

**CURRICULUM FRAMEWORK AND SYLLABI FOR
BACHELOR OF TEXTILES AND CLOTHING
FOR THE CANDIDATE TO BE ADMITTED FROM THE ACADEMIC YEAR
(2021-2022)
(UNDER CHOICE BASED CREDIT SYSTEM-CBCS)**



**DEPARTMENT OF HOME SCIENCE
MOTHER TERESA WOMEN'S UNIVERSITY
KODAIKANAL**

B.Sc Textiles and Clothing

1. About the Programme

The UG Programme in Textiles and Clothing aims to empower women through imparting high level technical, creative and innovative skill in textile and fashion. The Programme courses include Language Studies, Fashion Designing, Textile Studies, Apparel Designing, Marketing, Branding and Forecasting. The Programme is skill oriented and designed to arm a student with the knowledge to join entry level managerial positions such as Fashion coordinator, Designer, Fashion Stylist, Fashion Analysts, Production Executive, Merchandiser, Pattern maker, Freelancer, Quality Control Assistant, Costume Designer and to become as Entrepreneur in the field of textile, garment and fashion Industry.

2. Programme Educational Objectives (PEOs)

PEO1	To coach the students to be competent in industry, academic, and in research in the field of garment and fashion technology
PEO2	To enable the students to possess professional and ethical values and demonstrate their spirit of excellence and leadership in careers
PEO3	To develop skills of the students in fashion and garment design
PEO4	To mould the students as Garment Industry Professionals or freelance consultants
PEO5	To practice them to become young Entrepreneur or Designers with their indigenous ideas.

3. Eligibility:

- The candidates should have completed 10+2 or its equivalent exam in Science/Arts stream from any recognized board.

4. General Guidelines for UG Programme:

- Duration:** The programme shall extend through a period of 6 consecutive semesters and the duration of a semester shall normally be 90 days or 450 hours. Examinations shall be conducted at the end of each semester for the respective subjects.
- Medium of Instruction:** English
- Evaluation:** Evaluation of the candidates shall be through Internal and External assessment.

Evaluation Pattern	Theory		Practical	
	Min	Max	Min	Max
Internal	10	25	10	25
External	30	75	30	75

- Internal (Theory):** Test (15) + Assignment (5) + Seminar/Quiz(5) = 25
- External Theory: 75**

- **Question paper pattern for External examination for Core and Elective papers:**

Max. Marks: 75**Time: 3 Hrs.**

S.No.	Part	Type	Marks
1	A	10*1 Marks=10 Multiple Choice Questions - 2 Questions from each Unit	10
2	B	5*4=20 Two questions from each Unit with Internal Choice (either / or)	20
3	C	3*15=45 Open Choice: Any three Questions out of 5 - one Question from each Unit	45
Total Marks			75

***Minimum credits required to pass - 156**

5. Conversion of Marks to Grade Points and Letter Grade (Performance in a Course/ Paper)

Range of Marks	Grade Points	Letter Grade	Description
90 – 100	9.0 – 10.0	O	Outstanding
80-89	8.0 – 8.9	D+	Excellent
75-79	7.5 – 7.9	D	Distinction
70-74	7.0 – 7.4	A+	Very Good
60-69	6.0 – 6.9	A	Good
50-59	5.0 – 5.9	B	Average
40-49	4.0 – 4.9	C	Satisfactory
00-39	0.0	U	Re-appear
ABSENT	0.0	AAA	ABSENT

6. Attendance

Students must have earned 75% of attendance in each course for appearing for the examination. Students with 71% to 74% of attendance must apply for condonation in the Prescribed Form with prescribed fee. Students with 65% to 70% of attendance must apply for condonation in the Prescribed Form with the prescribed fee along with the Medical Certificate. Students with attendance lesser than 65% are not eligible to appear for the examination and they shall re-do the course with the prior permission of the Head of the Department, Principal and the Registrar of the University.

7. Maternity Leave

The student who avails maternity leave may be considered to appear for the examination with the approval of Staff i/c, Head of the Department, Controller of Examination and The Registrar.

8. Any Other Information:

In addition to the above regulations, any other common regulations pertaining to the UG Programmes are also applicable for this programme.

9. Programme Outcomes(POs)

On completion of the B.Sc. Textiles and Clothing Programme, the students will be able to

- PO:1 Qualify for higher education, government service, industry needs and for startup of business units.
- PO:2 Understand the fundamentals in the field of textiles, apparel and fashion
- PO:3 Enhance their technical and computing skills as to develop creativity and self-confidence.
- PO:4 Increase their higher thinking skill and professionalism for industry relations
- PO:5 Explore knowledge on professionalism, soft skills, environment, social responsibility and human values.
- PO:6 Complete understanding of current trends and advanced knowledge in costume, design and textile.
- PO:7 Acquire knowledge and abilities for self-development and to meet ongoing changes in global fashion and commercial market.

10. Programme Specific Outcomes(PSOs)

On completion of this B.Sc. Textiles and Clothing Programme, the students will be able to

- PSO: 1 Have sound subject knowledge which form basis for technical understanding
- PSO: 2 Develop comprehensive and analytical skills in apparel and fashion industry
- PSO: 3 Acquire knowledge in textile and apparel production techniques.
- PSO: 4 function independently with their ability to design ordevelop products to meet global challenges of textile and apparel industry.
- PSO: 5 Develop employability and entrepreneur skills in textiles, clothing and fashion.

B.Sc. Textiles and Clothing**Framework of the Syllabus to be implemented from the Academic Year 2021-2022**

Paper No.	Course Code	Title of the Course	Credits	Hours		Maximum Marks		
				T	P	INT	EXT	Total
SEMESTER I								
1.	U21LTA11	PART-I -TAMIL- I	3	6	0	25	75	100
2.	U21LEN11	PART-II - ENGLISH -I	3	6	0	25	75	100
3.	U21TCT11	CORE I - Fundamentals of Apparel Designing	4	5	0	25	75	100
4.	U21TCP11	CORE II - Fundamentals of Apparel Designing Practical	4	0	6	25	75	100
5.	U21CHA11	ALLIED I Chemistry –I	4	5	0	25	75	100
6.	U21EVS11	Environmental Studies	2	2	0	25	75	100
7.	U21PELS11	PROFESSIONAL ENGLISH- I	4	6	0	25	75	100
		Total	24	36		-	-	700
SEMESTER II								
8.	U21LTA22	PART-I - TAMIL II	3	6	0	25	75	100
9.	U21LEN22	PART-I I- ENGLISH II	3	6	0	25	75	100
10.	U21TCT21	CORE III – Fiber to Fabric	4	5	0	25	75	100
11.	U21TCP22	CORE IV Textile Science Practical	4	0	5	25	75	100
12.	U21CHA22	ALLIED II - Chemistry –II	4	5	0	25	75	100
13.	U21VAE21	Value Education	3	3	0	25	75	100
14.	U21PELS22	PROFESSIONAL ENGLISH-II	4	6	0	25	75	100
		Total	25	36		-	-	700
SEMESTER III								
15.	U21LTA33	PART-I - TAMIL III	3	6	0	25	75	100
16.	U21LEN33	PART-II - ENGLISH III	3	6	0	25	75	100
17.	U21TCT31	CORE V –Fashion Designing	4	5	0	25	75	100
18.	U21TCA33	ALLIED III Fashion Illustration Practical	4	0	5	25	75	100
19.	U21TCE311/ U21TCE312/ U21TCE313	ELECTIVE –I- Fashion and Clothing Psychology/ Basics of Cosmetology/ Computer Applications in Textiles	3	4	0	25	75	100
20.	U21MSS31	SBE I – Managerial Skills	2	2	0	25	75	100
21.		Non-Major Elective – I	2	2	0	25	75	100
22.	U21PELS33	Professional English III	4	6	0	25	75	100

			Total	25	36	-	-	800
SEMESTER IV								
23.	U21LTA44	PART-I - TAMIL IV	3	6	0	25	75	100
24.	U21LEN44	PART-II - ENGLISH IV	3	6	0	25	75	100
25.	U21TCT41	CORE VI Wet Processing	4	4	0	25	75	100
26.	U21TCP43	CORE VII Textile Dyeing and Printing Practical	4	0	4	25	75	100
27.	U21TCA44	ALLIED IV Principles of Pattern Making	4	4	0	25	75	100
28.	U21TCE421/ U21TCE422/ U21TCE423	ELECTIVE-II-Fashion Forecasting/ Fashion Communication/ Fashion Accessories	3	3	0	25	75	100
29.	U21CSS42	SBE II- Computer Skills for Office Management	2	0	2	25	75	100
30.		Non -Major Elective –II	2	2	0	25	75	100
31.	U21PELS44	Professional English- IV	4	6	0	25	75	100
		Total	29	37		-	-	900
SEMESTER V								
32.	U21TCT51	CORE VIII Fabric Structure and Design	4	5	0	25	75	100
33.	U21TCT52	CORE IX Basics of Fabric Testing	4	5	0	25	75	100
34.	U21TCT53	CORE X Sewing Techniques	4	5	0	25	72	100
35.	U21TCP54	CORE XI Draping Techniques Practical	4	0	5	25	75	100
36.	U21TCP55	CORE XII Garment Construction Practical	4	0	5	25	75	100
37.	U21TCE531/ U21TCE532/ U21TCE533	ELECTIVE –III Textiles and Costumes of India/ Indian Textile Industry/ Knitting	3	3		25	75	100
38.	U21TCS53	SKILL BASED ELECTIVE PAPER III Computer Aided Designing – Practical	2	0	2	25	75	100
		Total	25	30		-	-	700
SEMESTER VI								
39.	U21TCT61	CORE XIII Export Documentation	4	5	0	25	75	100
40.	U21TCT62	CORE XIV Organization of Garment Unit	4	5	0	25	75	100
41.	U21TCT63	CORE XV Garment	4	5	0	25	75	100

		Quality and Cost Control						
42.	U21TCT64	CORE-XVI Clothing Care and Maintenance	4	4	0	25	75	100
43.	U21TCP66	CORE-XVII Fashion Portfolio Presentation Practical	4	0	6	25	75	100
44.	U21TCE641/ U21TCE642/ U21TCE643	ELECTIVE –IV Apparel Marketing/ Basics of Non-Woven / Eco Fashion	3	3	0	25	75	100
45.	U21TCS64	SKILL BASED ELECTIVE PAPER IV Surface Ornamentation Practical	2	2	0	25	75	100
46.	U21EAS61	Extension Activities	3	0	0			100
Total			28	30	-	-	800	
Grand Total			156	205			4600	

U21TCO31 Online Course 3rd Semester

U21TCI41 Internship 4th Semester

U21TCV51 Value Added Courses 5th Semester (Aari Embroidery)

Each Carries 2 Credits to be included as additional Credit courses.

B. Sc Textiles and clothing (Three year Under Graduate Programme):

1. 8 Language Papers
2. 17 Core papers (11 Theory + 6 Practical)
3. 4 Allied Papers (3 Theory +1 Practical)
4. 4 Elective papers with 3 optional papers
5. 2 Non -Major Elective (NME) with two optional papers
6. 4 Skill Based Elective (SBE)
7. Professional English -Add on Course 4 Credits- 6 Hours

NON-MAJOR ELECTIVE

Paper Code	Course Title	Hours	Credits	Continuous Internal Assessment (CIA)	End Semester Exam (ESE)	Total
U21TCN311	Non -Major Elective -I Fashion Concepts	2	2	25	75	100
U21TCN312	Traditional Indian Textiles	2	2	25	75	100
U21TCN421	Non -Major Elective -II Fundamentals of Embroidery	2	2	25	75	100
U21TCN422	Basic Garment Sewing Techniques	2	2	25	75	100

Semester-I

Course Code	U21TCT11	FUNDAMENTALS OF APPAREL DESIGNING	L	T	P	C
CORE I			6	-	-	4
Cognitive level		K1: Recall K2: Understand				
Learning Objectives		<ul style="list-style-type: none"> ➤ To impart thorough knowledge on the parts and function of the sewing machine. ➤ To enable students to gain knowledge about seams and seam finishes. ➤ To gain skills in sewing techniques 				

UNIT I Sewing Equipment and Seams

Sewing machines- parts and their function, care and maintenance. Tools for measuring, marking, cutting and pressing. Selection of thread and needle for various types of fabric. Seams, seam finishes and hems-Definition, Techniques and types.

Unit II Fullness and Skirts

Fullness: Definition, Types of fullness – Darts, Tucks, Pleats, flares, godets, gathers, shires and frills. Calculating the number of materials for these types. Skirts: Different types of skirts – Drafting patterns for flares, gathered, pleated, gored, semicircular and circular skirts.

Unit III Necklines, Plackets and Fasteners

Neck Finishes: -Definition, Bias- definition, joining bias and uses. Bias facing and bias binding.

Plackets- Definition, characteristics of a good placket, classification – continuous, bound and faced, fly opening, zipper, tailored placket.

Fasteners - Buttons and its types-steps in attaching buttons. button hole- types of buttonhole Button loops- thread loops, fabric loop, corded loop, corded frogs. Button and button hole position and length of the button hole-other types of fasteners.

Unit IV Sleeves and Collars

Sleeves: - Classification of sleeves, types of sleeves- plain, puff at top, bottom, bell, bishop, circular, leg-o-mutton, sleeveless styles, kimono & raglan. Pattern preparation for these sleeves. Neck Collars – definition, parts of collar, factors to be considered in designing collar, classification of collar. Drafting for peter pan, cape, scallop, puritan, sailors, Chinese collar.

Unit V Pockets, Yokes and Trimming

Pockets- Definition, classification, selection of pocket and creating variety in pockets. Yokes - Definition, selection of yoke design, creating variety in yoke. Drafting patterns for yoke without fullness yoke with fullness within the yoke and yoke supporting or releasing fullness. Attachment of yokes. Trimmings and Decoration - Definition, types -Bias trimming, Ricrac, ruffles, embroidery, smocking, faggoting, Applique, lace, lace motifs, scallopedging, decorative fastening belts and bows.

Text Books:

1. Patrick John Ireland., Encyclopedia of Fashion Details, Om Books International, New Delhi. (2005).
2. Besty-Hose good, The Complete Book of Sewing, Dorling Kindersley Ltd., London. (2006).
3. Harold Carry and Barbara Latham., The Technology of Clothing Manufacture, Om Book Service, New Delhi. (2005).

References:

1. Zarapkar K.R, System of Cutting, Navneet Publications India – (2005)
2. Lorna Knigh, Sewing Tips, Techniques and Trade Secrets, St. Martin's Press, New York. (2010).
3. Karthik T., Ganesan P., Gopalakrishnan, D, Apparel Manufacturing Technology, CRC Press, U.S. (2016),

COURSE OUTCOME

On successful completion of the course, the students will be able to

K1	CO1	gain knowledge of parts and function of the sewing machine
K2	CO 2	acquire knowledge of fullness
K2	CO 3	understand the classification of sleeves.
K2	CO 4	sew different type of neck finishes, yokes and pockets
K2	CO5	prepare basic garment construction techniques

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO5
CO1	S	S	S	S	S	S	S	S	M	S	S	S
CO2	S	S	S	S	S	S	S	S	M	S	S	S
CO3	S	S	S	S	S	S	S	S	M	S	S	S
CO4	S	S	S	S	S	S	S	S	M	S	S	S
CO5	S	S	S	S	S	S	S	S	M	S	S	S

Strongly Correlating(S)	-	3 Marks
Moderately Correlating(M)	-	2 Marks
Weakly Correlating(W)	-	1 Mark
No Correlation(N)	-	0 Mark.

