

**CURRICULUM FRAMEWORK AND SYLLABI FOR**  
**MASTER 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**

**Mother Teresa Women's University, Kodaikanal**

**Department of Home Science**

**Choice Based Credit System (CBCS)**

**M.Sc Textiles and Clothing**

**(2021-2022 onwards)**

**1. About the Programme**

The Postgraduate Program in Textiles and Clothing aims to maximize student's potential through scientifically planned, multidimensional and skill oriented curriculum that would make them job ready and self-reliant. The Programme offers more scope for the students to get the exposure for research, projects, internships, industrial visits and placements. This Program provides opportunities to students to grow beyond classroom through a wide range of extracurricular activities, programs and services through the maintenance of environment, cultural and intellectual diversity. The Program facilitates and enhances the students' skill in critical thinking, communication, leadership and computer literacy.

**2. Eligibility \*:** Candidates who have qualified in B.Sc. Costume Design and Fashion, Textiles and Apparel Design, Textiles and Fashion Design, Fashion Design, Textiles and Clothing or any B.Sc./ B.Voc. Degree related to Textiles and Fashion discipline are eligible to register for the degree of Master of Science in Textiles and Clothing.

**General Guidelines for PG Programme:**

**1. Duration:** The Programme shall extend through a period of 4 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.

**2. Medium of Instruction:** English

**3. Evaluation:** Evaluation of the candidates shall be through Internal and External Examinations. The ratio of formative and summative assessment should be 25:75 for both Core and Elective papers.

**Evaluation Pattern**

	Theory		Practical	
	Min	Max	Min	Max
<b>Internal</b>	<b>13</b>	<b>25</b>	<b>13</b>	<b>25</b>
<b>External</b>	<b>38</b>	<b>75</b>	<b>38</b>	<b>75</b>

- **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	<b>10*1 Marks=10</b> Multiple Choice Questions - 2 Questions from each Unit	<b>10</b>
2	B	<b>5*4=20</b> (Either/or, Choice, from each unit)	<b>20</b>
3	C	<b>3*15=45</b> (Open Choice) (Any three Questions out of 5 - one Question from each Unit)	<b>45</b>
Total Marks			<b>75</b>

**Project Report**

A student should select a topic for the Project Work at the end of third semester itself and submit the Project Report at the end of the fourth semester. The Project Report shall not exceed 75 typed pages.

**Evaluation:**

There is a Viva Voce Examination for Project Work. The Guide and an External Examiner shall evaluate and conduct the Viva Voce Examination. The Project Work carries 100 marks (Internal: 25 Marks, Viva: 75 Marks)

Minimum credits required to pass - 90.

#### 4. Classification of Successful candidate:

<b>% of Marks scored</b>	<b>Division</b>
50 – 59	Second class
60 – 74	First class
75 and above	First class with Distinction

#### 5. Attendance

Students must have earned 75% of attendance in each course for appearing for the examination, Students who have earned 74% to 71% of attendance must apply for condonation in the prescribed form with the prescribed fee. Students who have earned 70% to 65% of attendance must apply for condonation in the prescribed form with the prescribed fee along with the Medical Certificate. Students who have attended below 65% are not eligible to appear for the examination and they shall re-do the semester(s) after completion of the course, with the prior permission of the Controller of the Examination, and The Registrar of the University.

#### 6. Any Other Information:

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

**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.

**Mother Teresa Women's University**  
**Kodaikanal**  
**M.Sc Textiles and Clothing**

No.	Course Code	Course Title	Credits	Hours		(CIA)	(ESE)	Total
				T	P			
<b>Semester I</b>								
1	P21TCT11	CoreI - Textile Science	4	5	-	25	75	100
2	P21TCT12	CoreII - Apparel Machinery Operations and Maintenance	4	5	-	25	75	100
3	P21TCT13	Core III - Apparel Merchandising	4	5	-	25	75	100
4	P21TCT14	Core IV - Textile Testing	4	5	-	25	75	100
5	P21TCP11	Core V - Fashion Sketching Practical I	4	-	6	25	75	100
6	P21CSS11	Supportive Course I Computer Skills For Web Designing and Video Editing	2	-	4	25	75	100
			<b>22</b>	<b>20</b>	<b>10</b>			
		<b>Total</b>	<b>22</b>	<b>30</b>		-	-	<b>600</b>
<b>Semester II</b>								
7	P21TCT21	Core VI Eco friendly Textile Processing and Finishing	4	5	-	25	75	100
8	P21TCT22	Core-VII Home Textiles	4	5	-	25	75	100
9	P21TCT23	Core-VIII Boutique Management	4	4	-	25	75	100
10	P21TCT24	Core-IX Apparel Quality Standards	4	4	-	25	75	100
11	P21TCP22	Core-X Advanced Pattern Making Practical II	4	-	6	25	75	100
12		Non Major Elective	4	4		25	75	100

13	P21TCS22	Supportive Course II (Skill) Surface Ornamentation Practical	2	-	2	25	75	100
			<b>26</b>	<b>22</b>	<b>8</b>			
		<b>Total</b>	<b>26</b>	<b>30</b>		-	-	<b>700</b>
<b>Semester III</b>								
14	P21TCT31	Core XI Research Methodology	4	5	-	25	75	100
15	P21TCT32	Core-XII Technical Textiles	4	5	-	25	75	100
16	P21TCT33	Core-XIII Apparel Production Technology	4	4	-	25	75	100
17	P21TCT34	Core-XIV Entrepreneurship and Industrial organization	4	4	-	25	75	100
18	P21TCT35	Core-XV Textile Industry Management	4	4	-	25	75	100
19	P21TCP33	Core XVI Advanced Garment Construction Practical	4	-	6	25	75	100
20	P21WSS33	Supportive Course III Women Empowerment	2	2	-	25	75	100
			<b>26</b>	<b>24</b>	<b>6</b>			
		<b>Total</b>	<b>26</b>	<b>30</b>				<b>700</b>
<b>Semester IV</b>								
21	P21TCE411/ P21TCE412/ P21TCE413	Elective-I* Personality Development / Retail Business / Industrial and Clothing Psychology / Any MOOC Course <sup>s</sup>	4	4	-	25	75	100
22	P21TCE421/ P21TCE422/ P21TCE423	Elective-II* CAD for Apparel and Fashion Design Practical's / Business Communication / Fashion Industry and Sustainability / Any MOOC Course <sup>s</sup>	4	4	-	25	75	100

23	P21TCR41	Project	8	22	-	25	75	100
		<b>Total</b>	<b>16</b>	<b>30</b>				<b>300</b>
<b>Total</b>			<b>90</b>	<b>120</b>				<b>2300</b>

#### Additional Credit Courses (Mandatory)

1. P21TCV11 - Value Added Program I-Two Credits (First Semester)
2. P21TCI21 - Internship/Industrial Training – Two Credits- (Second Semester)
3. P21TCO31 - Online Courses-Two Credits- (Third Semester)
4. P21TCV42 - Value Added Program II-Two Credits (Fourth Semester)

\*Those who have CGPA as 9, and want to do the project in industry/institution during fourth semester, may opt for these two paper in third semester.

§Students can take one 4 credit course in MOOC as elective or two 2 credit course in MOOC as elective with the approval of Department committee.

#### Outside class hours

- Health, Yoga and Physical Fitness
- Library Information access and utilisation
- Employability Training
- Programme Outcomes \*:
- The Expected Programme Outcomes on completion of M.Sc. Textiles and Clothing are:
- PO1- Students will have complete knowledge in the field of Textiles and Clothing.
- PO2-Students will apply their professional knowledge and their research ideas for developing innovative fashion trends and creative products.
- PO3-Students will acquire dexterity for self-development and competency
- PO4-The students understand current scenario of fashion and apparel design and adapt themselves to the changes in global fashion and commercial market.
- PO5- They shall acquire business relations with their technical and computer knowledge, statistical analytical skills, soft skills, confidence, ethics and moral values.
- PO6- They will be qualified for industrial needs and start up units by providing professional skills

- PO7- The students will undertake research with interest in sustainable environment practices.
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- Programme Specific Outcomes \*:
- On completion of this Programme, the students will
- PSO1 – acquire research knowledge in Textile, Apparel and Fashion production techniques
- PSO2 – gain expertise in areas of fashion and design as to adopt current and future trends
- PSO3 – acquire entrepreneurial skills in the field of textiles, apparel and fashion
- PSO4 – excel in the area of computer and soft skills as per industrial needs and start-ups.
- PSO5 – acquire dexterity in the field of textile, clothing and fashion for employability
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#### Supportive courses (skill)

S. No.	Paper Code	Course Title	Course title	Credits	Hours	(CIA)	(ESE)	Total
1	P21CSS11	Supportive Course I (Skill)	Computer Skills For Web Designing and Video Editing	2	4	25	75	100
2	P21TCS22	Supportive Course II(Skill)	Surface Ornamentation Practical	2	2	25	75	100
3	P21WSS33	Supportive Course III(Women Empowerment)	Women Empowerment	2	2	25	75	100





