools of MS Office, using the internet, etc. This exposure will enable the students to enter their professions with confidence, live in a harmonious way, and contribute to productivity.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

Employers expect individuals to possess foundational digital literacy skills, including the ability to effectively operate a computer, manage files, utilize common office applications for document creation and communication, and navigate the internet securely and efficiently for information retrieval and correspondence.

III. COURSE LEVEL LEARNING OUTCOMES (COS):

Students will be able to achieve & demonstrate the following COs on completion of course based learning:

CO1: Understand Computer Fundamentals

CO2: Operate and Manage Files within an Operating System

CO3: Perform Basic Word Processing Operations

CO4: Utilize Computer Communication and Internet Services

IV. THEORY CONTENT COVERED IN LAB LECTURE BEFORE THE PRACTICAL.

S. N.	Theory Learning Outcomes (TLOs) aligned to COs	Learning content mapped with Theory Learning Outcomes (TLOs) & COs.	Suggested Learning Pedagogies.	CO
1	**TLO1.1** Define a computer, its characteristics, and various applications in daily life and professional settings. **TLO1.2** Identify and describe the major components of a computer system, including input/output devices, and differentiate between various types of memory and storage devices.	**Unit I. Computer:** Definition, Characteristics, Applications, Components of Computer System, Input/Output Devices, Concept of Memory, Magnetic and Optical Storage Devices.	Hands-on Activity, Tutorials	CO1
2	**TLO2.1** Explain the definition and core functions of an operating system (e.g., Windows). **TLO2.2** Demonstrate proficiency in navigating the Windows environment, including exploring the computer, managing files and folders, and customizing display properties and system settings.	**Unit II. Operating System Windows:** Definition & Functions of Operating System, Basic Components of Windows, Exploring Computer, Icons, taskbar, desktop, managing files and folders, Control panel – display properties, add/remove setting date and time, screen saver and appearance	Hands-on Activity, Tutorials	CO2
3	**TLO3.1** Create, edit, and format documents using word processing software (e.g., MS Word). **TLO3.2** Utilize features like spell checking, printing, tables, and mail merge to produce professional documents.	**Unit III. Word Processing:** Introduction to Word Processing, Menus, Creating, Editing & Formatting Document, Spell Checking, Printing, Views, Tables, Word Art, Mail Merge.	Hands-on Activity, Tutorials	CO3
4	**TLO4.1** Understand the basics of the Internet and its various applications. **TLO4.2** Demonstrate the ability to surf the Internet using web browsers and effectively manage email, including creating an email ID, sending, receiving, attaching files.	**Unit IV. Computer Communication:** Internet and its applications, Surfing the Internet using web browsers, Creating Email Id, Viewing an E-Mail, Sending an E-Mail to a single and multiple users, Sending a file as an attachment.	Hands-on Activity, Tutorials	CO4

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL EXPERIENCES:

S. N.	Practical/Tutorial/Laboratory Learning Outcome (LLO)	Laboratory Experiment/ Practical Titles / Tutorial Titles	Relevant Cos
1	**LLO 1.1** Identify physical components of a computer system including CPU, monitor, keyboard, mouse, printer, and speakers. **LLO 1.2** Demonstrate correct method of connecting peripheral devices to the CPU. **LLO 1.3** Classify devices as input or output and explain their functions.	Identify and connect various components of a computer system (CPU, Monitor, Keyboard, Mouse, Printer, Speakers, etc.). Differentiate between input and output devices.	CO1
2	**LLO 2.1** Demonstrate proper procedure to start and shut down a computer system safely. **LLO 2.2** Identify elements of the Windows desktop such as icons, taskbar, and start menu, and explain their functions. **LLO 2.3** Open and close commonly used software applications using desktop or start menu shortcuts.	Start and shut down the computer properly. Identify and describe the functions of the Desktop, Taskbar, and Icons. Practice opening and closing applications.	CO2
3	**LLO 3.1** Create, rename, move, copy, and delete files and folders using the Windows interface. **LLO 3.2** Demonstrate the use of the Recycle Bin to restore or permanently delete files. **LLO 3.3** Navigate file structures and drives using "My Computer" or "This PC" interface.	Create, rename, move, copy, and delete files and folders. Understand the concept of "Recycle Bin" and restore/empty it. Use "My Computer" or "This PC" to navigate drives.	CO2
4	**LLO 4.1** Open and navigate a word processing application such as MS Word or Libre Office Writer. **LLO 4.2** Identify and describe the functions of common menus and toolbars in the word processor interface. **LLO 4.3** Create a basic document, input text, and save it to a specified location.	Open word processing software (e.g., MS Word). Identify common menu items and toolbars. Type and save a basic document.	CO2
5	**LLO 5.1** Apply editing operations such as cut, copy, and paste to modify text in a document. **LLO 5.2** Perform table operations such as inserting, deleting rows/columns, and merging/ splitting cells.	Practice basic editing (cut, copy, paste) and text formatting (font type, size, bold, italic, underline, text alignment).	CO3

	LLO 5.3 Demonstrate formatting consistency and readability in a structured document.		
6	**LLO 6.1** Create and insert a table in a word processing document. **LLO 6.2** Format text using different font types, sizes, and styles (bold, italic, underline). **LLO 6.3** Enter data into table cells and apply formatting (alignment, font style, borders, etc.).	Create a table, insert/delete rows and columns, and merge/split cells. Enter and format data within the table.	CO3
7	**LLO 7.1** Insert and customize Word Art in a word processing document. **LLO 7.2** Insert, resize, and reposition an image within a document using appropriate formatting tools.	Insert Word Art into a document. Insert and resize a simple image.	CO4
8	**LLO 8.1** Establish a connection to the internet using available network options (wired/wireless). **LLO 8.2** Open a web browser and navigate to search engines (e.g., Google). **LLO 8.3** Use effective keywords to search for specific information and interpret the search results.	Connect to the internet. Use a web browser (e.g., Chrome, Firefox) to search for information using keywords on search engines (e.g., Google).	CO4
Note: Out of above suggestive LLOs - Minimum 70% of the above listed lab experiments are to be performed. Judicious mix of LLOs is to be performed to achieve desired outcomes.			

VI. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table):

S. N.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	Computer	CO1	09	20
2	II	Operating System Windows	CO2	09	20
3	III	Word Processing	CO3	15	30
4	IV	Computer Communication	CO4	15	30
Total				**48**	**100**

VII. SUGGESTED COS - POS MATRIX FORM:

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life long Learning
CO1	3	2	1	1	2	-	2
CO2	3	2	1	2	2	-	2
CO3	3	3	2	2	2	-	2
CO4	3	2	2	2	2	-	2
Legends :- High:03, Medium:02, Low:01							

VIII. SUGGESTED LEARNING RESOURCES:

S.N.	Author	Title	Publisher
1	P.K. Sinha	Computer Fundamentals	BPB Publications
2	Anita Goel	Computer Fundamentals	Pearson Education
3	V. Rajaraman	Fundamentals of Computers	PHI Publications
4	D.J. Rosencrantz	Fundamental Problems in Computing (5th Ed.)	Springer
5	Ron Faile et al.	Libre Office - The Documentation Foundation	LibreOffice
6	Arti Rathore	Microsoft Office 2010 Course (Hindi)	BPB Publications
7	Krishna Kumari	Computer Fundamentals	Book World, Dehradun