Course Code	U21TCP11	FUNDAMENTALS OF APPAREL DESIGNING PRACTICAL	L	T	P	C
CORE II			-	-	6	4
Cognitive level		K2: Understand K3: Apply K4: Analyze				
Learning Objectives		<ul style="list-style-type: none"> ➤ To impart thorough knowledge on the parts and function of the sewing machine ➤ To impart practical exposure in sewing operation. ➤ To acquaint students with the knowledge on basic sewing techniques. ➤ To impart the knowledge and skills required for garment designing. 				

1. Threading practice and sample preparation for Single Needle Lockstitch Machine
2. Preparation of samples for seam - plain, top stitch, welt, lapped, slot, flat fell, French seam, mantua makers and piped seam.
3. Preparation of samples for seam finishes - pinked finish, Edge stitched, double stitch finish, overcast, herringbone and bound seam edge finish.
4. Hems - stitched and turned hem, seam binding hem finish, catch stitched hem, narrow machine stitched hem, rolled or whipped hem and shell edged hem.
5. Preparation of samples for darts - darts - single pointed and double pointed darts.
6. Preparation of samples for tucks - pin, piped or corded, shell or scalloped, cross, group tucking with scalloped effect.
7. Preparation of samples for pleats - knife, box, inverted, kick, cartridge and pinch.
8. Preparation of samples for gathering by hand, machine, elastic, shirring or gauging.
9. Preparation of samples for ruffles - single, double.
10. Preparation of samples for facing - bias facing, shaped facing, and decorative facing.
11. Preparation of samples for binding - single and double bias binding.
12. Preparation of samples for plackets - continuous, bound and faced placket, zipper Placket and tailored placket.
13. Preparation of samples for sleeves - plain sleeve, puff sleeve, bishop sleeve, raglan sleeve, circular sleeve.
14. Preparation of samples with yoke - yoke without fullness, yoke with fullness within the yoke.
15. Preparation of samples for collar - Peter Pan collar, Shirt collar, Chinese collar, shawl collar.
16. Preparation of samples for pocket - Patch pocket and bound pocket. Side seam pocket.

Text Books

1. Gayatri Verma and Kapil Dev Cutting and Tailoring Course. New Delhi: Asian Publishers. (2006).
2. Sumathi, G, Elements of Fashion and Apparel Design II Edition. New Age International Private Ltd Publications. (2005)

References

1. Zarapkar K.R, System of Cutting, Navneet Publications India – (2005)
2. Hilary Campbell, Designing Patterns, Om Book Services, New Delhi-(2003)

3. Helen Joseph, Pattern Making for Fashion Design, Armstrong Education, Delhi (2000)
4. Mary Mathew, Practical Clothing Construction Part-II, Designing Drafting and tailoring Bhattarams Reprographic(P) Ltd- (1991)

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	The operation of sewing machine
K3	CO 2	Practiced the construction of seams, seam finishes, sleeves.
K3	CO 3	Illustrate and construction of different type of neck finishes
K4	CO 4	Examine variety in yokes and pockets
K4	CO 5	Analyzing the essential techniques for garment Component designing

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	M	S	S	S
CO2	S	S	S	S	S	S	S	S	M	S	S	S
CO3	S	S	S	S	S	S	S	S	M	S	S	S
CO4	S	S	S	S	S	S	S	S	M	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating(S)

-

3Marks

Moderately Correlating(M)

-

2 Marks

Weakly Correlating(W)

-

1 Mark

No Correlation(N)

-

0 Mark

Semester-II

Course Code	U21TCT21	FIBER TO FABRIC			
CORE III		L	T	P	C
		5	-	-	4
Cognitive level	K2: Understand K3: Apply K4: Analyze K5: Evaluate				
Learning Objectives	The Course aims <ul style="list-style-type: none"> ➤ To gain knowledge on fibers and its properties. ➤ To understand the yarn manufacturing process. ➤ To identify natural and man-made fibers. ➤ Concept of fabric manufacturing process 				

Unit I Introduction to the field of Textiles

Introduction to the field of Textiles – major goals -Importance of Textiles, -Definition of Fibers, Classification of fibers – Natural and Man-made – Primary and Secondary characteristics of Textile fibers. Identification of textile fibers- microscopic test, Burning test and Solubility test.

Unit II Manufacturing process

Manufacturing process, physical, chemical, thermal and biological properties and uses of natural fibers – cotton, linen, jute, pineapple, hemp, silk, wool, hair fibers, Man-made fibers – viscose rayon, acetate rayon, nylon, polyester, acrylic.

Unit III Spinning

Spinning – definition, classification – chemical and mechanical spinning– working principle of blow room– opening, cleaning, doubling, carding, combing, drawing, roving, spinning - Yarn classification – definition, classification – simple and fancy yarns, sewing threads and its properties.

Unit IV Woven

Woven – basic weaves – plain, twill, satin. Fancy weaves – pile, double cloth, leno, swivel, lappet, dobby and Jacquard Weaving technology – process sequence – machinery details.

Unit V Knitting

Knitting – definition, classification, difference between weaving and knitting - characteristics of knitted goods. Difference between warp and weft knitting -Principles of knitting- general terms in knitting, parts of knitting machine, machine knitting needles.

Text Books:

1. Deepali Rastogi and Sheetal Chopra, Textile Science, Orient Black-Swan Private Limited, Hyderabad (2017).
2. Bernard P. Corbman, Textiles Fiber to Fabric, McGraw Hill International Editions, New Delhi, Sixth edition, (2005).
3. Kaplan, N.S., Textile Fibers, Abhishek Publications, Chandigarh (2008).

Reference:

1. Premony Ghosh, Fiber science and Technology, Tata McGraw- Hill Publishing Company limited, New Delhi. (2004)
2. Kothari, V. K, Progress in Textile Science, Vol I, II and III, IAFL Publications, New Delhi. (2010).
3. Seema Sekhri, Textbook of Fabric science, Fundamentals to finishing, PHI Learning Private limited, New Delhi. (2011).

COURSE OUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Classification of fiber
K4	CO 2	Analyze manufacturing process of fibers and yarns
K2	CO 3	Concept of fabric manufacturing process
K5	CO 4	Compare the physical and chemical properties of Synthetic, Metallic and Mineral fibers
K3	C05	Identification of natural and man-made fibers

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	M

Strongly Correlating (S) - 3 Marks
Weakly Correlating (W) - 1 Mark

Moderately Correlating (M)- 2 marks
No Correlation (N) -0 mark

Course Code	U21TCT22	TEXTILE SCIENCE PRACTICAL	L	T	P	C
CORE IV			-	-	5	4
Cognitive level		K1: Recall K3: Apply K4: Analysis K5: Evaluate				
Learning Objectives		<ul style="list-style-type: none"> ➤ To identify fiber and perform fiber test. ➤ To identify and perform yarn test. ➤ To identify and perform fabric test. 				

Identification of textile fibers

Cotton, Silk, Wool, Nylon, Polyester, Linen, Rayon, Jute.

1. Microscopic Method
2. Flame test.
3. Chemical test.

Testing of yarns/ fabrics:

- Counting of the yarn using wrap reel.
- Counting of the yarn using Beasley's balance
- Twist of the yarn using twist tester
- Determining the weight of the fabric.
- Determining the fabric count by
 - a. Raveling method
 - b. Pick glass method
 - Colour fastness to water
 - Test of Shrinkage.
 - Test of Absorbency

Text Books

1. Amutha.K A, Practical Guide to Textile Testing, CRC Press, (2016)
2. Raul Jewel, Textile Testing, APH Publishing Corporation, New Delhi, (2017)
3. Sheraz Ahmad et al., Advanced Textile Testing Techniques, CRC Press, (2017)

Reference Books

1. Jinlian Hu, Fabric Testing, Ed., Woodhead Publishing Ltd., (2008)
2. Butter worth's, Principles of Textile Testing: An Introduction to Physical Methods of Testing Textile Fibers, Yarns and Fabrics, J.E. Books, (1986)

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K1	CO1	Physical identification of fiber specimen
K4	CO 2	Analyzation and identification of the fiber
K3	CO 3	Procedure for testing fiber, yarn and fabric.
K5	CO 4	Evaluation of count of yarn
K4	C05	Analyze the color fastness and shrinkage

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	M
CO5	S	S	S	S	S	S	S	S	S	S	S	S

StronglyCorrelating(S) - **3 Marks**
ModeratelyCorrelating(M) - **2 Marks**
WeaklyCorrelating(W) - **1 Mark**
NoCorrelation(N) - **0 Mark**

Course Code	U21TCT31	FASHION DESIGNING	L	T	P	C
CORE V			5	-	-	4
Cognitive level	K2: Understand K3: Apply K6: Create					
Learning Objectives	<ul style="list-style-type: none"> ➤ To acquire knowledge about design basics, elements and principles of design. ➤ To apply the elements and principles of design in textiles ➤ To learn about textile designing and role of motifs in designing 					

UNIT I Basics of Design

Basics of Design: Introduction, meaning and significance of good design– structural and decorative. Types of design: natural, conventional, geometric, abstract, historical. Good and Bad structural and decorative design.

Elements of design: Line – vertical, horizontal, zig-zag, diagonal, broken lines, curved line, shape or form, colour, texture, silhouette – Bell, buffont, back fullness, bustle tubular - Meaning, types and application on garments.

UNIT II Principles of design

Principles of design – Balance – Formal and Informal, Rhythm –Through repetition, Radiation and Gradation, Emphasis – Grouping of design units, using contrast hues, by leading lines, a combination of any of the above, repeating details such as tucks, Gathers, Unusual Shapes and Textures, Applied design on a contrast background, Harmony and Proportion.

UNIT III Colour

Colour –Definition, Dimensions of colour, psychological effects of colour. Colour theories-Prang and Munsell, Colour harmonies - Monochromatic, analogous, Complementary, Double complementary, Spilt complementary and Triad colour harmony.

UNIT IV Textile Design

Textile Design–Meaning, Motif development – enlargement and reducing a motif, methods for modifying – manual and machine, placement of motif. Source of ideas: Library, Social networking sites, e-books, CD's, Magazines.

UNIT V Application of Design

Application of Design on bodice, skirt, trims, trousers, sleeve and collar Application of the design basics- principles and elements of design on specific body types: fat, thin body type, short, tall, flat bust, heavy bust, heavy thigh, too thin and deformed and abnormal body.

Text Books:

1. Jenny Davis, A Complete Guide to Fashion Designing, First Edition, Abhishek Publications, Chandigarh. (2006).
2. Mahadevan M.G, Textile coloring, First Edition, Abhishek Publication, Chandigarh.

(2008).

3. Premlata Mullica, Text book of Textile Designing, Kalyani Publishers, Ludhiana. (2006).

References:

1. Kathryn Mc Kelvey and Janine -Munslow Fashion Design: Process, Innovation and Practice, Blackwell Science Ltd., Blackwell Publishing Company, UK. (2005).
3. Parachure, J. W, Fundamentals of Designing for Textiles and other end use, Woodhead publishing, India, New Delhi, (2009).
4. Dorling Kindersley., Fashion, The Ultimate Book of Costume and Style, Dorling Kindersley Limited; London. (2012).

Course Outcomes

On successful completion of the course, the students will be able to

K2	CO1	know the concept of design and its application
K3	CO 2	apply the principles of designon garment designs
K2	CO 3	understand color systems and theories
K6	CO 4	develop of textile designs by creation of motif
K3	CO 5	apply the design concepts for specific body types

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating(S) -3Marks
Weakly Correlating(W) -1 Mark

Moderately Correlating(M) - 2 Marks
No Correlation(N) - 0 Mark

Course Code	U21TCA33	FASHION ILLUSTRATION– PRACTICAL	L	T	P	C
ALLIED III			-	-	-	4
Cognitive level	K2: Understand K3: Apply K4: Analysis K5: Evaluate					
Learning Objectives	<ul style="list-style-type: none"> ➤ To give a thorough knowledge on illustrating garment designs ➤ To impart practical knowledge in sketching facial features and head theories. ➤ To equip the students with skill in sketching fashion accessories 					

Prepare sketches for the following

1. Practice of different types of line, shape, shading and smudging techniques
2. Sketching different garment components– (sleeves/ necklines/ collars/pockets)
3. Sketching of garment design using elements and principles of design
4. Sketching of garment design using colour theories and harmony
5. Drawing different Hair Styles
6. Sketching different Jewelleries
7. Fashion Accessories – Bag, Belt, Shoe
8. Head Theory – 7 ½, 8, 10 and 12 for Men / Women
9. Drawing front and side view of face-Variou facial features – Lips, Nose, Eyes, Ears, Hand and Leg
10. Application of garments and accessories on Head Theory –8, 10 and 12 for Men / Women

Text books

- 1.Ranjana Singhal, Kannari Bharat, Fashion Rendering, OM books International. Abridged, (2010).
2. Raviraj, Pencil Shading BasicTechniques. New Century Book House Pvt Ltd.,Chennai (2007).
3. Pooja Khurana & Monika Sethi, Introduction to Fashion Technology, Firewall Media Pvt.Ltd.,New Delhi, (2007)

Reference books

- 1.PundalikVaze, Jyotsna Prakashan, How to Draw and Paint,Pune,II Edition (2002).
- 2.Steven Stipelman, Illustrating Fashion Concept to Creation, Fairchild publication.New York,II edition. (2005).
- 3.Kathryn Hagen, Fashion illustration for Designers. Pearson education, Inc., New jersey (2005)

4. Bina Abling, Fashion Sketch Book. Om Books International, New Delhi, 4th Edition, (2004).
5. Navneet Kaur, Comdex Fashion Design: Fashion Concepts. Dreamtech Press, New Delhi (2010).

Course Outcomes

On successful completion of the course, the students will be able to gain knowledge about

K3	CO1	Application of design elements, principles and colours on garment design
K2	CO 2	Development of designs for various garment components
K4	CO 3	Sketching facial features and head theories
K4	CO 4	Analyze designs for sketching fashion accessories
K5	C05	Evaluate the sketching of facial features

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating(S)

-3 Marks

Moderately Correlating(M)

- 2 Marks

Weakly Correlating(W)

- 1 Mark

No Correlation(N)

- 0 Mark

SEMESTER IV

Course Code	U21TCT41	WET PROCESSING	L	T	P	C
CORE VI			-	4	-	4
Cognitive level	K2: Understand K3: Apply K4: Analyze K6: Create					
Learning Objectives	<ul style="list-style-type: none"> ➤ To enable the students to gain knowledge in various processing methods ➤ To educate the students on Dyeing techniques ➤ To impart knowledge on methods of Printing ➤ Understand principles of dyeing and printing in relation to various types of dyes ➤ Develop technical ability in dyeing and printing with different dyes on different fabrics 					

UNIT I Preparatory processes

Preparatory processes – Need for processing and its classification-Fabric preparation process–singeing, Desiring, scouring, bleaching, mercerizing and degumming– definition, Methods and usage.

UNIT II Dyeing

Stages of Dyeing – Dyes – Classification and Fastness properties of dyes- direct, vat, reactive, acid, basic, azoic dyes. Vegetable dyes – types used, significance of vegetable dyes. Mordant – Introduction, Importance, Role of mordant in Dyeing.