2	P21TCN212	Traditional Textiles and Costumes of India	4	4	25	75	100
3	P21TCN213	Principles of Fashion Design	4	4	25	75	100

### Value added courses

Paper No.	Paper Code	Course Title	Hours	Credits	Continuous Internal Assessment (CIA)	End Semester Exam (ESE)	Total
1	P21TCV11	Sustainable Fashion Product Development	30	2	25	75	100
2	P21TCV42	Fashion Event Management	30	2	25	75	100

## SEMESTER – I

<b>Course Code</b>	<b>P21TCT11</b>	<b>Textile Science</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>I</b>		<b>5</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: AnalyseK5: Evaluate</b>					
<b>Learning Objectives</b>	<b>The Course aims to</b> <ul style="list-style-type: none"> <li>➤ Study about the properties of textile fibre, yarn and fabric</li> <li>➤ Understand the and manufacturing process of fibre, yarn and fabric</li> <li>➤ Study about the latest technology</li> <li>➤ Understand the sequence of developing fibres into fabric</li> <li>➤ Understand the applications of fibers , yarns and fabric</li> </ul>					

### UNIT I - Introduction to Textile Fibers

Introduction to fiber Science: Definition, Classification of textile fibres according to their nature and origin, essential and desirable properties of textile fibres, staple fibre and continuous filaments, comparison of natural and manmade fibres. Latest development in textilefibers.

### UNIT II - Fiber properties

Natural fibres: Vegetable fibers (bast, leaf and seed fibres), animal fibers (wool and silk) and mineral fibers (glass, asbestos and metallic fibres). classification, distinctive properties and end uses. Man-made fibers- Polyester, Nylon, Acrylic, Spandex. Viscose Rayon. Classification, production of manmade fibres and regenerated fibres, general properties and end uses.

### UNIT III - Yarn Spinning

Spinning - ring spinning, rotor spinning, friction spinning, air-jet spinning. structure of yarns produced from different spinning systems. Classification of yarns- carded and combed yarns, woollen and worsted yarns, filament and spun yarns. Yarn properties -yarn linear density, size, twist in yarn, twist direction.Types of yarn: Simple, fancy, textured, stretch and metallic yarns-uses, quality and applications.

### UNIT IV - Weaving and Knitting

Weaving machineries and mechanism, classification of weaving machines – shuttle, shuttle less weaving. Weaving processes – Warp winding, Warping, Sizing and Pirn winding. Weaving mechanism – primary, secondary and auxiliary loom mechanism- Shuttle weaving machine – Hand loom, power loom and automatic loom, shuttle less weaving machine – Projectile, Rapier and jet – water and air. Latest techniques in fabric manufacturing.

Knitting-Types of knitting-weft knitting-single jersey, purl, rib, interlock .Warp knitting-Tricot and Raschel. Flat and socks knitting – principles - Uses and Properties. Comparison between warp and weft knitting. Latest innovation in knitting technology.

## UNIT V - Nonwoven

Non-Woven – Definition, Processes of raw materials- Fibre preparation, mixing and Carding process, Parallel-lay process, cross-lay process, perpendicular-lay process, air-lay process and Wet-lay process.

Web bonding process-Mechanical bonding - needle punch process and hydro entanglement process. Thermal bonding - Principles of thermal bonding, calendar bonding process, Through-air bonding process, Infra-red bonding process, Ultrasonic bonding process. Chemical bonding - chemical binders and binder applications. Saturation bonding - foam bonding, spray bonding and print bonding process, Methods of drying. Polymer-Extrusion based Technologies - Raw Material and process sequence in Spun-bond technology and Melt-blown technology

Finishing Methods, Laminates, Bonding and Flocking. Applications of Nonwovens.

## REFERENCES BOOKS:

1. Kadolph, Textiles, S J Pearson Education Ltd, 2013
2. Vatsala, R, Textbook of Textiles and Clothing, Indian Council of Agriculture Research, 2003
3. N. Anbumani, “Knitting Fundamentals, Machines, Structures and Developments”, 2007.
4. David.J.Spenser, Knitting Technology, Limited, Oxford Wood Head Publishing Cambridge, New Delhi, Philadelphia, 2011
5. Russell S.J., Handbook of Nonwovens, Woodhead Publishing, CRC Press, Washington DC, 2007.
6. Albrecht W. H. Fuchs and W.Kettelmann, Nonwoven Fabrics: Raw Materials, Manufacture, Applications, Characteristics, Testing Process, Wiley-VCH, Verlag GmbH & Co. KGaA, Weinheim, 2003.
7. seems sekhri, Textbook of Fabric Science-Fundamentals to Finishing, PHI Learning Private Limited, 2011.

## REFERENCES:

1. Dr Kin-Fan Au ., Advanced knitting Technology, Woodhead Publication, 2011.
2. Subramanian, Senthilkannan, Muthu, Textile Science and clothing technology, Springer 2020.

## COURSE OUTCOMES

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

K4	CO1	Analyzing the properties of textile fibre, yarn and fabric
K2	CO2	Manufacturing process of Fiber, yarn and fabric

K3	CO3	Latest fabric formation technologies
K3	CO4	Developing fibers into fabric
K5	CO4	End applications of fibers , yarns and fabric

**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	S	S	S	M	S
CO2	S	S	S	S	S	S	S	S	S	S	M	S
CO3	S	S	S	S	S	S	S	S	S	S	M	S
CO4	S	S	S	S	S	S	S	S	S	S	M	S
CO5	S	S	S	S	S	S	S	S	S	S	M	S

Strongly Correlating (S) - 3 Marks

Moderately Correlating (M) - 2 marks

Weakly Correlating (W) - 1 Mark

No Correlation (N) - 0 Mark

<b>Course Code</b>	<b>P21TCT12</b>	<b>Apparel Machinery Operations and Maintenance</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>II</b>		<b>5</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>KI: Recall K2: Understand K3: Apply K4: Analyse K5: Evaluate</b>					
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>To enable students to learn about evolution and types of sewing machineries</li> <li>To study different types of basic sewing machines</li> <li>To impart the students to understand the concepts of garment quality in stitching operations</li> <li>To acquaint students about the importance of In-line inspection</li> <li>To understand care and maintenance of sewing machines</li> </ul>					

### **Unit I - Introduction to Sewing Machines**

Introduction- Evolution of the sewing machine- Types of sewing machines- Mechanical, Electrical and Computerized sewing machines. Categories of sewing machine - Domestic and Industrial sewing machines –characteristics and features.

### **Unit II - Sewing Machines**

Classification of sewing machines-General sewing machines and sewing machines based on technical characteristics. General- sewing machines, Special sewing machines, sewing automata, sewing systems, Numerical-controlled, robotic sewing machines. Technical -stitch type, sewing needle, feed mechanism, bed type- Characteristics and features- working principle -precautions. Advanced sewing machines in industry- sewing machine brands.

### **Unit III - Garment quality in Stitching Operations**

Garment quality -factors contributing quality product-raw material quality, accessories, cutting quality, Inspection procedure in sewing department, machine and sewing quality, Washing and finishing quality. Functions of quality assurance in sewing department - Role and responsibility of Quality assurance manager. Standard quality levels-Fault free fabric, Good stitching and seam formation, Machine conditions, needle size, and thread, trims and fasteners -Job card-meaning - Importance of job card or work ticket- job cardspecification -garment components, stitch specification.

### **Unit IV - In-line Inspection**

In-line inspection – Meaning - Format of inline checking - checking at check points, Roving quality checking, Traffic light System, inspection by buyer. Types of in-line inspection - Purpose- In-line Inspection report – Defect list- Defect classification zones - Most noticeable, Average noticeable, Least noticeable. Specifications of quality department -Swatch cards, specification sheet, trim cards.

## Unit V - Care and Maintenance

Cleaning and Maintenance of tools - Cleaning and oiling of sewing machines- Handling of sewing machines -Safe and correct procedure of handling equipment and machinery - Clothing and Personal Protection, Clear demarcations and sign boards, Compliance towards – Noise Protection, Cleanliness and maintenance, Reporting an Accident, Essential facilities required at the workplace- Potential hazards risks and threats based on nature of operations.

### Text Books:

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

### References:

- 1.Betsy hosegood,. The Complete Book of Sewing, Dorling Kindersley Limited,London,2006
- 2.Karthik T., Ganesan P., Gopalakrishnan, D, Apparel ManufacturingTechnology, CRC Press,U.S.,2016.
- 3.Debbie Colgrove, Sewing, Wiley Publishing,Inc., Hoboken, NewJersey, 2006.