IX. LEARNING WEBSITES & PORTALS:

S.N.	Link / Portal	Description
1	https://nptel.ac.in	NPTEL materials on computer fundamentals
2	https://tutorialspoint.com	Basics of computing and MS Office tutorials
3	https://www.libreoffice.org	LibreOffice documentation and downloads
4	https://www.bpbpublications.com	Access to BPB-published computer books

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SECOND SEMESTER
(Detailed Syllabus)

'TEXTILE DESIGN '

ENGLISH AND COMMUNICATION SKILLS - II

Subject Code : **No. of Credits :** 2 (TH:2,T:1,P:2)

I. RATIONALE :

In the era of globalization, the most commonly used medium to express oneself is the English language, especially in the industry, where almost all the service manuals, installation and commissioning manuals of the various equipment are in English and the technologist has to interpret them correctly. English is the dire need, not only for the Indian industry, but also worldwide, where the diploma engineers have the opportunity to take up jobs. Therefore, the basic English reading and writing skills have become almost mandatory for employment in the industry. Hence, English language has become quite a necessity for engineering diploma students. This course is therefore designed to help the students to learn the correct grammatical structures and use the relevant vocabulary while reading and writing.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

The aim of this course is to help the student to achieve the following industry identified outcome through various learning experiences: "Communicate in written and oral form of English effectively at workplace".

III. COURSE LEVEL LEARNING OUTCOMES (COS) FOR ENGLISH AND COMMUNICATION SKILLS –II:

Students will be able to achieve & demonstrate the following COs on completion of course based learning:

CO1 - Practice workplace etiquettes and professionalism in communication.

CO2 - Cultivate soft skills like teamwork and empathy in work environments.

CO3 - Explore digital communication tools and techniques for professional interaction.

CO4 - Demonstrate the ability to write clear and concise business and technical documents.

CO5 - Formulate grammatically correct sentences.

IV. THEORY LEARNING OUTCOMES AND ALIGNED COURSE CONTENT FOR ENGLISH AND COMMUNICATION SKILLS-II:

Sr. No	Major Theory Learning Outcomes		Learning content mapped with Learning Outcomes (LOs) and COs.	Suggested Learning Pedagogies.	No of Lecture	CO
1	**WRITING SKILLS** 1. Understand professional digital communication etiquette 2. Write clear, concise emails and professional documents 3. Use workplace communication platforms effectively	**SPEAKING SKILLS** 1. Practical exercises on writing emails and reports 2. Role playing digital communication scenarios 3. Hands- on session with platforms like Microsoft teams, zoom and meet	**UNIT - I: Digital Communication** 1. E mail writing (format, subject lines, tone, structure) 2. Writing professional reports (report types, structure, style) 3. Digital platforms for communication (zoom, teams, meet etiquette)	Chalk and board, Improved lecture, Tutorial, Assignment and Demonstra-tion	8	CO3
2	1. Write clear and professional business documents 2. Understand the tone and structure required for business communication 3. Enhance the ability to write concise emails, memos and proposals.	1. Writing practice assignments (letters, memos) 2. Case studies to develop proposals 3. Peer editing for feedback and improvement	**UNIT - II: Business Correspondence** 1. Business letters (structure, formal tone, clarity) 2. Memos and proposals (formats, purpose- driven writing) 3. Executive summaries (condensing information, clarity)	Chalk and board, Improved lecture, Tutorial, Assignment and Demonstra-tion	9	CO4
3	1. Develop key interpersonal skills for workplace success	1. Group projects to foster teamwork	**UNIT - III: Soft Skills for Employability** 1. Teamwork and collaboration	Chalk and board, Improved lecture, Tutorial,	12	CO2

	2. Enhance teamwork, leadership and decision- making abilities 3. Improve problem- solving and critical thinking in communication	2. Leadership role play exercises 3. Problem-solving scenarios and case studies	(importance of cooperation) 2. Leadership communication (persuasion, delegation) 3. Problem solving techniques (decision-making frameworks)	Assignment and Demonstration		
4	1. Develop effective verbal and non-verbal communication abilities 2. Understanding communication barriers. 3. Improve ability to overcome barriers. 4. Develop effective listening skills.	1. Role- playing effective communication 2. Case studies on successful overcoming of communication barriers. 3.Group discussions on real- life conflict examples.	**UNIT - IV: Communication Skills** 1. Definition and Process of effective communication. 2. Barriers to communication- Definition, types, Overcoming barriers 3.Conflict resolution (active listening, empathy)	Chalk and board, Improved lecture, Tutorial, Assignment and Demonstration	9	CO1
5	1. Write and understand subject- verb agreement rules. 2. Write and understand noun-pronoun agreement rules. 3. Identify the common errors in English.	1. Writing practice exercises for identifying misplace modifiers and common errors in English. 2. Assigning exercises to identify subject-verb and noun-pronoun agreement in sentences	**UNIT - V: Identifying Common Errors in Writing** 1. Subject- verb agreement 2. Noun- Pronoun Agreement 3. Misplaced Modifiers 4. Common English Errors	Chalk and board, Improved lecture, Tutorial, Assignment and Demonstration	10	CO5

V. LABORATORY LEARNING OUTCOME (LLO) ENGLISH AND COMMUNICATION SKILLS-I:

Sr. No.	Practical / Laboratory Learning Outcome (LLO)	Laboratory Experiment / Practical Titles	No. of Hrs.	Relevant Cos
1	**LLO 1.1** Enhance the understanding of word formation **LLO 1.2** Enrich word power **LLO 1.3** Construct words with the specific meanings	Formulate 20 words using Prefix and suffix	4	CO5
2	**LLO 2.1** Use words and phrases effectively **LLO 2.2** Enrich vocabulary **LLO 2.3** Develop overall language skills	Construct sentences using 20 collocations	4	CO5
3	**LLO 3.1** Add depth to narratives **LLO 3.2** Form grammatically correct sentences	Compose situational dialogues (Any Two)	4	CO5
4	**LLO 4.1** Develop skills in story telling **LLO 4.2** Connect with the audience	Narrate anecdotes of various situations in English	5	CO2
5	**LLO 5.1** Present complex information in a clear & concise manner **LLO 5.2** Develop public speaking skills and presentation skills	Prepare a Power point presentation on a given topic	6	CO3
6	**LLO 6.1** Reflect on thoughts, feelings, and experiences	Write your experience of an industrial visit in 50 words on (Four) given situations (Diary Entry)	4	CO4
7	**LLO 7.1** Express information incoherent and engaging manner **LLO 7.2** Build confidence	Mock Team Meeting Presentation	5	CO1

VI. SUGGESTIONS OF WEIGHTAGE TO LEARNING FOR ASSESSMENT PURPOSE:

Sr. No.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	Digital Communication	CO1	08	15
2	II	Business Correspondence	CO2	09	20
3	III	Soft Skills for Employability	CO3	12	25
4	IV	Negotiations and Conflict Resolution	CO4	09	20
5	V	Identifying Common Errors in Writing	CO5	10	20
Grand Total				**48**	**100**