UNIT-III Dyeing technique

Dyeing techniques- Fiber, yarn, fabric and garment – process involved, advantages and limitations. Methods of Dyeing-Stock, yarn, piece, solution, cross and garment dyeing Batch dyeing – Winch, Jig, Padding, Package dyeing, Combination dyeing - machines used and process involved. Recent techniques in Dyeing.

UNIT-IV Methods of printing

Methods of printing – Types, preparation of screen, printing process, Discharge printing – chemicals used, process involved. Resist printing- batik printing, Tie and dye -Process sequence and techniques used. - Direct printing, Block printing, Stencil printing. Recent developments in printing methods.

UNIT-V Effluent treatment

Effluent treatment – Effluent, Introduction, types of effluent from textile unit, Characteristics and treatment of Textiles processing effluents. Effluent treatment processes- Primary, Secondary and Tertiary treatments. Recent trends in effluent treatment techniques.

Textbooks:

1. Kapoor Seema, Dyeing of Textile material, Sonali Publication, New Delhi, (2012).
2. Arora. A., Textbook of Dyes, Sonali Publications, New Delhi. (2011).
3. Niyati Bhattacharya, Natural dyes for Textiles and their eco-friendly application, IAFL Publication, New Delhi. (2010).
4. Wingate IB, Textiles-Fabrics and their Selection, Allied Publishers, Chennai (2006).
5. Navneetkaur, Comdex Fashion Design: Fashion Concepts, Tech Press., New Delhi, VoI-I (2010)

References:

1. Jamshed A Khan, Eco-Friendly Textile Dyeing and Finishing, Scitus Academics LLC, (2016).
2. T.L. Vigo, Textile Processing and Properties: Preparation, Dyeing, niching and Performance, Elsevier, Netherland. (2013).
3. M.L. Gulka Jami, Advanced in the Dyeing and Finishing of Technical Textiles, Wood Head Publishing., Oxford Cambridge, Philadelphia, and New Delhi, (2013).
4. E-Pellow, Dyes and Dyeing, Abhishek Publications, Chandigarh (2007).
5. Ajay Kr. Gupta, Textile Processing with Effluent Treatment, New Delhi, (2005).
6. J.L. Smith, Textile Processing, Printing, Dyeing, Finishing, Abhishek Publications, (2009)
7. W.S. Murphy, Textile finishing. Murphy Publications, Chandigarh (2007)

Course Outcomes

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Concepts of fabric processing methods
K3	CO 2	Application of dyes on fabrics
K6	CO 3	Creation of designs for printing garments
K4	CO 4	Analyzing suitable finishing process for different fabrics
K3	CO5	Evaluate the methods of treating effluents

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating(S) - 3 Marks

Moderately Correlating(M) - 2 Marks

Weakly Correlating(W) - 1 Mark

No Correlation(N) - 0 Mark

Course Code	U21TCP43	TEXTILE DYEING AND PRINTING PRACTICAL	L	T	P	C
CORE VII			-	-	4	4
Cognitive level		K2: Understand K3: Apply K4: Analyze K5: Evaluate K6: Create				
Learning Objectives		<ul style="list-style-type: none"> ➤ To gain practical experience in textile dyeing and printing. ➤ To do value addition to products based on the type of fabric and dye techniques ➤ To enhance the fabric by applying different styles of dyeing and printing 				

1. Preparatory process: Cotton- Desizing, Scouring, Bleaching, Silk-Degumming
2. Synthetic dyeing: Cotton- Direct, reactive, Silk- Acid dye.
3. Printing - wooden block, nail block, vegetable, finger, flock, stencil and Screen printing. Batik printing; cracked, nail block, free hand, Tie and Dye: gathering, stripes, diagonal, spiral web, trick, triangle, knotting.
4. Color fastness tests for dyed and printed fabrics – Evaluation of colorfastness to washing, light and rubbing

Text Books:

1. Arora. A., Textbook of Dyes, Sonali Publications, New Delhi. (2011).
2. Kapoor Seema, Dyeing of Textile material, Sonali Publication, New Delhi, (2012).
3. Niyati Bhattacharya., Natural dyes for Textiles and their ecofriendly application, IAFL Publication, New Delhi, (2010).

References

1. I.J. Grosioki., Watson's Design and Color – Elementary Weaves and Figured Fabrics, Wood Head Publishing Limited, London, (2004).
2. Clarke, W., An Introduction to Textile Printing, Wood Head Publishing Limited, London, (2004).

COURSE OUTCOMES

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Fabric preparatory processes
K3	CO 2	Demonstrate various dyeing and printing methods
K6	CO 3	Creation of design on fabrics for printing
K4	CO 4	Analyze designs and fabrics for dye and print application

K5	CO 5	Evaluate the colour fastness test of dyes fabrics
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Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO 3	PSO 4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) - **3 Marks**

Moderately Correlating (M) - **2 Marks**

Weakly Correlating (W) - **1 Mark**

No Correlation (N) - **0 Mark**

Course Code	U21TCA44	PRINCIPLES OF PATTERN MAKING	L	T	P	C
ALLIED IV			-	4	-	4
Cognitive level	K2: Understand K3: Apply K4: Analyze					
Learning Objectives	<ul style="list-style-type: none"> ➤ To enable the students to learn about method and importance of taking body measurements ➤ To impart knowledge on basic drafting and draping techniques ➤ Understand about preparation of fabric for cutting ➤ To enable the students to learn the skills of standardizing body measurements 					

Unit I Body Measurements

Body Measurements– Importance, Preparation for measuring, Girls and Ladies Measurements, Boy’s and Men’s measurements. Standardizing body measurements, Importance, Techniques used. Relative length and girth measurements. Preparation of standardized measurement chart.

Unit II Drafting

Drafting – Pattern making terminology, Methods of pattern making, Types of paper patterns, Pattern making tools, Steps in drafting bodice front, Bodice back, Sleeve, Skirt front and back, Collar- one piece peter pan and shirt collar. Dart Manipulation, Technique- Slash and Spread method and Pivotal method. Study of commercial pattern, Merits and Demerits. Preparation of commercial pattern for kids. Fitting – Standards of a good fit, Steps in preparing a blouse for fitting, checking the fit of a blouse.

UNIT III Draping

Draping-Draping-Definition and Meaning, need for draping, Importance of Draping Technique, Advantages and Disadvantages, Tools and Equipment’s used for Draping, Preparation of dress form. Importance of grain, preparation of Muslin Material, straightening, tearing and pressing.

UNIT IV Grading and Preparation of Fabric for Cutting

Grading and Preparation of Fabric for Cutting – Grading, Introduction and importance of grading, Manual Grading of basic bodice – front and back, Sleeve, skirt and Collar, Computerized Grading. Basic terms: Grain, Selvedge, On grain, Off Grain, Off Grain Print, With the Grain, Against the Grain, Importance of Grain in Fabric. Cutting-Preparing the Fabric for Cutting, Methods of straightening fabric ends, Methods of straightening fabric grain, shrinking fabrics.

UNIT-V Pattern alteration and layout

Pattern alteration and layout –Importance of altering patterns, Principles for pattern

alteration, common pattern alteration in blouse. Pattern layout - Definition, Purpose, Rules in layout, Types of layout and Special layouts. Piecing, transferring pattern markings, Stay and Ease stitching.

References:

Text Books

1. Connie Amaden Crawford., The Art of Fashion Draping, Third edition, Bloomsbury Academic, London, (2004).
2. Jaffe., Draping for fashion Design, Sonali Publication, New Delhi, (2012).
3. Khurana K, Draping and Pattern Making for Fashion Design, Sonali Publications, New Delhi., (2012).

References:

1. Helen Joseph Armstrong, Pattern Making for Fashion Design, Pearson Educations, New Delhi. (2013).
2. Zarapkar K.R, System of Cutting, Navneet Publications, India, (2005).

Course Outcomes

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Method and importance of taking body measurements
K3	CO 2	Application of principle of pattern making techniques for drafting
K2	CO 3	Concept of basic draping techniques
K4	CO 4	Analyzed the methods for preparation of fabric for cutting
K4	C05	Analyzed the methods of grading pattern and pattern layout

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO5
CO1	M	S	S	S	S	M	M	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating(S)	-	3 Marks
Moderately Correlating (M)	-	2 Marks
Weakly Correlating (W)	-	1 Mark
No Correlation (N)	-	0 Mark

SEMESTER-V

Course Code	U21TCT51	FABRIC STRUCTURE AND DESIGN	L	T	P	C
CORE VIII				-	5	-
Cognitive level		K2: Understand K3: Apply K4: Analyze				
Learning Objectives		<ul style="list-style-type: none"> ➤ To learn about weave structure and its mechanism ➤ To gain knowledge about the uses of different fabric structures 				

Unit I Woven design fundamentals

Woven design fundamentals -Introduction, Classification of Woven structures, Methods of weave Representation, Weave repeat, basic elements of a woven design, Types of draft plans. Weaves – Plain, Rib Twill, Satin and Sateen. End uses of different weaves.

Unit II Heavy fabrics

Simple fancy weaves - Honey Comb – ordinary and brighten honey Comb, its modifications. – Huck a buck weave and its modifications, Sponge weaves, Mock Leno, Crepe and corkscrew. Distorted thread effects – Bed ford cord weaves and fabrics –End uses of honey comb and huck-a-buck weaves.

Unit III Figured fabrics

Figured fabrics - Backed Fabrics - Warp and Weft, Difference between warp and weft backed fabrics. Extra warp and extra weft figuring – single and two colors, Difference between extra warp and extra weft figuring. End uses of figured weaves.

Unit IV Pile fabrics

Pile fabrics - Pile Fabric- salient features, Classification of pile fabrics -Loop, pile and cut pile, warp pile and weft pile- Types of velveteen, Weft plush -Terry pile – salient features, Classification of terry pile structures – 3 pick, 4 pick, 5 pick and 6 pick - Terry Pile on one side of fabric only and on both sides.

Unit V Double cloth

Double Cloth- Introduction- Meaning –Classification of double fabric- warp, Weft and center stitched double cloth. Self-Stitched-back to Face -Difference between double cloth and double face fabrics - uses of double cloth – Applications of double cloth weaves.

Text Books:

1. Gokarneshan, N, Fabric structure and design, New Age International Publishers, New Delhi (2004).
2. Gokarneshan.N, Weaving Preparation Technology, Abhishek Publications, Chandigarh. (2009).
3. Barker, A. F., Handbook of Textiles, Abhishek publications, Chandigarh. (2009).

References:

1. Seema Sekhri, Textbook of Fabric science, Fundamentals to finishing, PHI Learning Private limited, New Delhi. (2011).
2. Deepali Rastogi, Sheetal Chopra, Textile Science, Orient Blacks wan Private Limited, Hyderabad. (2017).
3. Prabir Kumar Banerjee., Principles of fabric Formation, CRC press, U.S. (2015).

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Concept of fabric structures
K3	CO 2	Application of different fabric structures
K4	CO 3	Analyzing of different weaves structures from fabric samples
K2	CO 4	End uses of the weave structures
K4	CO 5	Classification and construction of fabric structure

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S)

-

3 Marks**Moderately Correlating (M)**

-

2 Marks**Weakly Correlating (W)**

-

1 Mark**No Correlation (N)**

-

0 Mark

Course Code	U21TCT52	BASICS OF FABRIC TESTING	L	T	P	C
CORE IX			-	5	-	4
Cognitive level		K2: Understand K3: Apply K4: Analysis K5: Evaluate				
Learning Objectives		<ul style="list-style-type: none"> ➤ To assess the physical and chemical parameters for assessing the quality of fiber, yarn and fabric. ➤ To impart knowledge to estimate the textile quality ➤ To equip the students to evaluate the woven and knitted fabrics 				

Unit I Testing of fibers

Testing of fibers- length, importance of fiber length, methods of measuring fiber length, hand stapling method, bare sorter and digital fibro graph. Fiber fineness; importance, Fiber maturity; Fiber strength; importance, measurement by Presley tester.

Unit II Evaluation of yarns

Evaluation of yarns – direct system, indirect and metric system, quadrant balance, physical balance, Twist. Importance of twist, twist estimation; single yarn, untwist, twist method. Yarn diameter, yarn strength; single yarn strength, lea strength. Yarn evenness.

Unit III Evaluation of Woven Fabrics

Evaluation of Woven Fabrics- Physical tests; Tensile strength, length and width, fabric thickness, fabric weight, count, stiffness, drape, abrasion, pilling, crease recovery and air permeability.

Unit IV Evaluation of Wet ability

Evaluation of Wet ability - sinking, wicking, drop, water repellency, color fastness; sunlight, artificial sunlight, wash, crocking and pressing.

Unit V Evaluation of Knitted fabrics

Evaluation of Knitted fabrics - Bursting strength analysis, Wales, coarse, GSM, Drapability, thickness and color fastness properties. Dimensional stability, absorbency tests; sinking, drop, capillary raise test. Wear study; 5, 10, 15 washes.

Text Books

1. Raul Jewel., Textile Testing, APH Publishing Corporation, New Delhi. (2009).
2. Meenakshi Rastogi., Fibers and yarn, Sonali Publications, New Delhi. (2009).
3. Jinlian HU, Fabric Testing, Wood Head Publishing Limited, Cambridge, England. (2008).

Reference Books

1. Rajesh Anandjiwala L. Hunter, Ryszard Kozlowski, Gennady Zaikov, Textiles for Sustainable Development, Nova Science Publications, Inc., New York. (2007).
2. Ahmed Sheraz, Rasheed Abher, Afzal. A and Ahmed Faheem, Advanced Textile Testing Techniques, Taylor and Francis, US. (2017).
3. Wang Lijiang, Performance Testing of Textiles, Methods, Technology and Applications, Woodhead Publishing, Elsevier Ltd., USA. (2016).

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Methods of testing fibers
K3	CO 2	Apply the methods learnt for physical testing of fiber, yarn and fabric
K4	CO 3	Analyze the quality of fiber and yarn
K4	CO 4	Analyze the quality of fabric through various testing methods
K5	C05	Evaluation of fabric properties through fabric testing methods

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S)	-	3 Marks
Moderately Correlating (M)	-	2 Marks
Weakly Correlating (W)	-	1 Mark
No Correlation (N)	-	0 Mark

Course Code	U21TCT53	SEWING TECHNIQUES			
CORE X		L	T	P	C
		-	5	-	4
Cognitive level	K2: Understand K3: Apply K4: Analysis K5: Evaluate				
Learning Objectives	<ul style="list-style-type: none"> ➤ To enable students to gain knowledge in sewing Machineries used in garment industries. ➤ To learn about sewing machineries and its types. ➤ To study about marking, cutting and sewing process. ➤ To study different types of equipment's used in apparel industry ➤ To acquaint students about the types of stitches used in the industry 				

UNIT I Sewing Machineries

Sewing Machineries – Classification of sewing machines, parts and functions of single needle machine, Double needle machine –Special Attachments-Care and maintenance-common problems and remedies. Applications of over lock machine, bar tacking machine, Buttonhole making machine, button fixing machine, feed-of-the-arm machine, blind stitching machine, fabric examining machine.

UNIT II Stitching Mechanism

Stitching mechanism – Needles, bobbin and bobbin case, bobbin winding, loops and loops spreader, threading finger, upper and lower threading, auxiliary hooks, throat plates, take-ups, tension discs – upper and lower thread tension, stitching auxiliaries, pressure foot and its types, Feed mechanisms – drop feed, different fed, needle feed, compound feed, unison feed, puller feed.