## COURSE OUTCOMES

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

K1	CO1	Evolution and types of sewing machineries
K2	CO2	Types of basic sewing machines
K4	CO3	Analyzation of garment quality in stitching operations
K3	CO4	Application of inspection techniques for In-line operations
K5	CO5	Evaluation of maintenance of sewing machines

### 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	S	S
CO2	S	S	S	S	S	M	S	S	M	M	S	S
CO3	S	S	S	S	M	S	S	S	S	M	M	S
CO4	S	S	S	S	S	M	S	S	S	M	M	S
CO5	S	S	M	S	S	S	S	S	S	M	M	S

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

<b>Course Code</b>	<b>P21TCT13</b>	<b>Apparel Merchandising</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>III</b>		<b>5</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K1: RecallK2: UnderstandK3: ApplyK4: AnalyzeK6: Create</b>					
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ To enable students, understand the concept and methods of merchandising.</li> <li>➤ To impart knowledge on product planning.</li> <li>➤ To learn about merchandise management</li> <li>➤ To understand visual merchandise techniques</li> <li>➤ To understand sourcing process and strategies</li> </ul>					

### **Unit I- Merchandising Concept**

Merchandising Concept – Changing structures of merchandising, Scope of Merchandising, Merchandising organization, Roles and responsibilities of merchandiser, Terminologies in merchandising, Target markets, Market segmentation, buying preparations, Buying, Brand versus Private Labels, Buying offices.

### **Unit II- Product planning**

Merchandising System- Market research, Product line planning, Product development – definition – objective - product design and manufacturing, merchandising calendar. Interface with other departments, Channels of distribution, Consumer demand, Record keeping, Merchandising evaluation.

### **Unit III- Merchandise Management**

Merchandise Management, Financial Management, Operations Management, Supply chain management. Store Management: Store Layout, Design and Visual Merchandising, Customer Service. Merchandising pricing - planning and controlling merchandising budget and profits. Factors affecting pricing strategy, Specific pricing strategies- New product pricing, demand oriented pricing, cost oriented pricing, value based pricing, competition-oriented pricing, Markups and markdowns.

### **Unit IV- Visual merchandising**

Merchandising Presentation - Exterior Presentation- Exterior Signs, Marquees, Banners, Awnings, Walks and Entries and Landscaping -Interior Presentation- Interior display in selling area and sales support area, Areas of display- Windows, Highpoint, Focal point, Nesting Tables, Staircase landings, Step raisers, Lift area, Danglers, Cash counters, pillars and entrances-Window Display- Scope of Window display, Window display designing process, types of window display, how to create eye- catching and innovative displays that will draw the customer into the retailer and prove the success of your window design. Signage, Fixtures and Props- Fixture-: Types of fixtures, selecting display fixtures. Signage- customer, retailer, Vendor and community- various types of signs-Props Advantages and types of props.



## **Unit V - Merchandising Sourcing**

Sourcing- Types of sourcing- factors affecting sourcing decision-lead time, logistics, quality parameters, sourcing cost, minimum order quantity- order specification - Sourcing Strategies, Sourcing process – Domestic and International sourcing- Role of production merchandiser in sourcing-Future trends.

### **References Text Book:**

1. SwathiBhalla and Anuraag.S, Visual merchandising, Tata McGraw hill Education Pvt. Ltd., New Delhi, 2010.
2. Krishan Kumar, M., Apparel Merchandising, Abhishek Publications, Chandigarh.2010.
3. Beverly Kemp-Gatterson and Barara L. Stewart, Apparel Concepts and practical applications, Fairchild Publications, Inc., New York, 2009.
4. Martin M. Pegler, Visual Merchandising and Display, Fairchild Publications, New York, 2011.
5. Swati Bhalla, Anuraag S, Visual Merchandising, Tata McGraw-Hill Education, 2010.
6. Sarah Bailey, Jonathan Baker, Visual Merchandising for Fashion, A&C Black, 2014.

### **Reference:**

1. Mary.G.Wolfe, The World of Fashion Merchandising, The Good heart – Willcox Company, Inc., Timely Park, 2002.
2. Stephens Frings, Fashion From Concepts to Consumer, Prentice Hall, (7th Edition), 2002.
3. Grace I Kunz, Merchandising Theory, Principles and Practices, Fairchild Publications, 2009.
4. Morgan, T. Laurence King, Visual Merchandising: Windows and In-store Displays for Retail, London, 2008.
5. Ellen Diamond, Fashion Retailing, Dorling Kinderley Publishing, New Delhi, 2007.
6. Robert Colborne, Visual Merchandising: The Business of Merchandise Presentation, Delmer Cengage Learning (1996).

### **Web Resources**

1. [https://onlinecourses.swayam2.ac.in/cec21\\_mg04/preview](https://onlinecourses.swayam2.ac.in/cec21_mg04/preview)
2. [https://ebooks.lpude.in/management/mba/term\\_4/dmgt552\\_visual\\_merchandising.pdf](https://ebooks.lpude.in/management/mba/term_4/dmgt552_visual_merchandising.pdf)

**COURSE OUTCOMES**

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

K1	CO1	Methods of merchandising
K4	CO2	Product planning and Development
K3	CO3	Management of Merchandise
K6	CO4	Visual merchandising Techniques
K2	CO5	Sourcing of Merchandise

**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 Marks

<b>Course Code</b>	<b>P21TCT14</b>	<b>Textile Testing</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>IV</b>		<b>5</b>	<b>0</b>	<b>0</b>	<b>4</b>

<b>Cognitive Level</b>	<b>K1: RecallK2: UnderstandK3: ApplyK4: Analyze</b>
<b>Learning Objectives</b>	To enable students to learn about role and importance of textile testing To study different testing methods for fiber, yarn and fabric To study about advanced textile equipment's used in industry To acquaint students about the testing standards To understand the testing process for colour fastness and garment test.

### **UnitI - Introduction to Textile Testing**

Textile testing – definition – objectives; Types – destructive and non-destructive. Selection of samples for testing: fiber - zoning, core sampling, random draw and cut square methods, yarn – random sampling and fabric sampling. Standard atmosphere for testing - Measurement of Moisture regain - Conditioning oven and Shirley Moisture meter. Various textile testing standards- ISO, BIS, BSI, AATCC, ASTM, ANSI.

### **UnitII - Fiber Testing**

Fibre testing – Cotton Fiber length - importance-Methods of measuring fibre length - Baer sorter. Fibre fineness tester- Fibre Maturity – Caustic soda swelling method. Fibre strength – Measurement of strength using Pressley tester and Stelometer, Determination of trash and lint in cotton using Shirley trash analyzer. Computerized testing method- HVI.

### **UnitIII- Yarn Testing**

Determination of yarn count, Instruments used for determination of count - wrap reel and balance, quadrant balance, Beesley balance. Yarn Twist -definition, significance, direction of twist, measurement of yarn twist– Estimation of twist by Twist contraction method - Measurement of yarn strength using CRL, CRT - Study of instruments – Single thread strength tester and Lea strength tester- Yarn evenness – Types of irregularity, Uster Evenness tester.

### **UnitIV- Fabric Testing**

**Physical Parameters-** Length, width, count (EPIxPPI), crimp, weight (GSM), cover factor, thickness, air and water permeability, Fabric dimensional stability to domestic washing and drying.

**Mechanical Parameters-** Tensile strength, tearing strength, bursting strength, peel bond strength.

**Handle and comfort parameters-** Fabric abrasion, pilling, drape, stiffness, crease resistance / crease recovery, sensory testing, FTT –Fabric Touch Tester.

### **UnitV - Fabric Colour Fastness and garment test**

Colour Fastness – Importance- factors affecting colour fastness, Colour fastness to

Washing, dry cleaning, Sunlight, Crocking (dry and wet), Pressing and Perspiration, Grey scales and ratings.

Basic garment test-Importance- Seam testing- seam strength, seam slippage.Accessories Testing- Zipper, Buttons, Sewing thread.

### Text Books

1. Amutha.K, A Practical Guide to Textile Testing, CRC Press, 2016.
2. Raul Jewel, Textile Testing, APH Publishing Corporation, 2005.
3. Sheraz Ahmad et al., Advanced Textile Testing Techniques, CRC Press, 2017.
4. Arindam Basu, Textile Testing -Fibre, Yarn &Fabric, SITRA Publication, Coimbatore, 2006.
5. P.Angappan and R.Gopalakrishnan, Textile Testing, SSMITT Students Co-operative Stores, Komaraplayam, 2002.
6. E.B.Groover and D.S.Hamby, Hand Book of Textile Testing and Quality Control, Published by Mohinder Singh Sejwal (for Wiley Eastern Limited), New Delhi, India,1996.

### Reference Books

1. Jinlian Hu, Fabric Testing, Ed. Woodhead Publishing Ltd., 2008.
2. J.E.Booth, Principles of Textile Testing, Butter worth Scientific, London 1996.
3. Textile Testing – I, NCUTE Publication, New Delhi, 2003.