VII. SUGGESTED COS - POS MATRIX FORM:

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life long Learning
CO1	1	1	-	-	-	2	1
CO2	1	1	-	-	-	2	1
CO3	1	1	-	-	-	2	1
CO4	1	1	-	-	-	2	1
CO5	1	1	-	-	-	2	1

VIII. SUGGESTED LEARNING RESOURCES:

Sr. No.	Author	Title	Publisher with ISBN Number
1	Effective English with CD	Kumar, E. Suresh; Sreehari, P.; Savithri, J.	Pearson Education, Noida, New Delhi, 2009 ISBN:978-81-317-3100-0
2	English Grammar At Glance	Gnana murali, M.	S. Chand and Co. New Delhi, 2011 ISBN:9788121929042
3	Essential English Grammar	Raymond murphy	Cambridge University Press, New Delhi, III edition, 2011, ISBN:9780-0-521-67580-9
4	Living English Structure	Allen, W.S.	Pearson Education, New Delhi, Fifth edition, 2009, ISBN:108131728498,99

IX. SOFTWARE / LEARNING WEBSITES:

a. https://www.britishcouncil.in/english/learn-online

b. http://learnenglish.britishcouncil.org/en/content

c. http://www.talkenglish.com/

d. languagelabsystem.com

e. www.wordsworthelt.com

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DRAWING & RENDERING

Subject Code : 192002 **No. of Credits :** 2 (TH:0,T:0,P:4)

I. RATIONALE:

The students of textile design are expected to have knowledge and skills regarding the study of various objects of nature and surroundings. Hence, in this subject, students will learn the basics of drawing and rendering objects found in nature and their adaptation for fabric-based design work. This course lays the foundation for visual sensitivity, motif development, and composition design skills needed in textile design.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

Apply principles of observation and rendering to develop nature-inspired motifs and compositions suitable for textile and surface design applications.

III. COURSE LEVEL LEARNING OUTCOMES (COs):

CO1: Illustrate natural outdoor elements like trees and branches with stylization.

CO2: Sketch and compose flying elements like butterflies, birds, and feathers with detailing.

CO3: Depict various animals (wild and pet) and fish through freehand drawing and coloring.

CO4: Draw and shade architectural structures and buildings realistically.

IV. INTEGRATED THEORY CONTENT TO BE COVERED IN LAB LECTURES (Before Practical Work):

S. N.	Theory Learning Outcomes (TLOs) aligned to COs	Learning content mapped with TLOs and COs	Suggested Learning Pedagogies.	CO
1	**TLO1.1** Identify and understand components of the outer environment	Introduction and importance of outer environment	Field observation, teacher-led demo	CO1
2	**TLO1.2** Illustrate trees and branches	Study of trees and branches	Sketching and stylization techniques	CO1
3	**TLO2.1** Compose butterfly forms with natural balance	Understanding of nature like butterflies.	Composition, watercolor application	CO2
4	**TLO2.2** Render birds and feathers with textural accuracy	Study of nature like birds, feathers.	Detail rendering, pen and color use	CO2
5	**TLO3.1** Sketch animals and fish in freehand form	Study of Animals wild and pet.	Visual analysis, water & poster color techniques	CO3
6	**TLO4.1** Construct realistic sketches of buildings	Understanding of buildings	Understanding of buildings	CO4

V. LABORATORY LEARNING OUTCOMES & ALIGNED PRACTICAL EXPERIENCES:

S. N.	Practical/Tutorial/Laboratory Learning Outcome (LLO)	Laboratory Experiment/ Practical Titles / Tutorial Titles	No of Hrs	Relevant Cos
1	**LLO1.1** Create tree and line-based compositions	Trees, lines drawing, flowers trees medium of water color poster color.	6	CO1
2	**LLO1.2** Stylize natural forms using simplified elements	Stylization of trees using poster colors.	8	CO1
3	**LLO2.1** Illustrate butterfly compositions	Sketching and Composition of butterflies medium of water color, sketch pen and poster color.	10	CO2
4	**LLO2.2** Draw birds and feathers with texture	Sketching and Composition of birds, feathers medium of water color, sketch pen and poster color.	10	CO2
5	**LLO3.1** Compose animal studies with realistic proportions	Sketching and Composition of Animals, water color, poster color.	10	CO3
6	**LLO3.2** Develop underwater-themed compositions	Fishes medium of water color, and poster color.	10	CO3
7	**LLO4.1** Draw buildings using tonal pencil techniques	Sketching of buildings medium of pencil shedding.	10	CO4

VI. SUGGESTED MICRO PROJECT / ASSIGNMENT / ACTIVITIES:

- Field visit-based sketchbook development (botanical gardens, zoo, markets, etc.)
- Stylized poster or collage from natural elements
- Thematic drawing series (e.g., wings, trees in seasons, architecture forms)
- Nature-inspired textile motif portfolio

VII. SUGGESTED COS - POS MATRIX FORM:

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	**PO-2 Problem Analysis**	**PO-3 Design/ Development of Solutions**	**PO-4 Engineering Tools**	**PO-5 Engineering Practices for Society, Sustainability &Environment**	**PO-6 Project Management**	**PO-7 Life long Learning**
CO1	3	2	3	2	1	1	2
CO2	3	2	3	2	1	1	2
CO3	3	2	3	2	1	2	2
CO4	3	2	3	3	2	2	2
Legends: - High:03, Medium:02, Low:01							

VIII. SUGGESTED LEARNING RESOURCES:

S.N.	Author	Title	Publisher with ISBN Number
1	Nita Leland	Exploring Color Workshop	North Light Books; ISBN: 9781581807591
2	Barrington Barber	The Complete Book of Drawing	Arcturus Publishing; ISBN: 9781841933175
3	Victor Perard	Drawing Animals	Dover Publications; ISBN: 9780486205377
4	Jack Hamm	Drawing Scenery: Landscapes and Seascapes	Penguin Putnam; ISBN: 9780399508066
5	Gabriel Martín i Roig	Light and Shade in Drawing	Barron's Educational Series; ISBN: 9780764158201

IX. LEARNING WEBSITES & PORTALS:

S.N.	Link / Portal	Description
1	https://www.natureartists.com	Provides examples and inspiration from professional artists specializing in wildlife and natural environments. Useful for TLO2.1, TLO2.2, TLO3.1
2	https://www.domestika.org	Online courses on sketching, nature illustration, watercolor, and urban sketching. Good for TLO1.2, TLO2.1, TLO4.1
3	https://www.skillshare.com	Video-based classes in sketching, painting, stylization, and nature drawing by artists. Suitable for all TLOs
4	https://www.drawspace.com	Free and paid lessons on pencil shading, animal drawing, perspective, and realistic rendering. Useful for TLO2.2, TLO3.1, TLO4.1
5	https://www.khanacademy.org	Basics of art and geometry in architecture; good for TLO4.1 (buildings and structure sketching)
6	https://www.pinterest.com	Visual inspiration boards for trees, animals, birds, and building sketches. Good reference for visual studies in all TLOs
7	https://line-of-action. com	Drawing practice tool with timed animal, bird, and figure references; ideal for TLO2.2 and TLO3.1
8	https://urbansketchers.org	A global sketching community focused on drawing buildings, urban environments, and nature. Relevant for TLO4.1

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PRINCIPLE OF DESIGN

Subject Code : 192003 **No. of Credits :** 2 (TH:0,T:0,P:5)

I. RATIONALE:

The students of textile design must have a well-developed aesthetic sense to recognize beauty in objects and the capability to make the best use of their experience in the design and development of textile products. This course imparts knowledge and skills related to traditional Indian fabrics, motifs, and design elements. Students will learn motif creation, placement techniques, color adaptations, and the transformation of styles for textile surfaces.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

Understand and apply traditional Indian textile design motifs and placement strategies. Develop and stylize compositions using various color schemes and design adaptation methods suitable for textile production and application.