UNIT III Cutting Technology

Cutting– definition, function, scope. Cutting equipment and tools, vertical reciprocity cutting machine, rotary cutting machine, band knife cutting machine, die-cutters.

Types of spread and its quality, spreading equipment and tools used for spreading methods.

UNIT IV Marking methods

Marking methods, positioning marking, types of markers, efficiency of a marker plan, requirements for marker planning. Pressing Equipment's – purpose, pressing equipment's and methods – iron, steam press, steam air finisher, steam tunnel, special types – pleating, permanent press.

UNIT V Sewing Federal Standards for Seam

Sewing Federal Standards for Seam- Class 1 To 8 - Superimposed Seam, Lapped Seam, Bound Seam, Flat Seams, Decorative Stitching, Edge Neatening. Stitch Types – Class 100 to 600: Chain stitches.

References:

Text Books:

1. Harold Carry and Barbara Latham., The Technology of Clothing Manufacturing, Om Book Service, New Delhi. (2010).
2. Dudeja, V.D, Professional Management of Fashion Industry, Gagandeep Publication, New Delhi. (2005).
3. Gerry Cooklin, Garment Technology for Fashion Designers, Black Well Science Ltd., Oxford. (2005)

References:

1. Betsy hose good, The Complete Book of Sewing, Dorling Kindersley Limited, London. (2006).
2. Karthik T., Ganesan P., Gopalakrishnan, Apparel Manufacturing Technology, CRC Press, U.S., (2016).
3. Debbie Colegrove, Sewing, Wiley Publishing, NC., Hoboken, New Jersey. (2006).

Course Outcomes

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Identification of different sewing machines used in apparel industry
K3	CO 2	Identification of Stitching mechanism and its operations
K4	CO 3	Analyze the garment cutting techniques.
K5	CO 4	Evaluation of the quality of marker efficiency and Pressing Equipment's
K2	C05	Sewing Federal Standards for Seam

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	M	S	S	S
CO2	S	S	S	S	S	S	S	S	M	S	S	S
CO3	S	S	S	S	S	S	S	S	M	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	M	S	S	S

Strongly Correlating (S)	-	3 Marks
Moderately Correlating (M)	-	2 Marks
Weakly Correlating (W)	-	1 Mark
No Correlation (N)	-	0 Mark

Course Code	U21TCT54	DRAPING TECHNIQUES PRACTICAL	L	T	P	C
CORE XI			-	5	-	4
Cognitive level		K2: Understand K3: Apply K4: Analysis K5: Evaluate K6: Create				
Learning Objectives		<ul style="list-style-type: none"> ➤ To create patterns by draping method ➤ To develop skills in making patterns through draping ➤ To drape designs using different types of fullness 				

1. Introduction to draping and dress forms
2. Draping basic front and back
3. Draping basic skirts
4. Draping yokes
5. Draping Shirt yoke and
6. Draping midriff yoke
7. Draping collars- Peter pan
8. Mandarin and Shirt Collar

Text Book

1. Khurana K, Draping and Pattern Making for Fashion Design, Sonali Publications, New Delhi. (2012)
2. Helen Jaffa and Nurie Relis., Draping for Fashion Design, Pearson Education Inc, Prentice Hall Dorling Kinder Sley Pvt. Ltd, New Delhi., (2009).
3. Hilde Jaffe, Draping for fashion design, Pearson education. New Delhi (2011).

Reference:

1. Helen Joseph Armstrong, Draping for Apparel Design, Blooms burry academic, London (2013).
2. Jaffe, Draping fashion Design, Sonali Publication, New Delhi. (2012).
3. Karolyn Kiisel, Draping: The Complete Course, Laurence King Publishing, London. (2013).

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Draping techniques
K3	CO 2	Application of fabrics on dress form for draping.
K6	CO 3	Development of garment design using draping techniques on dress form
K5	CO 4	Evaluation of fabric properties suitable to develop design on dress form

K4	CO 5	Analysis of styles of yokes and collars for the draping shirt /garments.
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Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) - **3 Marks**

Moderately Correlating (M) - **2 Marks**

Weakly Correlating (W) - **1 Mark**

No Correlation (N) - **0 Mark**

Course Code	U21TCP55	GARMENT CONSTRUCTION PRACTICAL	L	T	P	C
CORE XII			-	-	5	4
Cognitive level		K2: Understand K3: Apply K4: Analysis K5: Evaluate K6: Create				
Learning Objectives		<ul style="list-style-type: none"> ➤ To gain practical skill in designing, drafting, pattern making and constructing apparels for kids and adults ➤ To gain knowledge in calculating the material required for the designed garments and estimate the cost. 				

1. Designing, drafting, pattern making and constructing of infant garments- Jabla, Panty and Bib.
2. Designing, drafting, pattern making and constructing toddler's garments- Romper, shorts – Elastic at Waistline
3. Designing, drafting, pattern making and constructing school going boys garments - Yoke less Shirt with sleeve and collar
4. Designing, drafting, pattern making and constructing school going girls garments - middy and middy top
5. Designing, drafting, pattern making and constructing for women's garments - kameez and salwar and saree blouse
6. Designing, drafting, pattern making and constructing for men's garments - Shirt and Pant

Text Books:

1. Anita Tyagi, Handbook of fashion Technology, Sonali Publications, New Delhi, (2012).
2. Winifred Aldrich, Metric Pattern Cutting for Children's Wear and Baby Wear –Black Well Publishing, New Delhi. (2012).
3. Zarapkar K.R., System of Cutting, Navneet Publications, India. (2005).
4. Gerry Cooklin, Pattern cutting for Women's outer wear, Om books international, New Delhi., (2005).
5. Khurana K, Draping and Pattern Making for Fashion Design, Sonali Publications, New Delhi., (2012).

References

1. Carla Hegeman Crim, Pattern Cutting for Kids' Clothes, Search Press Limited, (2014).
2. Nancy J. S. Langdon and Sabine Pollehn, Sewing Clothes Kids Love, Creative Publishing International Inc. USA. (2010)
3. Samantha Me Nes., Baby Couture, K.P. Books, USA. (2005).
4. Jaffe, Draping fashion Design, Sonali Publication, New Delhi (2012).
5. Clayton, Marie, Pattern maker with Marie Clayton, make your own clothes: Twenty custom fit patterns to sew, Collins and Brown London. (2008).
6. Peg Couch, Garment Construction: A Complete course on making clothing for fit and

- Fashion, Fox Chapel Publishing. USA (2011).
 7. Samantha., NesBaby Couture, K.P. Books, USA., (2005).
 8. Myoungok Kim, Injoo Kim, Patternmaking for Menswear: Classic to Contemporary, Fair child Books, New York. (2014).

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Practical skill in designing, drafting, pattern making and constructing of apparels
K6	CO 2	Creating designs and patterns for the construction of Kids, Women's and men's garments
K3	CO 3	Application of suitable fabric for garment construction
K4	CO 4	Analyzing of material requirement
K5	CO 5	Evaluation of cost of the garment

Mapping of COs with POs & PSOs:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) - **3 Marks**

Moderately Correlating (M) - **2 Marks**

Weakly Correlating (W) - **1 Mark**

No Correlation (N) - **0 Mark**

Course Code	U21TCS53	COMPUTER AIDED DESIGNING - PRACTICAL	L	T	P	C
SKILL BASED ELECTIVE				-	-	2
Cognitive level		K2: Understand K3: Apply K4: Analysis K5: Evaluate K6: Create				
Learning Objectives		<ul style="list-style-type: none"> ➤ To get familiarize with the CAD apparel software used in garment industry. ➤ To develop garments for kids, men and women using CAD. ➤ To create designs, logos and labels through CAD ➤ To enlighten with the knowledge of various CAD software's for designing textiles 				

1. Design

2. Portfolio collection – theme board, mood board, color board and Swatch board.

Preparation of Patterns for the following

- Salwar and Kameez
- Middi and Tops
- T-Shirt
- Full Sleeve Shirt
- Trousers- Narrow bottom or Bellbottom

3. Grade the following patterns for 3 sizes

- Salwar and Kameez
- Middi and Tops
- T-Shirt
- Full Sleeve Shirt
- Trousers- Narrow bottom or Bellbottom

4. Marker planning and efficiency for the following garments

- Salwar and Kameez
- Middi and Tops
- T-Shirt
- Full Sleeve Shirt
- Trousers- Narrow bottom or Bellbottom

Text Books:

1. Alikhan, Computer Application in Textiles, Random Publications, New Delhi. (2013).
2. Frederick L. Chipkin., Adobe Photoshop for Textile Design, Origin Inc, New York, (2012).
3. Winifred Aldrich, CAD in Clothing and Textiles, Wiley, U.S, (1994).

References:

1. Frankie Ng and Jiu Zhou., Innovative Jacquard Textile Design using digital technologies, Woodhead Publishing, London. (2008).
2. Kathryn Mc Kelvey and Janine., Munslow Fashion Design: Process, Innovation and Practice, Blackwell Science Ltd., Blackwell Publishing Company. United Kingdom., (2005).

3.Sandra Burke, Fashion Computing: Design Techniques and CAD, Burke Publishing, London. (2006).

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	CAD apparel software used in garment industry
K4	CO 2	Analysis of garment designs for kids, men and women using CAD
K6	CO 3	Create designs, logos and labels through CAD
K3	CO 4	Grading of patterns using CAD
K5	CO 5	Evaluation of Marker planning and efficiency

Mapping of COs with POs& PSOs:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating(S) - 3 Marks **Moderately Correlating (M)- 2 Marks**

Weakly Correlating(W) - 1 Mark **No Correlation(N) - 0 Mark**

Course Code	U21TCT61		L	T	P	C
CORE XIII		EXPORT DOCUMENTATION	-	5	-	4
Cognitive level	K2: Understand K4: Analyze K5: Evaluate					
Learning Objectives	<ul style="list-style-type: none"> ➤ To impart knowledge on processes involved in exports. ➤ To learn about Export Procedure and export contract ➤ To learn about Documentation System 					

UNIT I Export Business

Preliminary steps for starting export business- Meaning-Classification of goods for exports- Advantages- Disadvantages-Registration formalities-procedure for obtaining IEC number-Export license- Role of Exports Promotion Councils (EPCS) –Apparel Exports Promotion Councils (AEPC).

UNIT II Export Procedure

Export Procedure and export contract: Steps in export procedure- pre-shipment procedure- Shipment procedure-post- shipment procedure. Exchange rate fluctuations Risks- Forward Contracts – Role of ECGC to cover political, Commercial and Comprehensive Risks on Exports.

UNIT III Export Finance

Arrangement of export finance: Meaning of export finance-pre- shipment finance-features-types- post- shipment finance-features- types-Institutional framework for export finance-Role of reserve bank of India in export finance.

UNIT IV Excise clearance

Excise clearance -Duty Exemption, Remission, Duty drawback schemes. Quality inspection- Applications for inspection-to-inspection agencies, Inspection Certificates CRF. Certificate of origin, GSP Certificate.

UNIT V Export Documentation

Export Documentation: Introduction-Aligned Documentation System (ADS)-Export documentation in India-Shipping documents. Transport documents - Export promotion measures in India, Preparation of Export documents

References

1. Khushpat S. Jain., Export Import Procedures & Documentation Himalaya Publishing House,New Delhi (2011)
2. Francis Cherunilam., International Business: Text and cases, PHI Learning Private Ltd, (2020)
3. P. SubbaRao, International Business:Text and cases, Himalaya Publishing House,Mumbai, (2012)

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Export documents in garment industry.
K2	CO 2	Procedure of garment export
K2	CO 3	Registration formalities
K4	CO 4	Analysis of duty exemption process
K5	C05	Quality inspection procedure in garment and textile industry

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	M	S	S
CO2	S	S	S	S	S	S	S	S	S	M	S	S
CO3	S	S	S	S	S	S	S	S	S	M	S	S
CO4	S	S	S	S	S	S	S	S	S	M	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) - **3 Marks**

Moderately Correlating (M) - **2 Marks**

Weakly Correlating (W) - **1 Mark**

No Correlation (N) - **0 Mark**

Course Code	U21TCT62	ORGANIZATION OF GARMENT UNIT	L	T	P	C
CORE XIV				-	5	-
Cognitive level	K2: Understand K3: Apply K4: Analysis K5: Evaluate					
Learning Objectives	<ul style="list-style-type: none"> ➤ To impart knowledge of organizing of garment unit ➤ To learn about Factory Design and layout ➤ To develop knowledge about Institutions supporting entrepreneurs 					

UNIT-I Entrepreneurship

Entrepreneurship- Meaning definition and types need for Entrepreneurs, qualities and types of Entrepreneurships. Difference between Entrepreneur and manager. Management- Definition, Management as a process –Planning, organizing, Directing Controlling, Coordination.

UNIT-II Institutions supporting entrepreneurs

Institutions supporting entrepreneurs- Abbreviation, year of establishment and the functions of following institutions -DIC, NSIC, SISI, SIPCOT, TII, KVIC, CODISSIA, COMMERCIAL BANKS –SBI. Organizational structure of a garment unit – Hierarchical organization, production planning and control.

UNIT-III Different department in a garment unit

Different department in a garment unit – Organizational Structure of a garment unit – Design department, Finance department, purchasing department, Production department, organizing different sections – hierarchy Personnel involved in all the departments, nature of the job.

UNIT-IV Factory Design and layout

Factory Design and layout – importance of factory design, factors affecting factory design, Types of buildings, (single and Multi –story) –advantages and limitation. Factory layout – Process, Product and combined layout Design requirement – requirements relating to health, safety and welfare.

UNIT-V Performance of Indian Garment Export

Performance of Indian Garment Export, SWOT Analysis Setting up of garment unit for export market, Export Document, Export finance-types of transport and Payment method, Export shipping Role of merchandiser in a garment unit.

Text Books

1. Education Tally, Official guide to financial accounting using Tally ERP 9 with GST, Tally education pvt ltd, BPB Publications, (2018.)
2. Tally education, Tally ACE, Tally education Pvt Ltd, (2019)
3. Benjamin Woolf Hirsh, Peter Ellis., An Introduction to Textile Economics, Textile Trade Press, (1973)

Reference Books

1. Tally education pvt ltd, Tally GURU Vol.2, (2019).
2. Anu Thomas, Startup India: Policies abound but limited impact on ground, ET online, (2017)
3. Bernard P Corbman, Textiles-Fiber to fabric, Mc Graw Hill Book Co, Singapore (1983).

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Role of entrepreneurs
K3	CO 2	Emerge as entrepreneur with the help of Institutions supporting entrepreneurs
K4	CO 3	Process of organizing a garment unit
K4	CO4	Analyze design and layout for a garment industry
K5	CO5	SWOT Analysis Setting up of garment unit

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO5
CO1	S	M	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S)

-

3Marks**Moderately Correlating (M)**

-

2 Marks**Weakly Correlating (W)**

-

1 Mark**No Correlation (N)**

-

0 Mark

Course Code	U21TCT63	GARMENT QUALITY AND COST CONTROL	L	T	P	C
CORE XV			-	5	-	4
Cognitive level	K2: Understand K3: Apply K4: Analysis					
Learning Objectives	<ul style="list-style-type: none"> ➤ To impart knowledge on quality control of raw material ➤ To impart knowledge on quality specification and process ➤ To understand about the types of control forms ➤ To understand about coordinating departmental activities ➤ To understand about types of costs and expenses 					

UNIT I Quality control

Definition and scope of quality control – establishing merchandising standards –establishing raw material quality control specifications – quality control of raw material

UNIT II Quality specification

Establishing processing quality specification – training quality control personnel – the quality standard control – quality control inspection, procedures for processing – quality control of finished garments – quality control and government contacts – quality control for packaging, warehousing and shipping – statistical quality control. Sampling plans —wide quality standards.