### COURSE OUTCOMES

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

K1	CO1	Importance textile testing
K2	CO2	Standard test methods for fiber, yarn and fabric
K3	CO3	Application of testing textile equipment's in Industry
K3	CO4	National and international standards for textile testing
K4	CO5	Evaluation of fabric color fastness and garment quality

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	M	S	S	S	M	S
CO2	S	S	S	S	S	S	S	M	S	S	M	M
CO3	S	S	S	S	S	S	S	S	S	S	M	S
CO4	S	S	S	S	S	M	M	S	S	S	M	M
CO5	S	S	S	S	S	S	S	S	S	S	M	S
Strongly Correlating (S)				-				3 Marks				
Moderately Correlating (M)				-				2 marks				
Weakly Correlating (W)				-				1 Mark				
No Correlation (N)				-				0 mark				

<b>Course Code</b>	<b>P21TCP11</b>	<b>Fashion Sketching Practical</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>V</b>		<b>0</b>	<b>0</b>	<b>6</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: Understand K3: Apply K4: Analyse K6: Create</b>					
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ To impart practical exposure in fashion sketching</li> <li>➤ To acquaint students with the knowledge on application of colours on garment designing.</li> <li>➤ To impart the knowledge and skills required to become designers.</li> <li>➤ To impart students to analyze and apply different fabrics and accessories on croqui</li> <li>➤ To impart students to design suitable garments for different personalities.</li> </ul>					

1. Creating of design and its application on garments.
2. Sketching of different action croqui
3. Rendering various fabrics on croqui -Silk/denim/checked/satin/velvet
5. Application of garments on croqui for different seasons/occasions
6. Application of Colours on garment designs using different mediums
7. Sketching of croqui with stylish garments and accessories/hair styles/trims
8. Developing stylized figures looking into photos and Pictures from Magazines
9. Design and apply suitable garments for different personalities-tall/stout/short/thin/special persons.

#### **References:**

1. Ranjana Singhal, Kannari Bharat, Fashion Rendering, OM books International, 2010.
2. Raviraj, Pencil Shading, Basic Techniques. 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. Pundalik Vaze, Jyotsna Prakashan, Draw and Paint. Pune, I Edition, 2002.
2. Steven Stipelman, Illustrating Fashion Concept to Creation, Fairchild publication, New York, 2005.
3. Kathryn Hagen, Fashion illustration for Designers, Pearson education, Inc., New jersey 2005.
4. Bina Abhing, Fashion Sketch Book...: Om Books International, New Delhi, 2004.

5.Navneetkaur, Comdex Fashion Design: Fashion Concepts, Dreamtech Press, New Delhi, Vol-I, 2010.

## COURSE OUTCOMES

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

K4	CO1	Design development and application
K3	CO2	Application of colours on garment design
K2	CO3	Garment design skills
K4	CO4	analyze and apply different fabrics and accessories
K6	CO5	Developing fashion garments for various 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	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	M	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	M	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 – II

<b>Course Code</b>	<b>P21TCT21</b>	<b>Eco friendly Textile Processing and Finishing</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>VI</b>		<b>5</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: Analyse</b>					
<b>Learning Objectives</b>	<p><b>The Course aims to</b></p> <ul style="list-style-type: none"> <li>➤ To understand the importance of eco textiles and fibers</li> <li>➤ To understand about the eco textile process</li> <li>➤ To gain knowledge about various natural dyes</li> <li>➤ To learn about Eco fabric finishes, testing's and standards.</li> <li>➤ To learn about ethical manufacturing and the environmental protection</li> </ul>					

### UnitI - Eco-Fibers

Introduction - needs for eco-textiles – importance of Eco-textiles- Ecology - Production ecology, Human ecology and Disposal ecology.

Natural fibers-Importance of natural fibers in textiles - Major fibers used in textiles - cotton, jute, linen and silk. Minor fibers used in textiles - sisal, pineapple, coir, nettle. Protein fibers - soya, spider silk. Extraction or preparation methods of natural fiber-retting and its methods, decortications by hand and machine. Recent findings of natural fibers in textile industry.

### UnitII -Eco-Textile Processing

Eco textile processing and its role in sustainable development-Enzyme-meaning- properties of enzymes used in textiles- application of enzymes in Textile process- Bio-desizing, bio scouring, bio bleaching, bio polishing, bio stoning, enzymatic degumming and enzymatic retting- Methods -uses.

### UnitIII - Natural Dyes

History, Importance- Types of Natural dyes-Sources- plant, animals and minerals- Dye Extraction methods - Ultra sonic and micro wave extraction, enzymatic extraction, solvent extraction, super critical carbon dioxide extraction - Application of dyes on fabrics-Mordants-natural mordants-Importance -Mordanting techniques- pre, meta and post mordanting. Importance of natural dyed fabrics.

### UnitIV - Natural Finishes, Eco labelling and standards

Importance of natural finishes -Traditional plants and herbs used in natural finishing. Recent Natural finishes on textiles-. Enzyme technology, Foam technology, Super critical carbon-di-oxide dyeing and Plasma technology.

Eco- labelling and various eco- standards for textiles - Eco -auditing.

## UnitV-Ethical manufacturing

Ethical Manufacturing: Ethical and environmental issues relating to textile and fashion industry. Ethical Standard practices for sourcing of sustainable fashion clothing and accessory. Corporate Social responsibility in fashion and apparel industry. Environment protection –Importance –Environmental impacts of textile industries.

### REFERENCE BOOKS:

#### Text Books

1. K.Sangeetha, Eco Textiles and Sustainability, Laser Park Publishing House, 2017.
2. Richard Blackburn, Sustainable Textiles: Life Cycle and Environmental Impact, Wood head Pub.Ltd., 2009.
3. Miraftab M. and Horrocks R., Eco Textiles, Wood head Pub.Ltd, Cambridge, 2007.
4. Black S, Sustainable Fashion Handbook, Thames and Hudson, 2013.
5. Rajesh D., Textiles for Sustainable Development,Anandjiwala Nova Publishers, 2007.
6. Miraftab, M Horrocks, A. Richard, Eco textiles: The Way Forward for Sustainable Development in Textiles,Woodhead Publishing, Elsevier,2007.
7. Richard S. Blackburn,Sustainable Textiles: Life Cycle and Environmental Impact,Woodhead Publishing; 2009.
8. Marion I Tobler-Rohr,Handbook of Sustainable Textile Production, Woodhead Publishing, Elsevier,2011.

#### Reference Books

1. Charis M. Galanakis, Biobased Products and Industries, Elsevier, 2020.
2. Shahid UI-Islam, The Impact and Prospects of Green Chemistry For Textile, Bhupendra Singh Butola, Elsevier, 2018.
3. P. Vinayagamurthi ,S .Kavitha, D.Gopalakrishnan, Textiles finishing –Basic concepts and application, Astral Publications International Pvt.Ltd, New Delhi, 2018.
4. M W King, B S Gupta, RGuidoin, Bio-Textiles as Medical Implants, Woodhead Publishing, 2013.
- 5.Christier.M., Environmental Aspects of Textile Dyeing, Woodhead Pub. Ltd, Cambridge, 2007.

### COURSE OUTCOMES

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

K2	CO1	Eco textiles and fibers extraction
K2	CO2	Eco friendly textile process
K3	CO3	Extractionof natural dye and application process
K4	CO4	Application of natural fabric finishes, ecolabels and standards
K2	CO5	Ethical manufacturing and environmental protection



**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	M	S
CO2	S	S	S	S	S	S	S	S	S	S	M	S
CO3	S	S	S	S	S	S	S	S	S	S	M	S
CO4	S	S	S	S	S	S	S	S	S	S	M	S
CO5	S	S	S	S	S	S	S	S	S	S	M	S

Strongly Correlating (S) - 3 Marks

Moderately Correlating (M) - 2 marks

Weakly Correlating (W) - 1 Mark

No Correlation (N) - 0 mark

<b>Course Code</b>	<b>P21TCT22</b>	<b>Home Textiles</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>VII</b>		<b>5</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K1: RecallK2: UnderstandK3: ApplyK4: Analyse</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To study about the concept and market for home textiles</li> <li>➤ To understand the uses and applications of floor coverings</li> <li>➤ To know about the characteristics of Windows and Wall Coverings</li> <li>➤ To understand about the products used in seating and bed linens</li> <li>➤ To understand the application and uses of table, kitchen and bath linens.</li> </ul>					

### UNIT I - Home Textiles

Home Textile- Introduction, properties required for home textiles, sustainable fibers and fabrics used for home textiles, areas of application, types of home furnishings, trends in home textile industry- home textile production in India-global market-Major production centers in India.- Factors affecting selection of home furnishing-Home textile products-brands-Future of home textiles.

### UNIT II - Floor Coverings

Floor Coverings-Definitions – Fiber used – types-hard and soft. Carpets-Types of carpets – broad loom carpets– Carpet cushions – Manufacturing Process –Rugs-Types of rugs – Knots and oriental rugs – Embroidered rugs – Natural leather rugs–Advances- Earth carpets –Lawn carpets — Benefits of carpets and rugs – use, applications and care-Recycled floor covering.