III. COURSE LEVEL LEARNING OUTCOMES (COs):

CO1: Understand various styles of textile design and their adaptation.

CO2: Apply collage techniques and color schemes for motif development.

CO3: Demonstrate methods of design placement and layout.

CO4: Use scale, enlargement, and reduction for design transformation.

CO5: Modify color usage using color terminology and mixing techniques.

IV. INTEGRATED THEORY CONTENT TO BE COVERED IN LAB LECTURES (Before Practical Work):

S. N.	Theory Learning Outcomes (TLOs) aligned to COs	Learning content mapped with TLOs and COs	Suggested Learning Pedagogies.	CO
1	**TLO1.1** Describe different styles of textile designs.	Understanding of various style of Textile design.	Visual demonstration, analysis of traditional samples.	CO1
2	**TLO1.2** Adapt motifs according to textile requirements.	Adaptation of design according to the requirement	Live sketching, discussion.	CO1
3	**TLO2.1** Create collage - based motifs using design elements.	Understanding of collage work and its use in making design.	Paper collage, color mixing.	CO2
4	**TLO3.1** Apply design placement techniques.	Placement of design and application.	Block printing, tracing.	CO3
5	**TLO4.1** Enlarge or reduce design elements as per application.	Enlargement and reduction of design.	Graph paper scaling exercises.	CO4
6	**TLO5.1** Explain and apply color theory in design modifications.	Methods of modification of colors and color terminology (i) Hue (ii) value (iii) intensity.	Color wheel exercises, shade cards.	CO5

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL / TUTORIAL EXPERIENCES:

S. N.	Practical/Tutorial/Laboratory Learning Outcome (LLO)	Laboratory Experiment/ Practical Titles / Tutorial Titles	No of Hrs	Relevant Cos
1	**LLO1.1** Create motifs in different styles with selected color schemes.	Students will make motifs of various style of design using different color scheme (split complementary, warm and cool color). (i) Natural (realistic) (ii) Geometrical (iii) Conventional (iv) Abstract (v) Traditional (vi) Folk (vii) Symbolic	20	CO1

2	**LLO2.1** Compose collage-based motifs.	Student will make various motifs of collage work on suggested theme with analogous color scheme. a) Composition of flowers using monochromatic color scheme b) Composition of animals using achromatic color scheme c) Composition of birds with flowers using polychromatic color scheme.	16	CO2
3	**LLO3.1** Demonstrate placement of design using various methods.	Placement of design using 10 methods including border, center, corner, half drop, sateen based etc using complementary color scheme.	16	CO3
4	**LLO4.1** Enlarge and reduce motifs proportionally.	Enlargement and reduction of motifs according to the requirement using analogous color scheme.	16	CO4
5	**LLO5.1** Mix and modify colors accurately.	Modification of colors by using color mixing	12	CO5

VI. SUGGESTED MICRO PROJECT / ASSIGNMENT / ACTIVITIES FOR SPECIFIC LEARNING / SKILLS DEVELOPMENT (SELF LEARNING)

To foster creativity and skill development, students may undertake the following self-learning tasks:

1. Motif Design Assignment :-

Create original motifs using various styles—Natural, Geometrical, Conventional, Abstract, Traditional, Folk, and Symbolic—applying different color schemes such as split complementary, warm, and cool colors.

2. Collage Composition Project :-

Prepare collage-based compositions on a selected theme using specific color schemes:

- Monochromatic: Composition of flowers
- Achromatic: Composition of animals
- Polychromatic: Composition of birds with flowers

3. Design Placement Study :-

Develop design placements using 10 layout techniques such as border, center, corner, half drop, and sateen-based repeat. Apply complementary color schemes to enhance visual appeal.

4. Motif Scaling Activity :-

Perform enlargement and reduction of selected motifs as per design requirements using analogous color schemes to maintain harmony.

5. Color Modification Practice :-

Explore color variation through mixing techniques and modify hue, value, and intensity to suit different textile applications. Create a color wheel or sample chart demonstrating these principles.

VII. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table)

S. N.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I-II		CO1	20	25
2	III		CO2	16	20
3	IV		CO3	16	20
4	V		CO4	16	20
5	VI		CO5	12	15
Total				**80**	**100**

VIII. SUGGESTED COS - POS MATRIX FORM:

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability & Environment	PO-6 Project Management	PO-7 Life long Learning
CO1	3	2	2	2	2	1	2
CO2	3	2	3	2	2	1	3
CO3	3	2	3	3	2	2	2
CO4	3	2	3	3	2	2	2
CO5	3	2	3	2	2	1	3
Legends: - High:03, Medium:02, Low:01							

IX. SUGGESTED LEARNING RESOURCES:

S.N.	Author	Title	Publisher with ISBN Number
1	Asha Rani & Seema Rani	Traditional Textiles of India	Abhishek Publications; ISBN: 9788182471602
2	K. Prakash	Textile Design and Development	Woodhead Publishing India; ISBN: 9789380308661
3	Dr. Vandana Bhandari	Costume, Textiles and Jewellery of India	Prakash Books; ISBN: 9788172341541
4	Anne Morrell	The Techniques of Indian Embroidery	Batsford; ISBN: 9780713486021
5	John Gillow & Nicholas Barnard	Traditional Indian Textiles	Thames & Hudson; ISBN: 9780500282472

X. SUGGESTED LEARNING WEBSITES / PORTALS

S.N.	Link	Description / Relevance
1	https://www.canva.com/learn/color-theory	Comprehensive and visual guide to color theory: useful for LLO1.1, LLO2.1, LLO5.1 (color schemes, mixing, contrast)
2	https://www.sessions.edu/color-calculator	Interactive tool for generating color schemes (analogous, complementary, split, monochromatic). Relevant for LLO1.1, LLO2.1, LLO3.1
3	https://www.pinterest.com	Rich visual inspiration for motif styles—folk, traditional, geometric, abstract, symbolic. Excellent reference for LLO1.1 and LLO2.1
4	https://www.skillshare.com	Online courses on motif creation, collage art, color mixing, and textile design techniques. Suitable for LLO1.1, LLO2.1, LLO5.1
5	https://www.tate.org.uk/art/art-terms	Art glossary and resources on styles such as abstract, symbolic, folk, and conventional. Helpful for

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YARN MANUFACTURING

Subject Code : 192004 **No. of Credits :** 3 (TH:2,T:0,P:3)

I. RATIONALE:

The students of textile design are supposed to have knowledge and skills regarding various textile yarn and materials. Hence, in this subject, students will learn yarn and material properties and importance for various fabric and quality particulars of different textile.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

Upon successful completion of this course, students will have a sound understanding of various yarn types, spinning methods, and material properties used in textile manufacturing. They will be capable of identifying yarn characteristics such as twist, diameter, and end-use performance, and apply this knowledge during fabric production and quality assessment. These competencies will prepare them to work confidently in textile mills, spinning units, quality control labs, and fabric production environments.