UNIT III Function of production control

Function of production control – production analysis – quality specifications – qualitative specifications – scope of apparel manufacturing activity –coordinating departmental activities – distribution of documents and records.

UNIT IV Type of control forms

Type of control forms – basic production systems – principles for choosing a production a production system – evaluating production systems – flow process grids for production control –scheduling calculation, graph methods, scheduling bundles of varying amounts– producing many styles simultaneously -producing many styles consecutively in one line.

UNIT V Functions of cost control

Functions of cost control, types of costs and expenses – apparel manufacturing cost categories – sales cost control, purchasing cost control, production cost control, administration cost control – cost ration policies – The manufacturing budget – cash flow controls.

Text Books

- 1.K. Amutha, Sustainability in the Textile Industry, Standards and Certificates, Springer Publication, (2017).
- 2.K. Amutha, Sustainable Fibers and Textiles, Sustainable Chemical Management and Zero Discharges, Woodhead Publishing, (2017).
- 3.K. Amutha, Eco-testing of Apparel Products Green Apparels, Woodhead Publishing, (2019).
- 4.Pradip V Mehta & Sathish K. Bhardwaj, Managing Quality in Apparel Industry, New Age International, (1998).

Reference Book

- 1.Stanley Bernard Brahams, The Fundamentals of Quality Assurance in the Textile Industry, CRC Press, (2016.)

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K4	CO1	Analysis of raw material quality
K3	CO 2	Quality specification and process
K4	CO 3	Types of control forms
K2	CO 4	Coordinating of departmental activities and distribution of documents and records
K3	CO 5	Administration cost control

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating(S)- 3 Marks
Weakly Correlating(W) - 1 Mark

Moderately Correlating(M) - 2 Marks
No Correlation(N) - 0 Mark

Course Code	U21TCT64	CLOTHING CARE AND MAINTENANCE	L	T	P	C
CORE XVI				-	4	-
Cognitive level		K2: Understand K3: Apply K4: Analyze K5: Evaluate K6: Create				
Learning Objectives		<ul style="list-style-type: none"> ➤ To gain knowledge on care and maintenance of textiles. ➤ To acquire knowledge in differentiating types of fabrics ➤ To acquire knowledge on types of water and suitable laundry methods ➤ To enable and create awareness in care and maintenance of clothing 				

UNIT I Water

Water- hard and soft water, methods of softening water. Laundry soaps – Manufacture of soap (Hot process, cold process), composition of soap- types of soap- soap less detergents, chemical action, Preparation of detergent, advantages of detergents. Difference between soap and detergents.

UNIT II Finishes and reagents

Finishes – Stiffening Agents – Starch (cold water and hot water), Other stiffening agents, Preparation of starch. Laundry blues, their application.

Laundry reagents - soaps - detergents - cleaning action of soaps, indigenous cleaning agents - ritanut - shikakai - green gram - bran solution – study of modern and industrial cleaning agents.

UNIT III Laundry equipment

Laundry equipment – for storage, for steeping and Washing – Wash board, suction washer, wash boiler, washing machine. Drying equipment's – outdoor and indoor types. Irons and ironing board – types of iron (box, flat, automatic, steam iron). Ironing board – different types.

UNIT IV Principles of Washing

Principles of washing – suction washing, washing by kneading and squeezing, washing by machine - Process details and machine details. Laundering of different fabrics – cotton and linen, woolen's, colored fabrics, silks, rayon and nylon.

UNIT V Special types of Laundry

Special types of Laundry – water proof coats, silk ties, leather goods, furs, plastics, lace.

Dry cleaning – using absorbent and using grease solvents. Storing of Cloths. Stain removal – food stains, lead pencil, lipstick, mildew, nose drops, paint, perfume, perspiration / mildew, tar, turmeric and Kumkum.

Text Books:

1. Sushma Gupta, Neeru Garg, Renu Saini, Text book of clothing, textiles and laundry, Kalyani Publishers, New Delhi, (2005).
2. Cheryl Mendelson., Home comforts- the art and science keeping house, published by Scriber, New York, (2005).
3. Meenakshi Rastogi., Textile and Laundry, Sonali Publications, New Delhi, (2009).

References:

1. Mary Humphries, Fabric References, Dorling Kindersley (India) Pvt.Ltd. Noida, UP. (2012).
2. Sushma Gupta, Neeru Garg, Renu Saini., Text book of clothing, Textiles and Laundry, Kalyani Publishers, New Delhi. (2005).
3. Rajkishore Nayak, Saminathan Ratnapandian., Care and Maintenance of Textile Products Including Apparel and Protective Clothing, CRC Press, U.S.A(2018).

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K2	CO 1	Care and maintenance of textiles.
K5	CO 2	Evaluation of stain removal quality on fabrics
K4	CO 3	Distinguish hand and soft water and identify methods of softening water
K3	CO 4	Application of laundering techniques on different fabrics
K6	CO 5	Creation of care labels for use

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	M	S	S	S	M	M	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) - 3 Marks

Moderately Correlating (M) - 2 Marks

Weakly Correlating (W) - 1 Mark

No Correlation (N)

- 0 Mark

Course Code	U21TCT66	FASHION PORTFOLIO PRESENTATION PRACTICAL	L	T	P	C
CORE-XVII			-	-	6	4
Cognitive level	K3: Apply K4: Analysis K6: Create					
Learning Objectives	<ul style="list-style-type: none"> ➤ To enable students, develop a comprehensive portfolio showcasing their professional competencies and skills. ➤ To understand about creation of portfolio boards ➤ To understand the concept of fabrics and design chart developments. ➤ To enable students to develop and construct garments as per theme. ➤ To Design embellishments for theme-based garments. 					

Portfolio development and presentation technique;

To be planned for a season or occasion

- Theme Board
- Mood Board
- Storyboard
- Colour Board
- Fabric Board
- Accessories Board
- Illustration
- Photographs

To be presented separately or in a combined form.

- Fabric development chart
- Design development chart
- Final presentation

Number of garments in a collection – 5 garments

Text Books:

1. Mary Mathews, Practical Clothing Construction: Designing, Drafting and Tailoring Bhattarams., Reprographics (P) Ltd., Chennai, Part-II. (2001)
2. Zarakar K.R, System of Cutting, Navneet Publications India (2005)
3. Helen Joseph, Pattern Making for Fashion Design, Armstrong Pearson Education, Delhi, (2000).

Reference:

1. Hilary Campbell, Designing Patterns, Om Book Services, New Delhi, (2003).
2. Mary Mulasi, Garments with style, Chiton Book Company, Pennsylvania, (1995).

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K4	CO1	Analyze designs for a theme.
K6	CO 2	Creation of portfolio boards
K3	CO 3	Develop chart for fabric and designs
K3	CO 4	Construct garments as per a theme.
K3	CO 5	Designing of embellishment for garments constructed

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S)

-

3 Marks**Moderately Correlating (M)**

-

2 Marks**Weakly Correlating (W)**

-

1 Mark**No Correlation (N)**

-

0 Mark

Course Code	U21TCS64	SURFACE ORNAMENTATION PRACTICAL	L	T	P	C
SKILL BASED ELECTIVE PAPER			-	2	-	2
Cognitive level		K2: Understand K3: Apply K4: Analyze K5: Evaluate K6: Create				
Learning Objectives		<ul style="list-style-type: none"> ➤ To impart practical knowledge of various surface ornamentation techniques ➤ To equip the students to analyze suitable surface ornamentations on different products 				

1. Introduction to surface Embellishment

Materials, Tools and Equipment's used, Design Sources, Methods of transferring designs.

2. Preparation of hand embroidery samples

Running, back. Chain, Feather, Stem, Fishbone, Long and short, Fly, Satin, Herringbone, Lazy-daisy, Bullion knot, French knot, seed, and Buttonhole, Ribbon embroidery.

3. Preparation of machine embroidery samples

Straight, Granite, Cording, Satin and Long and Short.

4. Preparing samples for

Mirror, Beads, Sequins, Zardosi, Stone work, Fringes and Tassels, Laces, Smocking, Cutwork, Pompoms, Patchwork, Appliqué, Quilting, Crochet – one technique.

5. Other embellishment techniques

Drawn thread work, Knotting, Flocking and Braiding and Macramé

Text books

1. Navneet Kaur, Comdex Fashion Design: Fashion Concepts, Dream techpress, New Delhi, Vol-I (2010).
2. Manmeet Sodhia., Dress Designing. Kalyani Publishers, New Delhi (2001).
3. Shailaja, Surface Designing for Textile Fabrics, D. Naik Jacquie A. Wilion Publisher (2006).

Reference book

1. Premalthe Mullick., Text Book of Home Science, Kalyani Publishers. New Delhi (2007).
2. Reader's Digest, Sewing Guide, Complete Guide for Sewing, The Reader's Digest Association Inc., 13th Edition (2004).
3. Dr. Paul., Traditional Indian and Textiles. Abhishek Publications, Chandigarh. (2004).
4. Jean Ray Laury, Applique Stitchery, Reinhold Pub.co, New York (2000).

5. Cookie Lyday Sterling, Delightful projects using Easy Techniques, Country Ribbon crafts Publisher, New York (1995).

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Materials, tools and equipment's used for surface ornamentation
K3	CO 2	Application of hand embroidery on fabric and garment design
K4	CO 3	Analyse designs for application of machine embroidery on fabric and garment design
K6	CO 4	Creation of design for surface ornamentation on fabrics
K5	CO 5	Evaluate the quality of surface ornamentation on selected designs

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	M
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S)

-3Marks

Moderately Correlating (M)

-2 Marks

Weakly Correlating (W)

-1 Mark

No Correlation (N)

-0 Mark

NON-MAJOR ELECTIVE

Course Code	U21TCN311	FASHION CONCEPTS	L	T	P	C
NME			-	2	-	2
Cognitive level	K1: Recall K2: Understand K3: Apply K4: Analyze					
Learning Objectives	<ul style="list-style-type: none"> ➤ To impart knowledge about fashion design concepts ➤ To acquaint students with current scenario of the Fashion Industry ➤ To be aware of Indian and International Fashion designers 					

UNIT I Meaning of Fashion

Meaning of Fashion -Need for clothing and Fashion perspectives - Fashion terminologies. Fabric terms, Accessory Terms, Common Sewing Terms and Industry Language. Fashion evolution- haute couture, pretaporter

UNIT II Fashion Movement

Fashion Movement - Meaning, Theories and principles- trickle up, trickle down and trickle across. Fashion - cycle, Fashion forecasting, fashion change – social and psychological reasons.

UNIT III Substance of Fashion Industry

Substance of Fashion Industry - Soft goods chain-textile, apparel & retail segment - Apparel Categories, Designing process - World fashion design centers, Influential designers in India and abroad.

UNIT IV Fashion Business Trends

Fashion Business Trends - Consumer Groups, Consumer Buying Consumer market, Importance of demographics and psychographics & Niche Marketing. Fashion enterprise-fashion information services. Fashion websites.

UNIT V Career in Fashion Industry

Career in Fashion Industry - Career planning process, Training and experience needed, Career in textile, apparel, retail & fashion promotion, Entrepreneurship in fashion, boutique management.

Text Books:

1. Pooja Khurana and Monika Sethi, Introduction to Fashion Technology, Laxmi publications, India. (2007).
2. Jenny Davis, A Complete Guide to Fashion Designing, First Edition, Abhishek Publications, Chandigarh (2006).
3. Kathryn Mc Kelvey and Janine Munslow Fashion design process innovation and practice, Wiley Publications, New Jersey. (2012).

References:

1. Anmol Roy Fashion designing and technology, Sonali Publications, NewDelhi.(2011).
2. Michale M. Granger Fashion the Industry and its careers, Second Edition, A division of conde Nast Publications, NewYork. (2012).
3. Dorling KindersleyFashion, The Ultimate Book of Costume and Style, Dorling Kindersley Limited,London, (2012).

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K4	CO1	Describe the fashion concepts with references to the terminology
K4	CO 2	Express the social and psychological reason for fashion changes, fashion cycle and forecasting
K3	CO 3	Outline fashion theories
K2	CO 4	Analyze the contribution of fashion designers to the world
K6	CO 5	Understand fashion business trend and identify the carrier opportunities in fashion industries

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) - 3 Marks

Moderately Correlating (M) - 2 Marks

Weakly Correlating (W) - 1 Mark

No Correlation (N) - 0 Mark

Course Code	U21TCN312	TRADITIONAL INDIAN TEXTILES	L	T	P	C
NME			-	2	-	2
Cognitive level	K1: Recall K2: Understand K3: Apply K4: Analyze					
Learning Objectives	<ul style="list-style-type: none"> ➤ To understand the origin of Indian costumes ➤ To acquire knowledge about Indian traditional textiles and embroidery. ➤ To understand the present trend in different states of India 					

UNIT 1 Study of Textile Crafts of India

Study of Textile Crafts of India: Introduction, Beginning of Textiles-Clothing of different periods - Egyptian costumes, and developments during various periods-Woven Textiles- Benaras, Brocades, Jamdanis and Baluchars of Bengal, Kani Shawls of Kashmir, Chanderi,

UNIT II Embroidered Textiles

Embroidered Textiles-Salient features of each type of embroidery: colours, motifs and materials used-Kanthas of Bengal, Kasuti of Karnataka, Phulkari of Punjab, Chikankari of Uttar Pradesh, Kashida of Kashmir, Kutch, Kathiawar, Sindh, ChambaRoomal Gujarat embroideries.

UNIT III Printed textiles

Painted and Printed textiles –Kalamkaris of Andhra Pradesh, Dabu printing of Rajasthan, Ajarakh prints of Gujarat, Kalamkari and Block printing Dacca Muslin, Jamdhani, Chanderi, Brocades, Balucher, Kashmir shawls, Bandhani, Patola, Kalamkari and Block printing.

UNIT IV Dyed textiles

Dyed textiles –Introduction, history, classification-Beginning of Dyed Textiles -Type of dyes used -Design creation -Bandhnis of Rajasthan and Gujarat, Ikats- Patola of Gujarat, Bandhas of Orissa, Telia Rumal-Men’s attire, women’s attire: upper wear and bottom wear.

UNIT V Status of Traditional Textiles

Status of Traditional Textiles in Modern India - Evolution and socio-economic significance of Khadi, Handloom and Handicraft sector - Sustenance of traditional textile crafts - Interventions by organizations-Conservation of Textiles - Factors affecting deterioration of textiles - Care and storage of textiles.

Text Books:

- 1.Parul Bhatnagar., Traditional Indian Textiles, Abhishek publications, Chandigarh.,(2004).
- 2.Shailaja. D. Naik, Traditional embroideries of India, APH publications, New Delhi,(2012).

3.Sankar K. Roy, Textile traditions of northeast India, Indira Gandhi Rastriya Manav Sangrahalaya, Bhopal and orient publishers, New Delhi, (2008).