### UNIT III - Windows and Wall Coverings

Windows- Basic sizes, Lay outs, Materials – Voiles, Nets – Sun filters – Semi sheers – Reflective textiles – Draperies – Types – Valances – Types – Shades – Types – Swags – Headings – Types. Curtains – Introduction – Types of curtains – Characteristics of curtain fabrics.

Wall Coverings- Requirements, benefits, types – carpet as wall covering – choice of Materials - manufacturing of fabrics – Application and end use.

### UNIT IV - Seating and Bed Linens

Seating- Structures, lay out, Range and size – Material used – Manufacturing – Double cloth – loop pile – cut pile – cushion foam – multi layer sheets – seat covers – types and materials.

Bed Linens – Definitions – design and size – Bed spread designs – chenille and organic bed spreads – dimensions – Bed sheets – types – fitted sheets – manufacturing process – bed skirts – types – mattress-pillows and pillow cover – comforts and comfort cover-Bolster and Bolster covers -types and applications. Quilt- types– Machine, Hand quilting – Knotted and tied – Trapunto – Shadow trapunto – export and import contributions – process sequence for bed

linen-Application and end use.

### UNIT V - Table, Kitchen and Bath Linen

Table Linens – Place mats and table cloths – Definition – Placemats – Varieties of placemats – Making process flow – Instruction – tips and warnings – Reversible placemats – Stone placemats– table cloths – Types, material and manufacturing.Kitchen Linens – Introduction – Material used – Kitchen products – Oven mitten – Pot holder – Apron – Napkins – Doilies – Kitchen mats – Dining table cloth – tea cozy–kitchen curtain– Table runner – Kitchen rugs – Types of stitches and seams used.Bath Linen- Categories – bath robe – Sizes and design elements – Terry towels– Fiber used – Standard sizes –Construction of terry towels -use and care – Production centers.

#### Text Books

1. Gopalakrishnan.D and T.Karthik, Home Textiles, Astral Publications, 2020.
2. Subrata Das, Performance of Home Textiles, Woodhead, 2018.
3. Ashis Kumar Ghosh, Traditional Knowledge of Household, Daya Publishing House, 2011.
4. V.Ramesh Babu, S.Sunderesan, Home furnishing, Woodhead, 2018.

#### Reference Books

1. Varghese, M.A., Ogale, M.M, and Srinivasan , K., Home Management, New Age International, 2017.
2. Premavathy, Parveen Pannu, Interior Design and Decoration“, CBS Publishers and Distributors, 1st Edition, 2013.
3. Harriet Goldstein, Art in Every Day Life, Goldstein Press, 2007.
4. Virginia Hencken Elsasser and Julia Sharp, Know Your Home Furnishings, Fairchild Books; 2nd Edition, 2016.

#### COURSE OUTCOMES

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

K1	CO1	Home furnishing materials and industry
K3	CO2	Application of different floor coverings
K2	CO3	Usage and care of window and wall coverings
K2	CO4	Functionality and products used in seating and bed linens
K4	CO5	Analyse the categories and manufacturing process of table, kitchen and bath linens

#### 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	M	S
CO2	S	S	S	S	S	S	S	S	S	S	M	S
CO3	S	S	S	S	S	S	S	S	S	S	M	S
CO4	S	S	S	S	S	S	S	S	S	S	M	S
CO5	S	S	S	S	S	S	S	S	S	S	M	S

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

<b>Course Code</b>	<b>P21TCT23</b>	M.Sc Textiles and Clothing, MTWU, Syllabus 2021 onwards			
		<b>Boutique Management</b>			
<b>Core</b>	<b>VIII</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: Understand K3: Apply K4: Analyze K5: Evaluate K6: Create</b>				
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To learn about boutique business management</li> <li>➤ To impart the knowledge of developing business plan</li> <li>➤ To Understand about material sourcing and supplier relations</li> <li>➤ To Analyze about Marketing techniques and legal requirements</li> <li>➤ To understand the benefits and process of online boutique</li> </ul>				

### **UNITI- Boutique Management**

Introduction to boutique management, Skills required to set up a boutique- starting a boutique business- Creating a business plan, identifying target market and customer, Choice of ideal location and space management., financial planning, facilities planning-Boutique interior designing- visual merchandising and store layout. Government norms to run a boutique.

### **UnitII - Business Plan**

Business plan - Importance-Process and procedures-company summary-description of business, company structure, company location, products- operational requirements-operational strategy-clothing boutique business-inventory control and management, branding and design-marketing strategy-market analysis-demand, market segment, competitive advantage-industry analysis-SWOT analysis, PEST analysis-Financial statements-start -up cost, financing and bank loan, pro forma income statement, revenues and income statement, monthly cash flow statement, annual cash flow, balance sheet, break even analysis, payback period analysis-risk analysis.

### **UNIT III - Material Sourcing and Supplier Relations**

Material sourcing -sourcing of raw materials (trims and fabric), Fashion accessories - inventory planning-Infrastructure requirement, Staffing-selection of generalists and specialists. Study of suppliers and consumers -Buyer supplier relationships, Customer relationship management - Tips and Tricks to attract the customer.

### **UNIT IV- Marketing Techniques and legal requirements**

Marketing techniques -Concept of marketing- Importance -objectives-Boutique marketing tools-Marketing Plan-Demographics of target customers, Products and pricing strategy, Advertising and website, Sales and events, Exemplary customer service - Market segmentation- Importance of marketing mix - Digital Marketing-Social media marketing-Instagram, Face book, Pinterest, Blogs -Challenges of digital and social media marketing. legal requirements - Choosing the right legal structure - Introduction to permits, registrations and compliances - Introduction to intellectual property rights - Importance of IPRS.

## UNIT V - On-line Boutique

E-Commerce-Definition – Applications-Impact on market, customers and environment- E-commerce during Covid-19/economic crises.

Starting an online boutique- Choose a domain name, Add product photos and descriptions, Create product categories, Optimize your checkout page, Set up a payment processor, Organize shipping- Modules of online boutique store- Catalog management, Customer accounts, catalog Browsing, Product Browsing, Checkout, Payment, Shipping, Site Management, Business Reports, Order Management, Search Engine Optimization, Analytic and reporting.

### REFERENCE BOOKS:

1. Briana Stewart, *Opening a Boutique Guide: How to Start your Own Unique Clothing Boutique*, Bull City Publishing, 2014.
2. Tag Goulet, DebraMikaelsen, CatherineGoulet, Fabjob, *Guide to Become a Boutique Owner*, FabJobPublisher, 2011.
3. Jennifer Lynne Matthews, *Fashion Unraveled: How to Start, Run and Manage an Independent Fashion Label*, East Bay Fashion Resource; First edition, 2009.
4. Charlene Davis, *Start Your Own Clothing Store and More: Women's, Men's, Children's, Specialty (Startup Series)*, Entrepreneurs press and Paperback – Third edition, 2011.
5. Christy Wright, *Business Boutique: A Woman's Guide for Making Money Doing What She Loves*, Ramsey Press, 2017.
6. Entrepreneur Press, *Start Your Own Clothing Store and More: Women's, Men's, Children's, Specialty* Entrepreneur Press, 01-Jan-2011.
7. Leontine de Wit, *Boutiques and Other Retail Spaces: The Architecture of Seduction* David Vernet, Routledge, 2007.
10. Tom Harris, *Start-up: A Practical Guide to Starting and Running a New Business*, Springer, 2018.
11. Neil R. Bingham, *The New Boutique: Fashion and Design*, Merrell publishers, 2005.

### COURSE OUTCOMES

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

<b>K2</b>	<b>CO1</b>	<b>Boutique management</b>
<b>K4</b>	<b>CO2</b>	<b>Developing a business plan</b>
<b>K3</b>	<b>CO3</b>	<b>Sourcing of materials and relationship with supplier</b>
<b>K5</b>	<b>CO4</b>	<b>Applying Marketing techniques, fulfillment of legal procedures and IP registrations</b>
<b>K6</b>	<b>CO5</b>	<b>Creation of online business</b>

**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
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

<b>Course Code</b>	<b>P21TCT24</b>	<b>Apparel Quality Standards</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>IX</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: AnalyzeK5: Evaluate</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To learn about various apparel standards</li> <li>➤ To impart the knowledge of apparel testing methods</li> <li>➤ To Understand about various eco standards</li> <li>➤ To Analyze about total quality management</li> <li>➤ To understand the garment quality test methods</li> </ul>					

### **UNIT I - Standards and Test Methods**

Introduction to Quality and Standards- Quality management system (QMS) – ISO, ASTM, AATCC, BS, BIS, DIN- ISO –ASTM Standards for Apparel, ASTM Standards for Body Measurement for Apparel Sizing, ASTM Cotton Fiber Standards, ASTM fabric test methods, ASTM Flammability tests, ASTM Standards for yarn and fiber. AATCC Testing methods for color fastness to Acids, Alkalis, Crocking, Perspiration, Light, Qualitative and Quantitative methods of fiber analysis.