III. COURSE LEVEL LEARNING OUTCOMES (COS):

After completing this course, students will be able to:

CO1: Explain the concept of fiber mixing and blending and its significance in textile manufacturing.

CO2: Describe the principles and working of blow room, carding, drawing/ginning, speed frame, ring frame, and doubling frame.

CO3: Identify types of yarns, their twist directions, and packaging styles used in spinning.

CO4: Interpret and illustrate flowcharts for cotton, blended woolen, and worsted yarn manufacturing systems.

CO5: Differentiate between various commercial yarn types such as hosiery yarn, core spun yarn, nepping yarn, and spintex.

CO6: Recognize advanced spinning methods such as rotary spin, airjet spin, and friction spin along with their end uses.

IV. THEORY LEARNING OUTCOMES AND ALIGNED COURSE CONTENT:

S. N.	Practical/Tutorial/ Laboratory Learning Outcome (LLO)	Laboratory Experiment/ Practical Titles / Tutorial Titles	Suggested Learning Pedagogies	No. of Lect.	CO
1	**TLO1.1** Explain mixing and blending techniques and their purpose in textile production.	Introduction to mixing and blending techniques, common blends in the textile industry.	Lecture, Visual samples, Industry case studies	6	CO1
2	**TLO2.1** Describe the functioning of key spinning machines and their sequence.	Principles of blow room, carding, drawing/ginning, speed frame, ring frame, doubling frame.	Demonstration videos, Plant visit, Interactive lecture	5	CO2
3	**TLO3.1** Identify yarn twist types and understand their application.	Types of Yarn inserting of twist, S twist and Z twist, type of package in spinning.	Sample observation, Group discussion, Charts	5	CO3
4	**TLO4.1** Interpret flow charts of different yarn manufacturing systems.	Flow chart of cotton, blended woolen and worsted system of yarn manufacture.	Diagram-based teaching, Class presentations	5	CO4
5	**TLO5.1** Classify various commercial yarns and their use cases.	Introduction of standard commercial yarn, Hosiery yarn, core spun yarn, nepping yarn, spintex.	Samples and swatches, Class demonstrations	5	CO5
6	**TLO6.1** Compare rotary, airjet, and friction spinning methods and their outputs.	Introduction to rotary spin, airjet spin, friction spin and their end uses.	Video lectures, Industry brochures, Use-case discussions	6	CO6

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL / TUTORIAL EXPERIENCES:

S. N.	Practical/Tutorial/Laboratory Learning Outcome (LLO)	Laboratory Experiment/ Practical Titles / Tutorial Titles	No of Hrs.	Relevant COs
1	**LLO1.1** Observe and explain industrial blending techniques.	Demonstration of various mixing / blending techniques employed during mill visit.	8	CO1
2	**LLO2.1** Describe and record spinning operations.	Demonstration of different spinning processes through textile mill visit.	8	CO2
3	**LLO3.1** Identify yarn twist directions and twist types.	Identification of yarn for S and Z twist, hard twist and soft twist.	8	CO3

4	**LLO4.1** Estimate fiber and yarn diameters using lab equipment.	Estimation of fiber diameter and yarn diameter using projection microscope.	8	CO4
5	**LLO5.1** Identify and collect yarn samples.	Identification & collection of different types of yarn studied in theory.	8	CO5
6	**LLO6.1** Examine rotary, airjet, and friction spun yarns.	Identification of different types of yarn like rotor spun, airjet spun, and friction spun.	8	CO6

VI. SUGGESTED MICRO PROJECT / ASSIGNMENT / ACTIVITIES FOR SPECIFIC LEARNING / SKILLS DEVELOPMENT (SELF LEARNING):

To strengthen learning and encourage independent exploration, students may be assigned the following micro-projects or activities:

1. Prepare a comparative chart showing different yarns (e.g., core spun, hosiery, nepping, spintex) with their properties and uses in fabric manufacturing.
2. Create a flow chart for cotton, blended woolen, and worsted yarn manufacturing systems using digital tools or hand-drawn visuals.
3. Develop a sample collection file including real swatches or yarn specimens labeled with their twist type (S/Z), twist level (hard/soft), and spinning method.
4. Submit a report on observations during a mill visit—highlighting blending and spinning techniques and the types of machines observed.
5. Conduct an internet-based research assignment comparing rotary, airjet, and friction spinning technologies and their modern textile applications.
6. Poster Presentation or Visual Map: Prepare a creative visual summary of yarn manufacturing processes, including sketches or digital illustrations.
7. Build a vocabulary booklet of yarn terminology with definitions and hand-drawn or photographed visual examples.

VII. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table):

S. N.	Unit	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	CO1	6	20
2	II	CO2	5	15
3	III	CO3	5	15
4	IV	CO4	5	15
5	V	CO5	5	15
6	VI	CO6	6	20
Total			**32**	**100**

VIII. SUGGESTED COS - POS MATRIX FORM:

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability & Environment	PO-6 Project Management	PO-7 Life long Learning
CO1	3	2	1	1	2	1	2
CO2	3	3	2	2	2	2	2
CO3	3	2	3	2	2	2	3
CO4	3	2	2	2	2	2	2
CO5	3	2	2	2	1	1	2
CO6	3	3	2	2	2	2	3
Legends: - High:03, Medium:02, Low:01							

IX. SUGGESTED LEARNING RESOURCES:

S.N.	Author	Title	Publisher with ISBN Number
1	Bernard P. Corbman	Fiber to Fabric	McGraw-Hill Education; ISBN: 9780070994180
2	J.E. Booth	Textile Testing	CBS Publishers; ISBN: 9788123908941
3	Grover and Hamby	Textile Testing	Wiley Eastern Limited; ISBN: 9788122410667
4	Angappan	Textile Testing	SSM Institute of Textile Technology; ISBN: NA
5	John H. Skinkle	Textile Testing	University of Illinois Press; ISBN: NA
6	J.B. Smith	Winding and Warping	Textile Institute Manchester; ISBN: NA

X. SUGGESTED LEARNING WEBSITES / PORTALS

S.N.	Link	Description / Relevance
1	https://www.textilelearner.net	In-depth technical articles and diagrams on spinning, yarn production, and blending techniques.
2	https://www.fibre2fashion.com	Industrial portal offering insights on commercial yarns, machinery, and latest technologies in textile spinning.

3	https://www.nptel.ac.in	Free video lectures by IIT professors on textile engineering, spinning, and fiber science.
4	https://www.textileengineer.org	Concepts, animations, and spinning system overviews including ring, rotor, and airjet spinning.
5	https://www.textileschool.com	Offers organized modules and tutorials on spinning processes, yarn types, and machinery.
6	https://www.tekstilportal.com	Global textile marketplace with information on spinning machines, suppliers, and yarn innovations.
7	https://textilefocus.com	Industry news and case studies on textile processing, spinning techniques, and yarn innovation.
8	https://www.textileapex.blogspot.com	Student-friendly blog explaining basics of yarn twist, package types, and spinning methods.
9	https://www.youtube.com/c/Industek	Channel with plant videos and animations of blow room, carding, and advanced spinning systems.