References:

- 1.Ritu Kumar, Costumes and Textiles of Royal India, Antique collectors club, India. (2008).
- 2.Carl Kohler, A History of Costume, Dover Publications, INC, New York. (2012).
- 3.John Gillow, Nicholas Barnard, Indian Textiles, Thames & Hudson, London. (2008).

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K1	CO1	Early development in textiles and costumes
K2	CO 2	Classify the traditional costumes of India
K2	CO 3	Types of traditional textiles of India
K4	CO 4	Choose and utilize traditional accessories in costumes designing
K3	C05	Choose traditional embroideries of India for garment designing

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO5
CO1	S	S	S	S	S	S	S	S	S	M	S	S
CO2	S	S	S	S	S	S	S	S	S	M	S	S
CO3	S	S	S	S	S	S	S	S	S	M	S	S
CO4	S	S	S	S	S	S	S	S	S	M	S	S
CO5	S	S	S	S	S	S	S	S	S	M	S	S

Strongly Correlating (S)-3Marks

Moderately Correlating (M)-2 Marks

Weakly Correlating (W)-1 Mark

No Correlation (N)

- 0 Mark

Course Code	U21TCN421	FUNDAMENTALS OF EMBROIDERY	L	T	P	C
NME			-	2	-	2
Cognitive level	K2: Understand K3: Apply K4: Analyze K5: Evaluate K6: Create					
Learning Objectives	<ul style="list-style-type: none"> ➤ To enable the trainees to learn basics in embroidery. ➤ To impart practical knowledge in various surface ornamentation techniques ➤ To impart practical knowledge of various surface ornamentation techniques ➤ To equip the students to analyze suitable surface ornamentations on different products ➤ To Enhance their employability skills 					

UNIT I Introduction to Surface Ornamentation

Introduction to Surface Ornamentation- and Embroidery – General rules for Hand and Machine Embroidery – Special Attachments to Sewing Machines for Embroidery –General tools-Frame, needles, thimble, Types of fabrics and Threads, Design transforming and tracing methods.

UNITII Hand Embroidery stitches

Hand Embroidery stitches - Running Stitch – Laced Running Stitch - Back stitch – Stem Stitch – Satin stitch – French Knot - Bullion Knot – Cross Stitch - Blanket Stitch – Button Hole Stitch – Corel Stitch –Fly Stitch – Feather stitch - Chain Stitch – Lazy Daisy Stitch. Herringbone- Laced, doubled, closed, threaded, fish bone. Feather- Closed, doubled. Satin-Padded, shaded, long & short.

UNITIII Special Decorations

Special Decorations - Counted thread work on canvas material – Drawn Thread Work – Cut Work – Bead Work – Mirror Work – Sequins Work. Designing and producing fabric appliques and placing it on children and women’s apparel. Bead, Sequin, Stone, Mirror work, chain, appliqué mirror, cut work, zardozi.

UNIT IV Machine Embroidery

Machine Embroidery - Straight, Zig zag, Granite, Monogram, Carding and Couching Machine embroidery stitches using SNLS machines – running stitch, long and short stitch, cut work. computerized embroidery machines —Concepts- Special attachments.

UNIT V Fabric Painting

Fabric Painting – Different types of brushing techniques-Size of brush used-Outline drawing, Shading with dry and wet strokes. Stencil preparation and use of stencils to produce designs - tooth brush spraying and other creative techniques.

Text books

1. Navneet Kaur, Comdex Fashion Design: Fashion Concepts, Dream techpress,New Delhi, Vol-I (2010).
2. Manmeet Sodhia., Dress Designing. KalyaniPublishers,New Delhi (2001).
3. Shailaja, Surface Designing for Textile Fabrics, D. Naik Jacque A.Wilion Publisher (2006).

Reference book

1. PremlatheMullick., Text Book of Home Science, KalyaniPublishers. New Delhi (2007).
2. Reader's Digest, Sewing Guide, Complete Guide for Sewing, TheReader's Digest Association Inc.,13th Edition (2004).
3. Dr. Paul., Traditional Indian and Textiles. Abhishek Publications, Chandigarh. (2004).
4. Jean Ray Laury, Applique Stitchery, Reinhold Pub.co, New York (2000).
5. Cookie Lyday Sterling, Delightful projects using Easy Techniques, Country Ribbon crafts Publisher,New York (1995).

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Materials, tools and equipment's used for surface ornamentation
K3	CO 2	Application of hand embroidery on fabric and garment design
K4	CO 3	Analyze designs for application of machine embroidery on fabric and garment design
K6	CO 4	Creation of design for surface ornamentation on fabrics
K5	CO 5	Evaluate the quality of surface ornamentation on selected designs

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	M
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating(S) - 3 Marks

Weakly Correlating (W) - 1 Mark

Moderately Correlating (M) - 2 Marks

No Correlation (N)

- 0 Mark

Course Code	U21TCN422	BASIC GARMENT SEWING TECHNIQUES	L	T	P	C
NME			-	2	-	2
Cognitive level	K1: Remember K2: Understand K3: Apply K4: Analyze					
Learning Objectives	<ul style="list-style-type: none"> ➤ To impart thorough knowledge on the parts and function of the sewing machine. ➤ To enable students to gain knowledge about seams and seam finishes. ➤ To gain skills in sewing techniques 					

UNIT I: Sewing Equipment and Seams

Sewing machines- parts and their function, care and maintenance. Hand stitches - Temporary stitches- even basting, uneven basting, slip basting and tailor's tacking. Tools for measuring, marking, cutting and pressing. Selection of thread and needle for various types of fabric. Seams, seam finishes and hems-Definition and types.

UNIT II: Fullness and Skirts

Fullness: Definition, Types of fullness –Fullness - Darts – standard dart, double pointed dart- Tucks - pin tuck, cross tucks. Pleat – Knife pleat, box pleat, inverted box pleat, Gathers - hand, machine, elastic, Shirring, Ruffles and flare- Different types of skirts- Gathered-pleated, circular skirt, frilled and A-line.

UNIT III: Necklines, Plackets and Fasteners

Neck Finishes: -Definition and types-Bias facing and bias binding. fitted facing, decorative facing -Fasteners - Buttons and its types. button hole- types of buttonhole Button loops- thread loops, fabric loop, corded loop, corded frogs. -other types of fasteners.

UNIT IV: Sleeves and Pocket

Sleeves: - Classification of sleeves, types of sleeves- plain, puff at top, bottom, bell, bishop, circular, leg-o-mutton, sleeveless styles, kimono and raglan- puff and designer sleeve. Pocket – patch pocket, set in pocket, pocket set into a seam and bound pocket.

UNIT V: -Neck lines and Collars

Neck finishes – Bias binding, facing, Fasteners – button and button hole, press buttons, hook and eyes. Collars -definition, parts of collar, factors to be considered in designing collar, classification of collar-peter pan, cape, shirt, Chinese and Shawl collar- Types of neck lines.

Text Books:

- 1.Patrick John Ireland., Encyclopedia of Fashion Details, Om Books International, New Delhi. (2005).
- 2.Besty-Hose good, The Complete Book of Sewing, Dorling Kindersley Ltd., London. (2006).
- 3.Harold Carry and Barbara Latham., The Technology of Clothing Manufacture, Om Book Service, New Delhi. (2005).

4. Deni Bown, The Complete Book of Sewing, Dorling Kindersley Limited, USA (2003).

5. Connie Amaden. A Guide to Fashion Sewing – Second Edition, - Crawford, Fairchild Publications, USA (1994).

References:

1. Zarapkar K.R, System of Cutting, Navneet Publications India – (2005)

2. Lorna Knigh, Sewing Tips, Techniques and Trade Secrets, St. Martin's Press, New York. (2010).

3. Karthik T., Ganesan P., Gopalakrishnan, D, Apparel Manufacturing Technology, CRC Press, U.S. (2016),

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Demonstrate the working mechanism of various sewing machines
K3	CO 2	Construct samples for different types of fullness
K4	CO 3	Analyze the application methods of neckline finishes, plackets and fasteners
K6	CO 4	Develop sleeves and yokes with and without fullness
K5	CO 5	Identify and apply collars and pockets in different position of the garments

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	M
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) - **3 Marks**
Moderately Correlating (M) - **2 Marks**
Weakly Correlating (W) - **1 Mark**
No Correlation (N) - **0 Mark**

ELECTIVES PAPERS

Course Code	U21TCE311	FASHION AND CLOTHING PSYCHOLOGY	L	T	P	C
ELECTIVE –I			-	4	-	3
Cognitive level	K2: Understand K3: Apply K4: Analyse K6: Create					
Learning Objectives	<ul style="list-style-type: none"> ➤ To impart knowledge about fashion clothing Psychology ➤ To acquaint students with Current scenario of the Fashion Industry ➤ To learn about Fashion evolution ➤ To learn about Visual Merchandising of Fashion ➤ To be aware of Indian and International Fashion designers 					

UNIT I Factors influencing fashion changes

Factors influencing fashion changes – psychological needs of fashion, social psychology of fashion, technological, economical, political, legal and seasonal influence. Role of costume as a status symbol, personality and dress, clothes as sex appeal, cultural value Fashion cycles, repetition of fashion.

UNIT II Fashion evolution

Fashion evolution – fashion cycles, length of cycles, Consumer groups in fashion cycles – fashion leaders, fashion innovators, fashion motivation, fashion victim, fashion victims, fashion followers Adoption of fashion – trickle down, trickle up and trickle across theory. Fashion forecasting – market research, evaluating the collection,

UNIT III Visual Merchandising of Fashion

Visual Merchandising of Fashion, Types of Displays - Window displays, Interior is plays, Elements of Display – The Merchandise, mannequins & forms, props, signage, lighting. Merchandising Presentation – tools and techniques – back drop, forms, fixtures Fashion show – definition, planning, budgeting, location, timings, selection of models, collection, set design, music, preparing the commentary, rehearsal.

UNIT IV Understanding fashion designer

Understanding fashion designer – types – classicist, idealist, influenced, realist, thinking poet. Indian Fashion Designers – Haute couture – Rohit hosla, Gitanjal Kashyap, Hemant Trivedi, J.J.Valaya, James ferrerira, Ritu Kumar, Rohit Bal, TarunTahiliani. Minimalists – Himanshu and Sonali Sattar, Sangeethe Chopra, Wendell Rodricks Village India – Bhamini Subramaniam, Anju modi, Indiar, Broker, Madhu Jain. Studio line – Bhairavi Jaikishan, Kishan Mehta, Ravi Bajaj, Ritu Beri, Rockys.

UNIT V World Fashion Centers

World fashion Centers - France, Italy, America, far east Contributions of well-known designers from France, America, Italy, Britain and Far east countries. Fashion services and resources (fashion services, colour services, video services, newsletter services, websites,

directories and references), Design - historic and ethnic costume.

Text Books:

1. Krishna Kumar, Apparel Merchandising, Abhishek Publications, Chandigarh. (2010).
2. Philip Kotlar and Kevin Lane, Marketing Management, Keller Pearson Education, Inc, Delhi. (2006)
3. Ellen Diamond, Fashion Retailing, A Multi-Channel Approach, Pearson Education, Delhi, Second Edition, (2006).

References:

1. Mike Easey, Fashion Marketing Black Well Publishing, Australia, Second Edition, (2005).
2. Jeremy A. Rosenau, David L. Wilson, Apparel Merchandising: The Line Starts Here, Fairchild books, New York, (2014).

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K4	CO1	Analyze the factors influencing fashion changes and psychological needs
K2	CO 2	Express the psychological reason for fashion changes, fashion cycle and forecasting
K3	CO 3	Application of Visual Merchandising of Fashion
K4	CO 4	Analyze the contribution of fashion designers to the world
K6	CO5	Understand fashion business trend and creation of career opportunities in World fashion Centers

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	M	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) – 3 Marks
Weakly Correlating (W) - 1 Mark

Moderately Correlating (M)- 2 Marks
No Correlation (N) - 0 Mark

Course Code	U21TCE312	BASICS OF COSMETOLOGY	L	T	P	C
ELECTIVE –I			-	4	-	3
Cognitive level	K2: Understand K3: Apply K4: Analyse					
Learning Objectives	<ul style="list-style-type: none"> ➤ To gain knowledge about personal grooming ➤ To enable the student to develop knowledge in dressing and makeup to the Etiquettes ➤ To help them to understand and apply the procedures for different personalities 					

UNIT I Cosmetology

Cosmetology – Introduction, Definition and its importance- difference between beautician and cosmetologist -features of a cosmetologist -Types and application- Self-grooming –definition and its importance.

UNIT II Pedicure

Pedicure, definition, need for pedicure, tools and equipment used for pedicure, step -by-step procedure of pedicure-, pedicure technique– benefits – difference between spa and regular pedicure - pedicure safety.

UNIT III Manicure

Manicure- equipment used for Manicure, Types- French, hot oil, dip power manicures- Paraffin wax treatments -shaping of nails, removal of the cuticles, Mehendi- Classical, Arabic, Glitter, Painting and Nail Art-Nail Care.

UNIT IV Skin and hair

Structure and function of skin, Skin types, skin tones, tips for skin care and steps in basic facial. Care for skin and hair-Basic Hairstyles: Knotted style - Rolling style - Plaited style- Basic structure of skin and hair, Products available, skin and hair care, make up for face and hairdo styles.

UNIT V Face makeup

Face makeup- meaning, make up application, Make- up types, shape and colour of Hair, hair care and hair styles for occasion. Basic Haircuts - Straight Trimming, “U” - cut and “V” – Cut.

Text books

1. Dr. Neena Khanna, Body and Beauty Care, Pustak Mahal Publishers, (2011).
2. Rashmi Sharma, Herbal Beauty & Body Care. Pustak Mahal Publishers, (2011).
3. Richa Dave, Make-up Album, Navneet Publication, (2006).

Reference books

1. Catherine M. Frangie. Milady, Standard cosmetology, Milady Publishing Company. (2014).
2. Roshini Dayal, Natural Beauty Secrets from India, Tata publishing Enterprises. LLC, (2008).
3. P.J. Fitzgerald., The complete book of Hair styling, Mansoor book house, (2003).

4.Trinnywood wall, sunsannaconstantive, What Not to Wear for Every Occasion, Part-2, Orion Publishing book group, U.K, (2003).

5.Helena Biggs, Nail Art: Inspiring Designs, by the world's leading technician, Arcturus Publishing limited, U.S, (2014).

Course Outcome

On successful completion of the course, the students will be able to gain knowledge about

K1	CO1	Importance of cosmetology
K2	CO 2	Equipment used for pedicure, basic pedicure technique
K2	CO 3	Equipment and techniques used for Manicure
K3	CO 4	Application Face makeup- meaning, make up
K4	CO 5	Analyzation of personal grooming techniques for different personalities

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	M	S	S
CO2	S	S	S	S	S	S	S	S	S	M	S	S
CO3	S	S	S	S	S	S	S	S	S	M	S	S
CO4	S	S	S	S	S	S	S	S	S	M	S	S
CO5	S	S	S	S	S	S	S	S	S	M	S	S

Strongly Correlating (S)	-	3 Marks
Moderately Correlating (M)	-	2 Marks
Weakly Correlating (W)	-	1 Mark
No Correlation (N)	-	0 Mark

Course Code	U21TCE313	COMPUTER APPLICATIONS IN TEXTILES	L	T	P	C
ELECTIVE –I				-	4	-
Cognitive level		K2: Understand K3: Apply K5: Evaluate K6: Create				
Learning Objectives		<ul style="list-style-type: none"> ➤ To understand the basics of computer and its applications ➤ To acquire knowledge about the latest software ➤ To impart knowledge of CAD in fashion designing 				

UNIT I Computer

Introduction to computer – merits and demerits, components of computer - hardware, software, computer peripherals – plotter, digitizer and scanner. Importance of computer in fashion design. CAD in Fashion industry and advancements. Software's in textiles and fashion industry.