### **UNIT II – Social Accountability International**

Social Accountability International (SAI) – SA8000 – Elements of SA8000 Standard – Child labour, Forced or Compulsory labour, Health and Safety, Freedom of Association and Right to Collective Bargaining, Discrimination, Disciplinary Actions, Working Hours, Remuneration, SA8000 Management System.

### **UNIT III - Eco standards and Eco Specifications**

Eco Standards and Certification – ISO 14000, Eco Mark, OekoTex 100 Standards, Global Organic Textile Standard (GOTS) – Requirements for Organic Fiber Production under GOTS, General Requirements for Chemical Inputs under GOTS, Occupational Health and Safety Assessment Series (OHSAS) -Eco Specifications and restrictions in Apparel and Textiles – Sensitizing dye stuffs, Allergic dyes, Carcinogenic amines, red listed as per eco specifications.

### **UNIT IV – Total Quality Management and Accepted Quality level**

TQM – Implementation phases of TQM – 5’S, Daily Work Management (DWM), Six Sigma – SIPOC flow at garment industry, Lean Six Sigma. Accepted Quality Level (AQL) – AQL 1.5, AQL 2.5, AQL 4.0 - Manufacturing of Readymade Garments (RMGs) – Defect analysis – Zero Defect, Stage wise defect occurrence in RMG Production.

### **UNIT V - Garment Quality test and Labelling Parameters**

Garment Quality tests for dimensions – Stitch quality, Seam quality. Durability

characteristics of Trims – Resistance of Zippers, Buttons, Snaps, Buckles to abrasion, bursting and corrosion. Labelling: Labelling parameters, Eco – labelling.

### Reference Books:

1. David Hoyle, ISO 9000 Quality Systems Handbook - updated for the ISO 9001:2008 standard, Routledge, 2009.
2. Joseph M. Juran, Quality Planning and Analysis, Tata McGraw-Hill Higher Education Publisher, 2014.
3. Pradip V. Mehta, Satish K. Bhardwaj, Managing Quality in the Apparel Industry, Nift Publication, New Delhi, 1998.
4. Sara J. Kadolph, Quality Assurance for Textiles and Apparel, Bloomsbury Academic, 2nd Edition, 2007.
5. Saville, Physical Testing of Textiles, B.P Woodhead Publishing Ltd and CRC Press LLC, 1996.
6. M Miraftab, A. Richard Horrocks, Eco textiles: The Way Forward for Sustainable Development in Textiles, Elsevier, 2007.
7. Rajkishore Nayak, Rajiv Padhye, Garment Manufacturing Technology, Elsevier, 2015.
8. Michael Essig, Michael Hülsmann, Eva-Maria Kern, Stephan Klein-Schmeink, Supply Chain Safety Management: Security and Robustness in Logistics, Springer Science & Business Media, 2012.
9. Jens J. Dahlgaard, Ghopal K. Khanji, Kai Kristensen, Fundamentals of Total Quality Management Routledge, 2008.

### COURSE OUTCOMES

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

K3	CO1	Adopting quality and standards in apparels
K2	CO2	Application of apparel testing methods
K3	CO3	Applying Eco standards
K5	CO4	Evaluation of total quality management in industry
K4	CO5	Analyze garment quality test methods

### Mapping of Cos with POS & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	M	S	S	S	M	S
CO2	S	S	S	S	S	S	M	S	S	S	M	S
CO3	S	S	S	S	S	S	S	S	S	S	M	S
CO4	S	S	S	S	S	S	S	S	S	S	M	S
CO5	S	S	S	S	S	S	M	S	S	S	M	S

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



<b>Course Code</b>	<b>P21TCP22</b>	<b>Advanced Pattern Making Practical- II</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>X</b>		<b>0</b>	<b>0</b>	<b>6</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K3: Apply K4: Analyze K6: Create</b>					
<b>Learning Objectives</b>	<b>The Course aims to</b> <ul style="list-style-type: none"> <li>➤ To study about pattern making</li> <li>➤ To understand about the pattern making techniques</li> <li>➤ To learn about the pattern manipulation techniques</li> <li>➤ To study the flat pattern techniques</li> <li>➤ To develop pattern for creative designs</li> </ul>					

### **Develop creative patterns using following pattern making techniques and principles**

- ✓ Sketch the basic/original design and modified /creative design for pattern development
  - ✓ Select a garment, list the measurements required, develop drafting instructions and draft the basic/original pattern.
  - ✓ Apply drafting principles on original pattern, modify the basic pattern for new/creative design
  - ✓ Present the original pattern and modified /creative pattern with their respective designs.
  - ✓ Check the original pattern and modified /creative pattern for same measurements.
  - ✓ Construct one garment using any one of the basic and creative pattern.01. Draft a basic pattern (any garment components /garments) and apply dart manipulation technique to shift darts from one location to another location to create designs.
2. Draft a basic pattern (any children garments) and apply Flat pattern techniques to add fullness at top and bottom edges of the garment to create designs.
  3. Draft a basic pattern (any women's garment) and apply Flat pattern techniques to convert darts into seams of the garment.
  4. Draft a basic pattern (any women's /Men's garment) and apply Flat pattern techniques to convert darts into seams forming yokes of the garment.
  5. Draft a basic pattern (any garment components /garments) and apply pattern alternations methods to increase and decrease the fullness from the original size of basic pattern.

**REFERENCE BOOKS:**

1. Suzanne G. Marshall, Hazel O. Jackson M. Sue Stanley, Mary Kefgen, Individuality in clothing Selection and Personal Appearance, Phyllis Touchie Specht, 2000.
2. Harriet T, McJimsey, "Art and fashion in clothing selection", The Iowa State University Press, Ames, Iowa, 2016.
3. Hilary Campbell, "Designing Patterns", Om Book Services, New Delhi, 2003.
4. Helen Joseph, Pattern Making for Fashion Design, Armstrong Pearson Education, Delhi, 2000.
5. Kitty G. Dickerson, Inside the Fashion Business, Pearson Publications, New Jersey, Sixth Edition, 2002.
4. Mary Mathews, Practical Clothing Construction, Designing, Drafting and tailoring, Bhattarams Repr ographics (P) Ltd., Chennai, Part II, 1991.
5. 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

K3	CO1	Apply the concepts of pattern making
K4	CO2	Analyze pattern making techniques
K3	CO3	Application of pattern manipulation techniques
K4	CO4	Relate the process flat pattern techniques for pattern modification
K6	CO5	Modify and develop patterns for creative designs

**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
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

<b>Course Code</b>	<b>P21TCS22</b>	<b>Surface Ornamentation Practical</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Supportive Course - II</b>			<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>
<b>Cognitive Level</b>	<b>K1: RecallK3: ApplyK5: EvaluateK6: Create</b>					
<b>Learning Objectives</b>	<p><b>The Course aims</b></p> <ul style="list-style-type: none"> <li>➤ To acquaint students with the knowledge on application of embellishments on fabric surface.</li> <li>➤ To enrich garments using dyeing</li> <li>➤ To impart the knowledge and skills required to design fabrics and garments using printing and painting</li> <li>➤ To design garments through proper selection of embroidery stitches</li> <li>➤ To identify the usage of garment accessory for enrichment of garments.</li> </ul>					

- Develop designs on garments for surface enrichment of neckline/waist line/sleeves/bottom hem line/collars/plackets/around buttons or button hole/arm line/pockets using the below embellishment techniques.
- Select any two children, Women's and men's garments suitable for designing and application of ornamentation techniques.
  1. Dyeing - Tie and dye/ Batik
  2. Printing – Block/Screen/Stencil
  3. Painting
  4. Embroidery -Hand/Machine
  5. Smocking
  6. Lace
  7. Applique
  8. Studs/Beads/sequins/mirror/stone
  9. Accessories-Buttons/elastic/cords/tapes/buckles

## References

1. MunniSrivatsava and Batsfor, Embroidery Techniques from East & West, London, 2005.
2. Lucinda Ganderton, Dorothy Wood, The Ultimate Book of Quilting Cross Stitch, Needle craft, Anness Publishing Ltd., London, 2005.
3. Nancy Ziemon, Machine Embroidery with confidence – A beginners guide, Krause Publications, West Indies, 2005.
4. Margo Singer, Textile Surface Decoration- Silk and Velvet, Textile handbook, A&C Black Publishers, Great Britain, 2007.