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INDIAN TRADITIONAL TEXTILE DESIGN - II

Subject Code : 192005 **No. of Credits :** 3 (TH:2,T:0,P:3)

I. RATIONALE:

The students of textile design must have a well-developed aesthetic sense to recognize beauty in objects and the capability to make the best use of experience in designing and developing textile products. They are expected to have knowledge and skills regarding various traditional fabrics of India. Hence, in this subject, students will learn about the motifs, patterns, and construction details of traditional Indian textiles.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

Students will develop the ability to identify, analyze, and apply knowledge of traditional Indian textile crafts including regional dyed, printed, and embroidered fabrics. They will gain an understanding of cultural heritage, fabric aesthetics, motifs, and traditional production techniques. These competencies will prepare them for roles in textile design, craft revival, product development, heritage-based fashion, and artisan collaboration within the textile and fashion industries.

III. COURSE LEVEL LEARNING OUTCOMES (COs):

After successful completion of this course, the students will be able to:

CO1: Explain the history, construction techniques, and aesthetic elements of Indian dyed and printed textiles.

CO2: Identify regional styles and characteristics of traditional Indian embroidery.

CO3: Recognize traditional motifs, textures, and color schemes used in Indian textile crafts.

CO4: Create design replications and assignments based on traditional Indian prints and embroidery techniques.

IV. THEORY LEARNING OUTCOMES AND ALIGNED COURSE CONTENT:

S. N.	Theory Learning Outcomes (TLOs) aligned to COs	Learning content mapped with TLOs and COs	Suggested Learning Pedagogies.	No. of Lectures	CO
1	**TLO1.1** Learners will be able to define the term "Indian traditional textiles" and articulate its importance in Indian heritage. **TLO1.2** Learners will be able to trace the historical timeline of key textile developments in India, citing specific examples.	Study of Indian traditional textiles: Introduction, historical significance, construction techniques, colors, textures, motifs & centers of production.	Lecture, visual samples, case studies, fabric swatch library	8	CO1
2	**TLO2.1** Describe the origin, construction methods, and cultural value of Indian dyed and printed textiles. **TLO2.2** Identify color, motifs, and textures specific to traditional printed textiles.	Section A – Study of Dyed and Printed Textiles: • Sanganeri, • Bandhani, • Bagru, • Patola & Ikat, • Batik, • Kalamkari, • Block Printing	Video demos, field references, virtual museum tours	12	CO3
3	**TLO3.1** Recognize various traditional embroidery styles from Indian regions. **TLO3.2** Interpret traditional embroidery aesthetics for design integration.	Section B – Study of Indian Traditional Embroidery: • Kashmir - Embroidery • Punjab - Phulkari • Bengal & Bihar - Sujni Kantha • Karnataka - Kasuti • Gujarat - Kutch kadhai (mirror and bead work) • Himachal - Chamba rumal • Uttar Pradesh - Chikankari • Orissa - Appliqué work	Video demos, field references, virtual museum tours	12	CO2 CO4

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL / TUTORIAL EXPERIENCES:

S. N.	Practical/Tutorial/Laboratory Learning Outcome (LLO)	Laboratory Experiment/ Practical Titles / Tutorial Titles	No of Hrs	Relevant Cos
1	**LLO1.1** Replicate traditional printed and embroidery designs with accuracy.	Replication of design of printed and traditional embroidery.	12	CO4
2	**LLO2.1** Analyze and present regional variations in dyed and printed textile designs.	Assignments to students on dyed and printed textile designs.	8	CO1
3	**LLO3.1** Execute embroidery stitches based on traditional regional techniques.	Embroidery to be executed and folder to be prepared related to the topics.	8	CO2
4	**LLO4.1** Present and explain traditional design inspirations and samples.	Presentation of assignments (oral and visual) with design boards or swatches.	8	CO2

VI. SUGGESTED MICRO PROJECT / ASSIGNMENT / ACTIVITIES FOR SPECIFIC LEARNING / SKILLS DEVELOPMENT (SELF LEARNING):

1. **Design Replication Project:** Create a hand-drawn or digitally designed motif inspired by any one traditional textile technique (e.g., Bandhani, Kalamkari, or Chikankari).
2. **Regional Textile Scrapbook :** Prepare a visual scrapbook with collected images, swatches (if available), and write-ups describing dyed/printed and embroidered textile traditions from at least five different states of India.
3. **Field Survey Report :** Visit a local textile museum/exhibition or interact with local artisans and document the processes, motifs, and historical relevance of any traditional fabric.
4. **Embroidery Sample Folder :** Create stitched samples of 3–4 regional embroidery styles along with technique notes and design placement possibilities.
5. **Cultural Presentation Assignment :** Prepare a visual PowerPoint or poster presentation showcasing the evolution, techniques, and motifs of one chosen traditional textile craft.
6. **Digital Research Collage :** Use online museum archives or fashion databases to compile a collage showing how traditional Indian fabrics are being adapted in contemporary design.

VII. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table):

S. N.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I		CO1	18	20
2	II		CO3	12	40
3	III		CO2,CO4	12	40
Total				**32**	**100**

VIII. SUGGESTED COS - POS MATRIX FORM:

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	**PO-2 Problem Analysis**	**PO-3 Design/ Development of Solutions**	**PO-4 Engineering Tools**	**PO-5 Engineering Practices for Society, Sustainability &Environment**	**PO-6 Project Management**	**PO-7 Life long Learning**
CO1	3	2	2	1	2	1	2
CO2	3	2	3	2	2	1	2
CO3	3	2	3	2	2	2	3
CO4	3	2	3	2	2	2	3
Legends: - High:03, Medium:02, Low:01							

IX. SUGGESTED LEARNING RESOURCES:

S.N.	Author	Title	Publisher with ISBN Number
1	Jasleen Dhamija	Handwoven Fabrics of India	Mapin Publishing; ISBN: 9780944142151
2	Rta Kapur Chishti et al.	Saris of India: Tradition and Beyond	Roli Books; ISBN: 9788174364470
3	John Gillow & Nicholas Barnard	Traditional Indian Textiles	Thames & Hudson; ISBN: 9780500288217
4	Anne Morrell	Indian Embroidery	B.T. Batsford Ltd; ISBN: 9780713489102
5	Rosemary Crill	Indian Textiles in the Victoria and Albert Museum	V&A Publications; ISBN: 9781851773811

X. SUGGESTED LEARNING WEBSITES / PORTALS

S.N.	Link / Portal	Description / Relevance
1	https://indianculture.gov.in	A Ministry of Culture portal that hosts in-depth information on India's textile heritage, museum collections, and craft forms.
2	https://www.craftrevival.org	Dedicated to traditional Indian crafts and textiles, including origins, motifs, and centers of production.
3	https://www.gktoday.in	Offers brief but informative descriptions of Indian traditional textiles, printed fabrics, and embroidery types, often useful for quick revision.
4	https://www.dastkarihaat.org	Platform promoting artisans and traditional Indian crafts including textiles and regional embroidery.
5	https://www.textilevaluechain.in	Articles and industry updates on regional textiles and traditional printing techniques like Sanganeri, Kalamkari, and Patola.
6	https://www.virtualniftmuseum.org	Virtual textile museum by NIFT, showcasing swatches, construction methods, and embroidery forms.