UNIT II Creating styles using Corel Draw

Creating styles using Corel Draw: Significance of the software, tools used for designing, steps in creating a logo, letter head, visiting card, envelope, carelabel. Fashion designing using Corel Draw: T-shirt, Salwar and kameez – creation of pattern, and style variations. Creating accessories: bag, jewelry, shoes using coral draw.

UNIT III Development of portfolio using TUKA Studio

Development of portfolio using TUKA Studio-Creation and tracing of designs, repeat setting and modification. Digital illustration using seven modules-weave, design and repeats, jacquard, knitting, easy colour ways and colour separation and story board. Creating samples in each category.

UNIT IV Computers in textile and apparel

Computers in textile and apparel: Computer in pattern making, grading and marker planning - Creation of pattern using TUKA Pattern making and printing using Plotter Computers in apparel production - Computer aided pattern making - Grading and lay planning system - Marker making system- Creating pattern using Plotter.

UNIT V Design creation and fashion catalog

Design creation and colorings using Adobe Photoshop: Creation and tracing of designs, repeat setting and modification. Application of design in textile materials. Creation of fashion catalog -designing and creating story board.

Textbooks:

1. Alikhan., Computer Application in Textiles, Random Publications, NewDelhi. (2013).
2. VasugiRaaja. N., Computer Application in Apparel Industry, PranavPublication, Tiruchengode, Tamil Nadu. (2011).

3. A. D. Sule, Atira, Computer Colour Analysis: Textile Applications, NewAgeInternational, India (1997).

References:

1. Frederick L. Chipkin, Adobe Photoshop for Textile Design, Origin Inc, NewYork. (2012).
2. Frankie Ng and Jiu Zhou Innovative Jacquard Textile Design using digital technologies, Woodhead Publishing, London., (2008).
3. Kathryn Mc Kelvey and Janine Munslow, Fashion Design: Process, Innovation and practice, BlackWell Science Ltd., Blackwell Publishing Company, United Kingdom (2005).

Course Outcomes

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Basics of computer and its applications
K3	CO 2	Application of software's used in the fashion industry
K2	CO 3	Uses and functions of Coral draw, TUKA studio and pattern making and adobe Photoshop
K6	CO 4	Creation of designs using the software's
K5	C05	Evaluate the efficiency of the marker planning

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) – 3 Marks

Moderately Correlating (M)-2 Marks

Weakly Correlating (W) - 1 Mark

No Correlation (N)

-0 Mark

Course Code	U21TCE421	FASHION FORECASTING	L	T	P	C
ELECTIVE –II			-	3	-	3
Cognitive level	K1: Recall K3: Apply K4: Analyse K6: Create					
Learning Objectives	<ul style="list-style-type: none"> ➤ To enable the students to understand about fashion frameworks. ➤ To develop a holistic understanding of fashion trend in a global setting. ➤ To increase their abilities in applying forecasting skills 					

Unit I Introduction

Introduction- Meaning of Fashion, Meaning of Fore Casting, the Role of a Forecasting, Types of Forecasting-Colour Forecasting, Textile Forecasting, Styling Forecasting, Sales Forecasting, Accessories Forecasting, Fabric Forecasting.

Unit II Process of Fashion Forecasting

Process of Fashion Forecasting- Process Diffusion of Innovation, Long term forecasting, short term forecasting, Difference between Long term and short-term forecasting, the precision of fore casting Responsibilities of trend forecasting.

Unit III Forecasting trend and Culture

Forecasting trend and culture -Contemporary Culture, Street Influence, Celebrity Culture, the new gatekeepers of fashion, Range building with trends, Trend prediction for a customer base Fabric Fairs, Consumer Research, and Trend in Colour forecasting.

Unit IV Fashion communication

Communicate creative concepts effectively - Communicate visually through roughs, boards and illustrations, communicate using industry standard terminology, software to communicate a design solution.

Unit V Process of Reporting

Process of Reporting- process of implementation, promotion, making the fashion happen, Steps in fashion forecasting- Hunt, Identify, Gather.

Text books

1. E. L, Fairchild Fashion Forecasting Brannon Publications, III Edition. New York, (2005).
2. McCelvey Kathryn and Maslow Janine, Fashion forecasting. Wiley-Blackwell. (2008).
3. RaymondMartin, The Trend Forecasters Handbook, Laurence's king, U.K, (2010).

Reference books

1. Cynthia I. Regan, Apparel Product Design & Merchandising Strategies, New Jersey Pearson Prentice Hall, New Delhi (2007).
2. Hethorn, J, & Lukasiewicz, Sustainable Fashion: Why Now, Fairchild Publications, New York, (2008).

Course Outcomes:

On successful completion of the course, the students will be able to gain knowledge about

K1	CO1	Remembering the trend forecasting terminologies
K3	CO 2	Communication using industry standard terminology
K3	CO 3	Application software to communicate a design solution
K4	CO 4	Analyzation of the Process of Fashion Forecasting
K6	CO 5	Analyzing the past and present influences and forecast Future fashion

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) - 3 Marks

Moderately Correlating (M) - 2 Marks

Weakly Correlating (W) - 1 Mark

No Correlation (N) - 0 Mark

Course Code	U21TCE422	FASHION COMMUNICATION	L	T	P	C
ELECTIVE –II			-	3	-	3
Cognitive level	K2: Understand K3: Apply K4: Analyse K5: Evaluate					
Learning Objectives	<ul style="list-style-type: none"> ➤ To the Students with effective communication tools required in the Fashion business ➤ To acquire the skills for effective communication. ➤ To enable students to gain knowledge about the opportunities in fashion industry 					

Unit I Introduction to communication

Introduction to communication – process of communication, importance of communication, types of communication- Verbal Communication, Non- verbal/ Interpersonal communication, Written Communications, Formal & Informal and Visual Communication.

Unit II Fashion Journalism

Fashion Journalism – Introduction, Career information, fashion journals, responsibilities of a fashion journalist, ethics. Photography- Introduction, Fashion photography, Career information, qualities and responsibilities, ethics.

Unit III Fashion Show

Fashion show- types of fashion shows- Couture Shows, Ready-to-wear Shows, Trade Shows, Trade Association Shows, Press Shows, Fashion Trend Shows and In-Store Training Shows. Steps to organize Fashion Show, fashion week.

Unit IV Fashion Advertisement

Fashion Advertisement – Introduction, Definition, Features, Objectives and importance of advertising, Types of Advertisement - Print Advertising, Outdoor Advertising, Broadcast advertising, Covert Advertising, Surrogate Advertising, Public Service Advertising, Celebrity Advertising.

Unit V Event Management

Event Management – Event definition, event manager, role of event manager, Steps involved in event planning – event planning, event promotion, event production, copy writer and visualization.

Reference

1. Jenny Davis, Fashion Lifestyle Communication. Abhishek Publications, (2008).
2. Suparna Dutta., Business Communication, PHI Laring Pvt. Ltd, New Delhi: (2013).
3. JulietteCezzar, The AIGA guide to careers in graphic and communication design, Law point publication. (2000).
4. Jin, Byoungho, Cedrola, Fashion Branding and Communication, Palgrave Macmillan, New York (2017).

5. Glenn Bowdin, Johnny Allen, Rob Harris, Events Management. Butterworth-Heinemann Publication, New York, (2017)
6. Helen GoWorek, Careers in Fashion and Textiles, John Wiley Sons, Publishing, (2007).
7. John V. Thill, Courtland L, Bovee, Excellence in Business Communication, Prentice hall, (1999).

Course Outcomes:

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Communication in Fashion industry.
K2	CO 2	Concept of Fashion Journalism
K3	CO 3	Organization of Fashion and trade shows
K4	CO 4	Analyzing various medias for correct fashion Advertisement
K5	CO 5	Evaluation of event management

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	M	S	S
CO2	S	S	S	S	S	S	S	S	S	M	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	M	S	S
CO5	S	S	S	S	S	S	S	S	S	M	S	S

Strongly Correlating (S)	-	3 Marks
Moderately Correlating (M)	-	2 Marks
Weakly Correlating (W)	-	1 Mark
No Correlation (N)	-	0 Mark

Course Code	U21TCE422	FASHION ACCESSORIES	L	T	P	C
ELECTIVE –II	-		3	-	3	
Cognitive level	K2: Understand K3: Apply K4: Analyze K6: Create					
Learning Objectives	<ul style="list-style-type: none"> ➤ To impart knowledge about the significance of accessories and styles available ➤ To understand the history of fashion accessory ➤ To enable them to understand about care for skin and hair 					

Unit I Introduction to Accessory

Introduction to accessory- Definition, History - Classification of fashion accessories - Head gears, Footwear, Neck wear, Belts, Hand bags, Gloves, Scarves, Stoles, Stocking and Sun glasses- Current trends in fashion accessories - Comparison of historical and current fashion accessories.

Unit II Bags and Belt

Bags and Belt- History, significance, top brands, anatomy, Classification, raw materials used in making bags and belts. Fashion using bags and belt. Factors involved in selection of bags and belt – different types of bags and belts for women,

Unit III Footwear and hosiery

Footwear and hosiery: Footwear: History, types, materials used, anatomy of shoe, styles of footwear for men and women, Types of heels, types of foot styles in footwear. Problems with foot wear-blister and foul odor – remedy. Factors to remember while selecting footwear. Fashion using footwear, care for footwear. Hosiery: Socks, stockinet, Panty hose – styles, care and fashion using hosiery.

Unit IV Minor Fashion accessories

Minor Fashion accessories: Glove and scarf: History, materials used, styles available, fashion using gloves and scarf, care and maintenance.
Hats, Umbrellas – History component parts, size and construction, style and care.
Watches and Eyewear: Introduction, parts, fashion, suitability based on body (watches) and face type (eyewear) and care

Unit V Jewelry and fragrance

Jewelry and fragrance: History, significance, types of jewelry – traditional and latest styles of jewelry for men and women - Major and minor jewelry types.
Fragrance-Meaning – importance- types - fragrance for men and women – branded perfumes.

Text Books:

1. Eileen Figure Sandlin, Start your own fashion, Accessories Business, Entrepreneur press, Canada. (2009).
2. Olivier Gerval, Fashion Accessories, A and C Black Publishing's, Great Britain, (2009).
3. Diamond Jay, Fashion Apparel, Accessories and home Furnishings, Pearson Education India, NewDelhi. (2008).

References:

1. Phyllis Tortora,. Encyclopedia of Fashion Accessories, OM books international, New Delhi. (2005)
2. NirupamaPundir, Fashion technology today's and tomorrow, A Mittal publication, New Delhi, (2007).

Course Outcomes

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Different types of bags, belts, shoes and other accessories
K4	CO 2	Analyze the raw materials used and styles for men and women
K3	CO 3	Use of selected fashion accessory for a specific theme
K6	CO 4	Creation of designs in jewellery and other fashion accessory
K2	CO 5	Various methods for skin and hair care

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S)	-	3 Marks
Moderately Correlating (M)	-	2 Marks
Weakly Correlating (W)	-	1 Mark
No Correlation (N)	-	0 Mark

Course Code	U21TCE531	TEXTILES AND COSTUMES OF INDIA	L	T	P	C
ELECTIVE –III			-	3	-	3
Cognitive level	K1: Recall K2: Understand K3: Apply K4: Analyse					
Learning Objectives	<ul style="list-style-type: none"> ➤ To understand the origin of Indian costumes ➤ To acquire knowledge about Indian traditional textiles and embroidery. ➤ To understand the present trend in different states of India 					

Unit I History of costumes

Introduction; Beginning of costume- Body decorations, body staining, tattooing, cutting and scarification; Clothing of different periods- Egyptian costumes, Ancient costumes and developments during various periods. Factors affecting early costumes, Sources and Types of early costumes.

Unit II Costumes and Accessories of East and West

Men's attire, women's attire; upper wear, bottom wear and accessories used in different states; Gujarat, Madhya Pradesh, Rajasthan, Orissa, West Bengal, Manipur, Assam, Haryana and Maharashtra, Nagaland, Bihar.

Unit III Costumes and Accessories of South and North

Men's attire, women's attire: upper wear, bottom wear and accessories used in different states: Tamil Nadu, Kerala, Andhra Pradesh and Karnataka, Jammu and Kashmir, Punjab, Himachal Pradesh, Uttar Pradesh.

Unit IV Traditional Woven, Dyed and Printed Textiles of India

Woven textiles- Dacca Muslin, Jamdani, Chanderi, Brocades, Balucheri, Kashmir shawls- colour, motifs, techniques and materials used. Dyed and Printed textiles- Bandhani, Patola, Kalamkari and Block printing – colour, motifs, techniques and materials used.

Unit V Traditional Embroidery of India

Salient features of each type of embroidery: colours, motifs and materials used. Phulkari, Chikankari, Kantha, Kutch, Kathiawar, Sindh, Kasuthi and ChambaRoomal.

Text Books:

1. Parul Bhatnagar., Traditional Indian Textiles, Abhishek publications, Chandigarh., (2004).
2. Shailaja. D. Naik, Traditional embroideries of India, APH publications, New Delhi (2012).
3. Sankar K. Roy, Textile traditions of northeast India, Indira Gandhi Rashtriya Manav Sangrahalaya, Bhopal and orient publishers, New Delhi, (2008).

References:

1. Ritu Kumar, Costumes and Textiles of Royal India, Antique collectors club, India. (2008).
2. Carl Kohler, A History of Costume, Dover Publications, INC, New York. (2012).
3. John Gillow, Nicholas Barnard, Indian Textiles, Thames & Hudson, London. (2008).

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K1	CO1	Early development in textiles and costumes
K2	CO 2	Classify the traditional costumes of India
K2	CO 3	Types of traditional textiles of India
K4	CO 4	Choose and utilize traditional accessories in costumes designing
K3	C05	Choose traditional embroideries of India for garment designing

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	M	S	S
CO2	S	S	S	S	S	S	S	S	S	M	S	S
CO3	S	S	S	S	S	S	S	S	S	M	S	S
CO4	S	S	S	S	S	S	S	S	S	M	S	S
CO5	S	S	S	S	S	S	S	S	S	M	S	S

Strongly Correlating (S)	-	3 Marks
Moderately Correlating (M)	-	2 Marks
Weakly Correlating (W)	-	1 Mark
No Correlation (N)	-	0 Mark

Course Code	U21TCE532	INDIAN TEXTILE INDUSTRY			
ELECTIVE –III		L	T	P	C
Cognitive level	K2: Understand K3: Apply K4: Analysis				
Learning Objectives	<ul style="list-style-type: none"> ➤ To learn about Origin, Growth and Development of Indian Textile Industry ➤ To impart knowledge Organizations related to the Textile and clothing Industry 				

UNIT I Indian textile and Apparel Industry

Introduction to Indian textile and Apparel Industry –Origin -History- market size - structure of Indian textile industry –Composite mills, spinning, weaving and knitting, fabric finishing, apparel.