**COURSE OUTCOMES**

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

K1	CO1	Designing garments with surface decoration
K3	CO2	Application of dyeing techniques on garments
K3	CO3	Garment designing using printing and painting
K5	CO4	Evaluate samples produced using embroidery
K6	CO5	Create designs using garment accessories

**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	S	S	S	M	S
CO2	S	S	S	S	S	S	S	S	S	S	M	S
CO3	S	S	S	S	S	S	S	S	S	S	M	S
CO4	S	S	S	S	S	S	S	S	S	S	M	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 – III

Course Code	P21TCT31	Research Methodology	L	T	P	C
Core	XI		5	0	0	4
Cognitive Level	<b>K1: Recall</b> <b>K2: Understand</b> <b>K3: Apply</b> <b>K4: Analyse</b> <b>K5: Evaluate</b> <b>K6: Create</b>					
Learning Objectives	<b>The Course aims to</b> <ul style="list-style-type: none"> <li>➤ Learn some basic concepts of research.</li> <li>➤ Understand the principle of research problem</li> <li>➤ Study about the techniques of data collection</li> <li>➤ To learn about research presentation and report writing</li> <li>➤ To understand the application of statistics in research</li> </ul>					

### UnitI - Concepts of Research

Research-Meaning, definition, Objectives, types of research, Steps in research process. Research ethics and its importance. Research Problem- Formulating Research Problem, Defining the research problem, Selection of Research Problem and Technique involved in defining a problem- Understanding and completing Literature review- Preparing a Literature review- Identifying, Choosing and Locating Relevant Literature- Reading and Taking Notes- Hypothesis-Definition, Formulating a Hypothesis.

### UnitII -Research Approach

Variables: Definition, Types of Variables- Research Design – Meaning, Types of Research Design, Basic principles of experimental designs, Developing a research Plan. Sampling – Census and sample survey, steps in sampling design, characteristics of a good sample design, different types of sample design.

### UnitIII - Data Collection

Definition of Primary and Secondary data, Sources of Primary and Secondary data-Data Collection Methods- Quantitative Data collection methods- Interviews and Types of Interviews- Face to face Interviews, Telephone Interviews, Computer Assisted Personal Interviewing- Questionnaires-Paper-pencilquestionnaires, web based questionnaires- Scientific Experiments and Laboratory testmethods.

### UnitIV - Data PresentationandReport Writing

Qualitative Data Collection Methods- In depth Interview, Focus Group, Observation method, Document review, Ethnography- Data Processing – Steps in data processing for Quantitative Studies and Qualitative studies-Data Presentation- Textual, Tabular -Components of tablefeatures of a good table, kind of tables, classification of data and tabular presentation- Graphical.

Report Writing - Research Report – Format of research report, main body of the report, references and appendices, style of writing, typing the report, pagination, tables and figures, bibliography, footnotes, margins, quotations, evaluating the report.

**UnitV –Statistics**

Meaning and scope of statistics, Role of Statistics in research - measures of central tendency-Mean, Median and mode-Measures of dispersion-Standard deviation, Coefficient of variation, percentiles and percentile ranks-Correlation-Co-efficient of Correlation and its Interpretation, Rank Correlation, Regression equation-Probability and tests of significance- large and small sample tests, 't' tests, F and chi square tests- Application of ANOVA test.

**REFERENCE BOOKS:**

1. C R Kothari, Research Methodology: Methods and Techniques, New Age International (P) Ltd, Delhi, 2011.
2. Donald Ary, Lucy Jacobs, Introduction to Research in Education, Asghar Razavieh, ChristineSorensen, Cengage Learning, 2009.
3. Ranjit Kumar,Pearson Research Methodology: A Step By Step Guide For Beginners, Education India, 2018.
4. S P Gupta, An Introduction to Statistical Methods, Vikas publishing House, Delhi,2009.
5. S P Gupta, An Introduction to Statistical Methods, Vikas Publishing House, New Delhi, 2009.
6. J. Medho, Statistical method- An introductory text, New age Internationalpublishers, New Delhi,2005.

**COURSE OUTCOMES**

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

K1	CO1	Recall the Concepts of Research
K2	CO2	Techniques of research problem hypothesis
K4	CO3	Analyze the process of collecting data's.
K3	CO4	Effective Research presentation and report preparation
K5	CO5	Efficient usage of different statistical tools and interpretation of data

**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	S	S	S	S	S	S	S
CO2	M	S	S	S	S	S	M	S	M	M	S	M
CO3	M	S	S	S	S	S	S	S	M	M	S	M
CO4	M	S	S	S	S	S	S	S	S	S	S	M
CO5	M	S	S	M	S	S	S	S	M	M	S	M

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

<b>Course Code</b>	<b>P21TCT32</b>	<b>Technical Textiles</b>		<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>XII</b>			<b>5</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K1: RecallK2: UnderstandK3: ApplyK4: AnalyseK6: Create</b>						
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To know about classification of technical textiles</li> <li>➤ To study about the application of technical textiles</li> <li>➤ To learn about the properties of technical textiles</li> <li>➤ To study the concept and uses of technical textiles</li> </ul>						

### **UnitI- Introduction to Technical Textiles**

Introduction- Definition and scope for technical textiles, Classification of technical textiles, technical fibres- High – Strength and high-modulus organic fibers- resistant organic fibers, High performance inorganic fibers, Ultra-fine and novelty fibers- Applications of Technical textiles.

### **UnitII - Filtration and Geo-textiles**

Filtration textiles-Introduction-Definition- importance of filtration textiles - Application of Filtration textiles- dust collection, fabric construction, solid liquid separation.

Geo textiles- Introduction-fibers used - Characteristics and Applications - geo synthesis, essential properties of geo textiles, geo textiles for soil strengthening - Friction resistance of geo textiles and standards for geo textiles.

### **UnitIII - Medical, Protective and Textiles**

Medical textiles - Introduction, Fibers used, Properties, Classification of medical textiles- Non – Implantable, Implantable, Extra corporal devices, Health care and Hygiene Products and Applications. Wearable assistants for mobile health monitoring-textiles for tents, helmets, gloves, survival bags and suits.

Protective Clothing-Introduction, fibers used Types, functions and properties, Characteristics and ApplicationsFireProtectiveclothing,Heat-resistantgarments,Waterproofmaterials,Ballistic resistantVests,MilitaryProtectiveclothing.

### **UnitIV - Smart, Sports and Automotive Textiles**

Smart and Intelligent Textiles – Introduction- Classification - Active smart, passive smart and very smart textiles and - Phase change materials, shape memory polymers, chromic and conductive Materials and its applications in various Wearable technology.

Sports Textiles-Introduction- fibers used-Types- functions and properties- Characteristics and applications of Sports Tech.

Automotive Textiles:Introduction, textiles in cars, other road vehicles, rail applications, textiles in aircrafts marine application, future prospects.

## UnitV - Agricultural,Indu and Pack Textiles

Agricultural textiles – Definition- application- in green house cover, fishing nets, nets for plants, rootless plants and protecting grassy areas, sun screens, wind shields and anti-bird nets.  
Indu Textiles -Introduction -Definition- Types - Indu-tech Products- Coated abrasives, Conveyor belts, Drive belt, Ropes and cordages, Printed circuit boards, Computer printer ribbon.

Pack Textiles -Polyolefin Woven Sacks, Flexible Intermediate Bulk Containers (FIBC),Tarpaulins, Leno bags, Lamination- Jute Hessian and Sacks Soft luggage products Tea-bags Carpet Backing Cloth.

### REFERENCE BOOKS:

1. A R Horrocks and S C Anand, Handbook of Technical Textiles, Woodhead Publication Ltd., Cambridge, 2000.
- 2.S.GraceAnnapoorani, Technical Textiles and its Applications, Laser Park Publishing House, Coimbatore, 2017.
3. R Senthil Kumar, Textiles for Industrial Applications, CRC Press, Taylor & Francis Group, Boca Raton, 2013
4. SabitAdanaur, Wellington Sears, Handbook of Industrial Textiles, Technimic Publishing Company, Inc., Pennsylvania, USA,1995.
- 5.Kothari, V., Textile Fibers: Developments and Innovations, IAFL Publications,New Delhi,2000.
6. Dr.S.GraceAnnapoorani, Agro Textiles and its Application, Wood head publishing ltd, India, 2018.

### COURSE OUTCOMES

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

K1	CO1	Classification of technical textiles
K2	CO2	Importance of Filtration and geo textiles
K3	CO3	Application of Medical and protective textiles
K4	CO4	Analyse different types of products for Sports and smart textiles
K6	CO5	Design requirement for automotive and agricultural textiles



**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	S	S	S	M	S
CO2	S	S	S	S	S	S	S	S	S	S	M	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

<b>Course Code</b>	<b>P21TCT33</b>	<b>Apparel Production Technology</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>XIII</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: AnalyzeK5: EvaluateK6: Create</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To learn about apparel production systems</li> <li>➤ To Understand production processes</li> <li>➤ To understand the techniques of finishing and packing apparels</li> <li>➤ To Understand Production Planning and Control</li> <li>➤ To impart knowledge on plant loading and capacity planning</li> </ul>					

### **UnitI - Apparel Production Systems**

Nature and Scope. Major functions of apparel manufacturing - Material flow in apparel industry - Basic types of apparel production process - Make through system, Group system, Whole garment production system, Assembly line system, Progressive bundle system and Unit production system. Introduction to apparel trade associations – AEPC, TEA, GEA, AHEA, CMAI, CAA, AEMA. Applications of Artificial Intelligence (AI) and Augmented Reality in apparel industry and fashion industry.