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WOVEN FABRIC DESIGN - II

Subject Code : 192006 **No. of Credits :** 3 (TH:2,T:0,P:3)

I. RATIONALE:

The students of textile design are supposed to have knowledge and skills regarding various advanced weaves and their construction. Hence, in this subject, students will learn advanced design for various fabric and quality particulars of different textile.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

Upon completion of this course, students will be capable of understanding, analyzing, and developing complex weave structures suitable for diverse textile products. They will possess the ability to identify and construct twill, satin, crepe, towel, and extra figured weaves using drafting and peg plans. These competencies will prepare them for roles in weaving production units, textile sampling departments, design development studios, and quality assurance in fabric manufacturing industries.

III. COURSE LEVEL LEARNING OUTCOMES (COs):

After successful completion of this course, the student will be able to:

CO1: Classify and construct various types of twill weaves and their variations.

CO2: Explain the structure and applications of satin and sateen weaves.

CO3: Identify and develop diamond, herringbone, and diaper weave patterns.

CO4: Construct crepe weaves using appropriate drafting and design techniques.

CO5: Analyze and develop towel weaves such as honeycomb, huckaback, and sponge weaves.

CO6: Apply techniques for spot figuring and manage extra warp/weft yarns in woven designs.

IV. THEORY LEARNING OUTCOMES AND ALIGNED COURSE CONTENT:

S. N.	Practical/Tutorial/ Laboratory Learning Outcome (LLO)	Laboratory Experiment/ Practical Titles / Tutorial Titles	Suggested Learning Pedagogies	No. of Lect.	CO
1	**TLO1.1** Explain types and characteristics of twill weaves and construct related designs.	Introduction of Basic weaves twill and its verification: - (i) Regular, irregular twill (ii) Pointed twill, curved twill (iii) Combined / large twill (iv) Herring bone twill (v) Fancy twill	Sample analysis, graph drafting, visual charts.	8	CO1
2	**TLO2.1** Describe satin and sateen weave structures and their uses.	Features of Satin and Sateen weave and its variation.	Lecture, fabric handling, comparative charts.	4	CO2
3	**TLO3.1** Identify and create diamond, herringbone, and diaper weave patterns.	Diamond weave, heering bone weave and diaper design.	Hands-on drafting, graph paper design.	4	CO3
4	**TLO4.1** Construct crepe weaves using various drafting techniques.	Crepe weave and their method of construction.	Demonstration, drafting exercises.	4	CO4
5	**TLO5.1** Analyze and develop towel weaves and related structures.	Towel weave (simple structure) (i) Honey Comb simple and Brighton. (ii) Haka back and sponge weave. (iii) Mock leno weave and distorted thread effects.	Chart work, drafting, fabric swatch identification	4	CO5
6	**TLO6.1** Demonstrate figuring techniques with extra warp/weft and manage thread disposal.	Figuring with extra warp and weft yarn, one and one i.e. pick and pick wefting, two and two wefting method of disposing of extra threads on the back of the fabric. spot figuring.	Visual case studies, practical illustrations.	8	CO6

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL / TUTORIAL EXPERIENCES:

S. N.	Practical/Tutorial/Laboratory Learning Outcome (LLO)	Laboratory Experiment/ Practical Titles / Tutorial Titles	No of Hrs.	Relevant COs
1	**LLO1.1** Identify and analyze fabric samples based on twill weave variations.	Study of twill weave fabrics and their end use.	6	CO1
2	**LLO2.1** Observe and differentiate satin and sateen weaves through physical fabric analysis.	Study of satin and sateen weave fabrics.	6	CO2
3	**LLO3.1** Sketch and draft diamond, herringbone, and diaper designs on graph paper.	Drafting of diamond and herringbone weaves.	6	CO3
4	**LLO4.1** Create crepe weave structures on graph paper.	Drafting and analysis of crepe weave.	6	CO4
5	**LLO5.1** Develop towel weave structures and identify their practical applications.	Study and drafting of honeycomb, huckaback, sponge, and mock leno weaves.	6	CO5
6	**LLO6.1** Execute figuring techniques using extra warp and weft.	Practical work on pick-and-pick and spot figuring methods.	6	CO6
7	**LLO7.1** Construct peg plan and denting order for given weaves.	Peg plan and denting order preparation.	6	CO1-CO1
8	**LLO8.1** Analyze overall structural layout and prepare design folders.	Compilation and presentation of sample folders with analysis.	6	All COs

VI. SUGGESTED MICRO PROJECT / ASSIGNMENT / ACTIVITIES FOR SPECIFIC LEARNING / SKILLS DEVELOPMENT (SELF LEARNING):

To foster deeper understanding and skill development, students may undertake the following self-learning projects or assignments:

1. Create a weave portfolio illustrating at least 5 types of twill and crepe weave designs with drafting, peg plan, and real fabric samples.
2. Develop a comparative chart showcasing satin vs. sateen weaves—highlighting differences in construction, luster, and end use.
3. Prepare an illustrated presentation explaining extra warp and weft figuring with real or printed fabric examples.
4. Document a field visit to a weaving unit or handloom cluster, focusing on towel or decorative weave production techniques.

5. Recreate a traditional textile sample (e.g., jacquard or jamdani-like spot figuring) using manual graph paper drafting.
6. Construct a mock design folder that includes analysis, denting order, and peg plan for various weave structures studied in class.
7. Conduct mini-research on the historical evolution and application of fancy twills in traditional Indian or global textiles.

VII. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table):

S. N.	Unit	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	CO1	8	20
2	II	CO2	4	15
3	III	CO3	4	15
4	IV	CO4	4	15
5	V	CO5	4	15
6	VI	CO6	8	20
		Total	**32**	**100**

VIII. SUGGESTED COS - POS MATRIX FORM:

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	**PO-2 Problem Analysis**	**PO-3 Design/ Development of Solutions**	**PO-4 Engineering Tools**	**PO-5 Engineering Practices for Society, Sustainability & Environment**	**PO-6 Project Management**	**PO-7 Life long Learning**
CO1	3	2	3	2	2	2	2
CO2	3	2	2	2	1	1	2
CO3	3	2	3	2	2	1	2
CO4	3	2	3	2	2	2	2
CO5	3	2	3	2	2	2	2
CO5	3	3	3	2	2	2	3
Legends: - High:03, Medium:02, Low:01							

IX. SUGGESTED LEARNING RESOURCES:

S.N.	Author	Title	Publisher with ISBN Number
1	Watson, E.	Textile Design and Colour	Longmans Green & Co; ISBN: 9781298960267
2	Robinson, S.	Design in Weaving	Dover Publications; ISBN: 9780486228006
3	Nisbet, H.	Grammar of Textile Design	D.B. Taraporevala Sons; ISBN: 9788120403173
4	W. G. Smith	Textile Weaving and Design	Nabu Press; ISBN: 9781143203181
5	J. E. Booth	Textile Mathematics and Fabric Structure	Butterworth-Heinemann; ISBN: 9780750647122
6	R. Marks & A. T. C. Robinson	Principles of Weaving	Textile Institute; ISBN: 9781870372033