UNIT II Textile Industry Growth

Growth and Development of Indian Textile Industry -Government Initiatives opportunities and strength -current facts on Indian textile Industry-Indian imports and export - Global scenario of textile industry.

UNIT III Categories of textile industry

Categories of textile industry - Cotton, Wool, Silk, Rayon, Man-Made Textiles, Readymade garments industry, Hand crafted textiles, jute and coir -introduction and market size.

Five-year plans for the textile Industry - Recent plan and previous 5 Five-year plans - Organizations related to the Textile and clothing Industry -Concept of GATT, MFA, WTO.

UNIT IV Fiber and Yarn Industry

Technological developments in Fiber Industry- Natural and Man-made Industry- production- Significance. Technological developments in Yarn Industry- Fabric Industry - woven, knitted, nonwoven - significance and uses. Garment Industry – developments, significance and uses.

UNIT V Printing and Dyeing Industry

Traditional approach of dyeing and printing industry - Technological developments - significance and uses - centers of traditional printing in India - Technological developments in Processing Industry, significance and recent trends.

Text Books

1. Benjamin Woolf Hirsh, Peter Ellis, An Introduction to Textile Economics, Textile Trade Press, (1973).
2. Pradip V Mehta & Sathish K. Bhardwaj., Managing Quality in Apparel Industry, New Age International, (1998).
3. K.Amutha, Sustainability in the Textile Industry, Standards and Certificates, Springer Publication (,2017).
4. K. Amutha Sustainable Fibers and Textiles, Sustainable Chemical Management and Zero Discharges, Woodhead Publishing, 2017.

5. K. Amutha., Eco-testing of Apparel Products, Woodhead Publishing, Green Apparels, (2019).

Reference Books

1. Anu Thomas, Startup India: Policies abound but limited impact on ground, ET online, (2017)
2. Bernard P Corbman, Textiles-Fiber to fabric, Mc Graw Hill Book Co, Singapore, 6th edition, (1983).

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Origin, Growth and Development of Indian Textile Industry
K2	CO 2	Five-year plans for the textile Industry
K3	CO 3	Technological developments in Fiber Industry
K4	CO 4	Analyze technological developments in Fabric Industry
K4	CO 5	Technological developments in Printing and Dyeing Industry

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S)

-3 Marks

Moderately Correlating (M)

-2 Marks

Weakly Correlating (W)

-1 Mark

No Correlation (N)

-0 Mark

Course Code	U21TCE533	KNITTING	L	T	P	C
ELECTIVE –III			-	3	-	3
Cognitive level	K2: Understand K4: Analyse K5: Evaluate					
Learning Objectives	<ul style="list-style-type: none"> ➤ To enable students to gain knowledge about knitting machines. ➤ To acquire knowledge about knitted fabrics and care ➤ To understand the classification of knitting 					

Unit I Knitting Industry

History-Definition -Scope of knitting in garment manufacturing -growth of knitting industry – market share of knitted apparels in India – Global market - threats in knitting industry – competition between Indian knitwear industry and global brands.

Unit II Knitting

Definition – Meaning – Knitted fabric features -Basic concepts of knitting- Difference between knitted and woven fabrics. Characteristics required for knitted yarn- Knitted loop structure – types of loops, Wales, course and stitch density.

Unit III Knitting Machine

Knitting Machine - The main features of the knitting machine -weft knitting machines -Circular knitting machine (single and double), Flatbed knitting machine, fully fashioned knitting machine, and Hosiery knitting machine. Warp knitting machines - Tricot knitting machine, and Raschel knitting machine. Knitting needles- Types – latch, spring beard and compound needle.

Unit IV Classification of knitting

Classification of knitting - Warp knitting and weft knitting - Warp knitting -Tricot and Raschel- Weft knitting–Flat and Circular. Weft and warp knitting- characteristics. Types of knitted fabrics- Weft knits- single knits- single jersey, Lacoste- double knits- Plain knitted fabrics, rib, purl, inter lock, cable, birds' eye – special weft knits – jacquard, terry, fleece, sliver – Warp knits- Tricot and Raschel.

Unit V Categories in knitted apparels

Knitting industry – categories of apparel – Knit wear, knitted outer wear, intimate apparel, hosiery/ socks, sports and active wear, swim and beach wear, knitted accessories, house hold, technical textiles. Potential benefits of seamless garment knitting.

Text Books

- 1.Seema Kapoor, Modern Knitting Technology, Sonali Publications, New Delhi. (2012).
- 2.Parmar M, Knitting, Random Publications, New Delhi. (2013).
- 3.Naik, Weaving and Knitting Technology, APH Publications, New Delhi. (2013).

References

- 1.Ray, Fundamentals and advances in Knitting Technology, Woodhead Publications. United Kingdom. (2011).
- 2.Anbumani N, Knitting Fundamentals, Machines, Structures and Developments, New Age

Publications, New Delhi. (2007).

3. David J. Spenser, Knitting Technology, Limited, Oxford Wood Head Publishing
Cambridge, New Delhi, Philadelphia. (Reprinted 2011).

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Understand knitting terminologies
K4	CO 2	Features of knitting machine and compare types of knitting needles
K2	CO 3	Classification of knitting
K5	CO 4	Evaluate different types of finishes given to knitted fabric
K4	C05	Analyze different methods of maintaining knitted fabrics

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) - 3 Marks
Weakly Correlating (W) - 1 Mark

Moderately Correlating (M) - 2 Marks
No Correlation (N) - 0 Mark

Course Code	U21TCE641	APPAREL MARKETING	L	T	P	C
ELECTIVE –IV			-	3	-	3
Cognitive level	K2: Understand K3: Apply K4: Analyse K6: Create					
Learning Objectives	<ul style="list-style-type: none"> ➤ To impart the knowledge on the Apparel marketing strategies. ➤ To impart the knowledge on Marketing Function, Pricing policies and strategies for apparel products 					

UNIT-I Marketing

Meaning and classification of Marketing, fashion Marketing, fashion Market – Size and structure, Marketing environment – Micro and macro marketing environment, Trends in marketing environment.

UNIT-II Marketing Function

Assembling, standardization and Grading and packaging, product planning and development, importance of fashion products, Nature of fashion products. The fashion industry and new product development, product mix and range planning, Fashion and related cycles.

UNIT-III Pricing policies and strategies

Pricing policies and strategies for apparel products, importance of price policies, Functions and factors Influencing pricing- internal and external, pricing strategies for new products, methods of setting prices.

UNIT-IV Sales promotion

Fashion sales promotional programme for apparel marketing, communication in prop motion, Personal selling, point of purchase, sales promotion – Objectives and methods, Marketing Research – Definition, Scope and Process – Areas of research.

UNIT-V Fashion Advertising

Fashion Advertising and preparation of advertising for apparel market, Advertising media used in apparel market – Advantages and limitations, Advertising department – structure and functions, advertising agencies – structure and functions. Advertising Budget

Text Books:

1. Krishna Kumar.M, Apparel Merchandising, Abhishek Publications, Chandigarh. (2010)
2. Philip Kotlar and Kevin Lane, Marketing Management, Keller Pearson Education, Inc, Delhi. (2006).
3. Ellen Diamond, Fashion Retailing, A Multi-Channel Approach, Pearson Education, Delhi. (2006).

References:

1. Mike Easey, Fashion Marketing, Black Well Publishing, Australia. (2005)
2. Jeremy A. Rosenau, David L. Wilson, Apparel Merchandising: The Line Starts Here, Fairchild books, New York, (2014).

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Fashion marketing and Marketing environment
K2	CO 2	Functions of fashion Marketing
K4	CO 3	Analyzation of pricing policies and strategies for apparel products
K3	CO 4	Application of sales promotional programme for apparel marketing
K6	CO5	Creation of Fashion Advertisements

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	M	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	M	S	S
CO5	S	S	S	S	S	S	S	S	S	M	S	S

Strongly Correlating (S) – 3 Marks

Weakly Correlating (W) - 1 Mark

Moderately Correlating (M) - 2 Marks

No Correlation (N) - 0 Mark

Course Code	U21TCE642	BASICS OF NON-WOVEN	L	T	P	C
ELECTIVE –IV			-	3	-	3
Cognitive level	K2: Understand K4: Analyse K5: Evaluate					
Learning Objectives	<ul style="list-style-type: none"> ➤ To acquire knowledge about types of non – woven fabrics ➤ To acquire knowledge on evaluation of non-woven fabrics ➤ To acquire the capacity to differentiate non-woven structures 					

Unit I Nonwoven Industry

Meaning of Nonwoven–developments in nonwovens – current trends and opportunities for nonwovens -nonwovens moving toward sustainability -nonwovens from disposable to reuse - Durable nonwoven fabrics – structures with super moisture transport, high strength micro and nano fiber structures.

Unit II Non-woven structure

Non-woven structure – Introduction, Definition, Classification of nonwoven - Advantages and disadvantages of non-woven -properties – machineries used - Applications of nonwovens.

Unit III Non-woven web formation

Nonwoven fabric web – types - staple fiber web – dry-laid webs and wet-laid web,- continuous filament web- spun laid web and melt blown web. Web formation- Blending, opening, and carding.

Unit IV Non-woven web Bonding techniques

Mechanical bonding – Needle punch -spun laced, stitch bonded, hydro entanglement -Thermal bonding -Calendaring, through air bonding, ultrasonic bonding, radiant heat – Chemical Bonding – saturation adhesive, foam coating, application of powders, spraying, print bonding.

Unit V Nonwoven process and product categories

Mechanical bonding Process - product categories - Felt, geotextiles, blood filters, synthetic leather, blankets, automotive interior trim, carpets.

Thermal bonding - process - product categories -upholstery, cushion pads, heat insulation, sound insulation, medical insulation, protective wrapping material.

Chemical Bonding – process- product categories- Acrylic weatherability roofing, PVC copolymers and seating materials for automotive.

Text Books

1. Seema Sekhri, Textbook of fabric science: Fundamental to finishing, PHI Learning Pvt.Ltd. NewDelhi.(2011).
2. Meenakshi Rastogi, Textile Forming, Sonali Publications, NewDelhi.(2009).

3. S J Russell, Handbook of Nonwovens, Wood head Publishing,UK.(2006).

References

1. Chapman R., Application of Non-woven's in Technical Textiles, Taylor and Francis's publisher, UK. (2010).
2. Irwin Marshall Hutten., Handbook of Non-Woven Filter media, Elsevier publisher, Netherland. (2007).
3. Stephen J. Russell., Handbook of Non-Woven, CRC Press publisher, England. (2007).

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K2	CO1	Classify the types of nonwovens
K2	CO 2	Manufacturing process of nonwovens
K4	CO 3	Compare the features of different bonding methods
K4	CO 4	Analyse different nonwoven structures based on their types
K5	C05	Assess the quality of nonwovens on different parameters

Mapping of COs with POs& PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) – 3 Marks
Weakly Correlating (W) - 1 Mark

Moderately Correlating (M) - 2 Marks
No Correlation (N) - 0 Mark

Course Code	U21TCE643	ECO FASHION	L	T	P	C
ELECTIVE –IV			-	3	-	3
Cognitive level	K2: Understand K3: Apply					
Learning Objectives	<ul style="list-style-type: none"> ➤ To understand the need for eco concepts in fashion. ➤ To outline the eco-friendly methods in fashion goods manufacturing ➤ To understand about eco fashion designers 					

Unit I Eco fashion

Introduction, carbon footprint, Eco fashion terminologies- Eco, Sustainable, Ethical, Vegan, Craft/ artisan, Eco green, up cycling. Eco initiatives-types. Popularity of eco fashion. The rise of conscious consumerism.

Unit II Eco fashion labels

Eco labels -Definition, Origin, Need and Scope of eco label, Benefits of eco label, Eco labeling schemes, Types of eco label and products covered. Certification terminologies- Fair trade, Global organic textile standard,

Unit III Eco fibers and fabrics

Eco fibers and fabrics – Organic cotton, Hemp, Bamboo, Linen, Organic wool, pashmina silk, Soy silk. Eco-mark- Definition, Types of eco mark for fabrics: Silk mark, Handloom mark.

Unit IV Eco fashion designers and brands

Eco fashion designers- Lucy Tamman, Ryan Jude Novelline, Meghna Nayak, Aneetha Arora. Brands- Doodlege, pero, Ka-sha, Bhusattava, Forty red bangles, Anokhi, Upasana, Ethicus- aim, collections and promotions. Big labels like Fab India.

Unit V Reuse and Recycle

Textile waste and Up-cycling - Three R's of recycling- Reduce, Reuse, Recycle. Methods of recycling technologies and repurposing of used clothing, fashion brands that use recycled textile materials.

TextBooks:

1. Rose Sinclair, Textile and Fashion materials, Design and Technology, Wood head publications, London. (2015).
2. Miraftab.M, Horrocks. A. R, Eco Textiles the Way Forward for Sustainable Development in Textiles, Wood head publications, London. (2007).

References:

1. Subramanian, Senthil Kannan, Muthu, Sustainable Innovations in Textile Fibers, Springer publications, Singapore. (2018).
2. Thomas and Hudson, The Sustainable Fashion Handbook, Sandy Black's publishers, London. (2012).

3. Jennifer Farley Gordon, Collean hill, Sustainable fashion: Past, Present and Future, Bloomsbury Publishing, London. (2014)

COURSE OUTCOME

On successful completion of the course, the students will be able to gain knowledge about

K4	CO1	Analyse the need for eco- fashion market
K4	CO 2	Eco - labeling in categorizing textile goods
K3	CO 3	Application of eco- friendly materials in fashion
K2	CO 4	Eco- fashion designers and their contribution
K6	CO 5	Methods of up- cycling textiles

Mapping of COs with POs & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S

Strongly Correlating (S) – 3 Marks
Weakly Correlating (W) - 1 Mark

Moderately Correlating (M) - 2 Marks
No Correlation (N) - 0 Mark

VALUE ADDED COURSE

Course Code	U21TCV51	AARI EMBROIDERY	Hours	C
VAP			30	2

Module	Course Content - Practical / Project / Internship	Hours
Module 1	Punching, Design Transforming and Tracing methods	4 hours
Module 2	Basic Stitches for Hand Embroidery	6 hours
Module 3	Hand Aari- Practice of frame fitting for hand aari	4 hours
Module 4	Practicing of locking, starting and finishing and chain stitch	4 hours
Module 5	Types of hand aari stitches	6 hours
Module 6	Practicing zardozi / embellishment	6 hours

Text books

1. Narmatha., Aari Embroidery Designs Book - Mirror Work Tracing Neck Designs for Blouses and Kurtis Ganga, Publisher Ltd, (2010)

References books:

- 1.Mabel Van Niekerk, Embroider on Printed Fabrics, Google e-online books, South Africa. (2015).
- 2.Mabel Van Niekerk, Recycled Denim Crazy Patchwork Quilt, Mabel Dawn Van Niekerk, South Africa. (2015).
- 3.Dueep Jyoti Singh, John Davidson, Learning the Traditional Art of Hand Embroidery, Mendon Cottage Books, USA. (2016).
- 4.Vandana Bhandari, Jewelled Textiles: Gold and Silver Embellished Cloth of India, Om Books International, (2015).
- 5.DueepJyot Singh, John Davidson., Learning Decorative Stitches: The Art of Shirring and Smocking, Mendon Cottage Books, USA. (2016).