X. SUGGESTED LEARNING WEBSITES / PORTALS

S.N.	Link	Description / Relevance
1	https://www.textilelearner.net	Comprehensive articles, drafting techniques, and visuals on all major and fancy weaves including **twill, satin, crepe, honeycomb, mock leno, diaper,** etc.
2	https://www.textileschool.com	Offers structured lessons on weave types, construction, and fabric behavior.
3	https://nptel.ac.in/courses/116/102/116102026/	Free IIT video lectures on fabric structure, weave drafting, and design by top textile professors.
4	https://www.fibre2fashion.com	Technical articles and industrial examples of woven fabric structures and end uses.
5	https://www.teonline.com	Provides industrial knowledge on textile construction, types of looms, and weave structures including figuring.
6	https://www.textilevaluechain.in	Industry-focused portal with articles, trends, and innovations in weaving techniques.
7	https://www.pinterest.com	A rich visual resource for weave patterns, fabric samples, graph paper drafting inspiration.
8	https://www.asiainch.org	Offers cultural context and heritage insights on traditional Indian weave variations like Brighton honeycomb.
9	https://www.youtube.com/@WeavingToday	Demonstration videos of weave structures and weaving techniques.

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BASIC COMPUTER EDUCATION - II

Subject Code : 102007 **No. of Credits :** 2 (TH:0,T:0,P:3)

I. RATIONALE:

Basic computer education has great influence on all aspects of life. Almost all workplaces and living environments are being computerized. In order to prepare diploma holders to work in these environments, it is essential that they are exposed to various aspects of information technology such as understanding the concept of information technology and its scope, operating a computer, use of various tools of MS Office, using the internet, etc. This exposure enables students to enter their profession with confidence, live in a harmonious way, and contribute to productivity.

II. INDUSTRY / EMPLOYER EXPECTED OUTCOME:

Use modern computing tools such as spreadsheets, presentation software, internet services, and basic networking knowledge to accomplish professional communication, documentation, and data management tasks effectively.

III. COURSE LEVEL LEARNING OUTCOMES (COs):

Students will be able to:

CO1: Operate spreadsheet software and apply formulas, functions, and charting tools.

CO2: Design and deliver presentations using multimedia elements and templates.

CO3: Understand basic ICT concepts including networks and topologies.

CO4: Use advanced internet services such as file transfer, storage, and conferencing.

IV. THEORY CONTENT OUTLINE:

S. N.	Theory Learning Outcomes (TLOs) aligned to COs	Learning content mapped with Theory Learning Outcomes (TLOs) & COs.	Suggested Learning Pedagogies.	CO
1	**TLO1.1:** Explain the elements and operations of spreadsheet software.	**Unit I: Spread Sheet:** Elements of Electronics Spread Sheet, Applications, Creating and Opening of Spread Sheet, Menus, Manipulation of cells: Enter texts numbers and dates, Cell Height and Widths, copying of cells, Mathematical, Statistical and Financial function, Drawing different types of charts.	Demonstration, Hands-on lab sessions, Practice worksheets.	CO1
2	**TLO2.1:** Create and enhance multimedia presentations.	**Unit II: Presentation Software:** Creating, modifying and enhancing a presentation, delivering a presentation, Using sound, animation and design templates in presentation	Instructor-led demos, Peer evaluation, Project-based presentation.	CO2
3	**TLO3.1:** Describe the fundamentals of ICT and computer networks.	**Unit III: ICT Fundamentals:** Basics of Information Communication Technology, Computer Networks and their advantages, Types of Computer Network, Network Topologies, Basics of Transmission Media.	Lecture, Visual diagrams, Concept mapping.	CO3
4	**TLO4.1:** Use advanced internet services for file sharing and communication.	**Unit IV: Internet Advanced Services:** Downloading/uploading files using ftp/telnet, Chatting, Video conferencing, Online storage of data on Google and Yahoo.	Practical demonstrations, Group discussions, Real-time exploration.	CO4

V. LABORATORY LEARNING OUTCOME AND ALIGNED PRACTICAL EXPERIENCES:

S. N.	Practical/Tutorial/Laboratory Learning Outcome (LLO)	Laboratory Experiment/ Practical Titles / Tutorial Titles	No of Hrs	Relevant Cos
1	**LLO1.1:** Create and format spreadsheets using cell operations, formulas, and functions.	Generate an electricity bill, salary statement, and student mark sheet using spreadsheet software.	8	CO1
2	**LLO1.2:** Apply statistical and financial functions in spreadsheet tools.	Use formulas like SUM, AVERAGE, IF, PMT, etc., to perform data analysis in Excel.	8	CO1
3	**LLO2.1:** Design a structured presentation using templates and multimedia elements.	Create a presentation on "College Education System" using three methods: blank, template, auto content wizard.	8	CO2
4	**LLO2.2:** Enhance presentation with animations and transitions.	Make a presentation on "Wildlife" applying color schemes and animation effects.	8	CO2
5	**LLO3.1:** Explain and demonstrate basic ICT components and network topologies.	Identify LAN, WAN, star, and ring topology through diagrams and demonstrations.	10	CO3
6	**LLO4.1:** Demonstrate the use of advanced internet services.	Upload/download files using FTP, explore Google Drive, perform video conferencing using Zoom or Meet.	6	CO4

VI. SUGGESTED WEIGHTAGE TO LEARNING EFFORTS & ASSESSMENT PURPOSE (Specification Table):

S. N.	Unit	Unit Title	Aligned COs	Learning Hours (L+T)	Weightage %
1	I	Spreadsheet Software	CO1	16	30%
2	II	Presentation Software	CO2	16	30%
3	III	ICT Fundamentals	CO3	10	25%
4	IV	Internet Advanced Services	CO4	6	15%
Total				**48**	**100**

VII. SUGGESTED COS - POS MATRIX FORM:

Course Outcomes (COs)	Programme Outcomes (POs)						
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability &Environment	PO-6 Project Management	PO-7 Life long Learning
CO1	3	2	2	3	2	2	2
CO2	3	2	3	3	2	2	2
CO3	2	3	2	2	3	1	2
CO4	2	3	2	3	3	2	2
Legends: - High:03, Medium:02, Low:01							

VIII. SUGGESTED LEARNING RESOURCES:

S.N.	Author	Title	Publisher
1	BPB Publications Russell A. Stultz	Microsoft Office – Complete Reference	BPB Publication; ISBN varies by edition
2	P.K. Sinha &	Learn Microsoft Office	BPB Publication; ISBN varies
3	Priti Sinha	Computer Fundamentals	BPB Publication; ISBN: 9788176567527

IX. LEARNING WEBSITES & PORTALS:

S.N.	Link / Portal	Description
1	https://www.nptel.ac.in	Government portal offering free IT and computer science courses
2	https://www.microsoft.com/en-us/learning	Microsoft Office tutorials and certifications
3	https://www.khanacademy.org	Computer fundamentals and internet basics
4	https://www.gcflearnfree.org	Free lessons on Office, Internet, and email
5	https://www.tutorialspoint.com	Online tutorials on Excel, PowerPoint, and networking basics
6	https://www.youtube.com	Practical videos and tutorials for spreadsheet, PowerPoint, FTP, etc.
7	https://www.w3schools.com	Additional tutorials for internet and basic web technologies

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