### **UnitII -Production Process**

Marker Planning- Efficiency of Marker, Methods of Marker Planning. Spreading- Spreading of the fabric to form a lay, Spreading Requirements, Methods of Spreading. Cutting- Fabric Packages, Introduction to Garment Cutting, Objectives of Cutting, Methods of Cutting. Spreading- Automation in spreading, cutting and sewing - Robotics for 3D sewing operations. Garment sewing- Introduction to Seam and Stitch - Sewing thread and selection of sewing thread for different fabrics.

### **UnitIII - Finishing and packing**

Apparel Finishing-Importance - Garment pressing and finishing, Types of Garments pressing, Specialty Garment Finishes. Quality Checking-Inspection, Interactive bar coding, needle detection. Packaging and ware housing- Types of packing, packing materials, quality specification, merchandise packing and shipping packing. Intra transport, ware housing, computerized storage.

### **UnitIV - Production Planning and Control**

Pre-production functions – product acceptance, steps from prototype to production model, order requirements - Production Control-Definition, objectives of production control, co-ordination of production control department with other departments in the manufacturing organizations -Process of inline checking - Pre-production inspection, In-Process Inspection, Pre-final inspection, Pre shipment Inspection.

Manufacturing operations - scheduling, work centres, facility layout, work load and work assignments.

### UnitV - Plant Loading and Capacity Planning

Determination of machinery requirements for a new factory, calculation of labour requirements, application of line balancing techniques. Techniques of industrial engineering in apparel industry - Time study, Motion study, Method/work study- Definition, Purpose, Techniques.

#### TEXT BOOK

- 1.T.Karthick et al, Apparel Manufacturing Technology, CRC Press, 2016.
- 2.Rajkishore Nayak & Rajiv Padhye, Garment Manufacturing Technology, Elsevier, 2015.
3. Harold Carr and Barbara Latham, The Technology of Clothing Manufacture, Blackwell Science Ltd., London, 2015.
4. N. Gaither and G. Frazier, Operation Management, Thompsan, Asia, 2004.
5. S. A. Chunwala and D. R. Patol, Production and Operation Management, Himalayas, (2004)
6. Decenzo and Robbins, Human Resource Management, Wiley, 6th edition, 2004.

#### Reference Books

- 1.V.Ramesh Babu, Industrial Engineering in Apparel Production, Woodhead Publishing, Elsevier Science &Technology, 2017.
2. Rajkishore Nayak & Rajiv Padhye, Automation in Garment Manufacturing, Wood head Publishing, 2017.
3. Glock.E, Grace.L, Apparel Manufacturing, Dorling Kindersley Pvt. Ltd., India, 2012.
4. Kitty G.Dickerson, Inside the Fashion Business, Pearson Education Pvt. Ltd., India, 2005.
5. Mamoria, C. B. andMamoria, S., Personal Management, Himalaya Publishing Co.,2005.
6. Jack Donnelly, Universal Human Rights in Theory and Practice, Cornell University Press, New York, 2003.

#### COURSE OUTCOMES

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

K2	CO1	Apparel production systems
K3	CO2	Analyze the Process involved in production
K6	CO3	Analyze finishing and packing of apparels
K4	CO4	Application of production planning and control
K5	CO5	Evaluate plant loading and capacity planning

**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	M	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

<b>Course Code</b>	<b>P21TCT34</b>	<b>Entrepreneurship and Industrial Organization</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>XIV</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: Analyse</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To study about the importance of entrepreneurship</li> <li>➤ To understand the role of women entrepreneurship</li> <li>➤ To analyze Entrepreneurial motivation theories</li> <li>➤ To understand about the Institutional Support to Entrepreneurs</li> <li>➤ To understand about project and personal management</li> </ul>					

### **UNIT I -Entrepreneurship**

Entrepreneurship- Meaning, Importance, Evolution of term Entrepreneurship, features, Factors influencing entrepreneurship - Psychological factors, Social factors, Economic factor, environmental factors - Characteristics of an entrepreneur-rural entrepreneurship, problems of rural entrepreneurship. .Growth of entrepreneurship- role of entrepreneurship in economic development -

### **UNITII - Institutional Support to Entrepreneurs**

Institutional support to entrepreneurs - Need for support - National small Industries Corporations (NSIC), NIESUBD,NEBD, PMEGP ,SIDO, SSIDC, SISI, State Finance Corporations (SFC), District Industrial Centres (DICs), Financial assistance -state and central government banks-Financial incentives and subsidies.

### **UNITIII - Women Entrepreneurs**

Concept of Entrepreneur - Categories of Women Entrepreneurs - Women in organized and unorganized sector, Women in traditional and modern industries, Women in urban and rural areas - Supportive Measures for Women's Economic Activities and Entrepreneurship- Technological training and awards, Federations and associations. Problems of Women Entrepreneurs in India and Ways to Develop Women Entrepreneurs. Measures to Improve Women Entrepreneurship- Trade Related Entrepreneurship Assistance and Development (TREAD) scheme for women, Mahila Vikas Nidhi, Cooperative schemes, Government Yojanas. Training programs – Support for training and employment programme of Women (STEP), Development of Women and Children in Rural Areas (DWCRA).

### **UnitIV - Entrepreneurial motivation and Types**

Entrepreneurial motivation – motivation theories – Maslow's need hierarchy Theory, McClelland's acquired needs Theory, Herzberg's theory, McGrigor's Theory. Need for Entrepreneurship development programs - sickness in small business

Types of entrepreneur- innovating, adoptive, Fabian, drone, individual and institutional, technologist, forced.

## UNIT V - Project, Innovation and personnel management

Project Management-Introduction, internal constraints and external constraints - project lifecycle - element of project formulation.

Innovation Management-Functions-classification- Process Innovation, Product Innovation, Marketing Innovation, Organizational Innovation.

Personnel management – meaning, manpower planning, jobs requirements, recruitments, training and development, remuneration and benefits.

### REFERENCE BOOKS:

1. Hisrich R D, Perter MP, “Entrepreneurship”, TATA MCGRAW- Hill,2013.
2. Mathew j Manimala, “Entrepreneurship theory at cross roads: paradigms and Raxis” dream teach, 2005.
3. Michael h. Morris, et. al., Entrepreneurship and innovation, CE gage learning, New Delhi, 2011.
4. S.S Kanka, Entrepreneurial Development, Revised edition, Sultan Chand Publications, New Delhi, 2012.
5. Khanaka, S.S., Entrepreneurial Development, S. Chand and Company Ltd., New Delhi, (2006).
6. Sanjay Tiwari and Anshuja Tiwari, Entrepreneurship Development in India. Sarup& Sons, New Delhi, 2007.
7. Philip Kotler and Kevin Lane, Marketing Management, Keller, Pearson Education Inc., Delhi, 2006.
8. Ramachandran K., Entrepreneurship development: Indian Cases on Change Agents. Tata McGraw Hill Private Limited, New Delhi, 2009.
9. Singh A.K., Entrepreneurship Development and Management, Lakshmi publications pvt. Ltd. New Delhi, 2009.

### COURSE OUTCOMES

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

K2	CO1	Features and importance of entrepreneurship
K2	CO2	Types and role of women entrepreneurs for growth
K3	CO3	Analyze the theories of entrepreneurial motivation
K4	CO4	Approach Institutional Support to Entrepreneurs
K3	CO5	Application of Project, innovation and personnel management concepts

**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	S	S	S	M	S
CO2	S	S	S	S	S	S	S	S	S	S	M	S
CO3	S	S	S	S	S	S	S	S	S	S	M	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

<b>Course Code</b>	<b>P21TCT35</b>	<b>Textile Industry Management</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>XV</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K1: RecallK2: UnderstandK3: ApplyK4: Analyse</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To study about Textile industry</li> <li>➤ To understand about departments in apparel industry and manufacturing operations</li> <li>➤ To learn about Textile Associations and Organizations</li> <li>➤ To impart knowledge on Government Policies and Startups</li> <li>➤ To analyze Textile industry Management</li> </ul>					

### **UnitI - Textile Industry**

Indian Textile industry- Growth and development -Market size- structure of textile industry- Problems and prospect-Readymade Garment industry - Government Initiatives for textiles sector Types-Cotton, silk, woollen, ready-made, Hand-crafted, jute and coir.

### **UnitII - Apparel Industry Departments and Operations**

Apparel industry- recent developments-Departments of a garment industry – Marketing, Merchandising, Fabric sourcing and store, Design and development, Pattern Making and CAD, Sampling, Fabric Testing, Production Planning and Control, Cutting and sewing, Quality Control, Machine Maintenance, Processing, packing-Supportive departments- Industrial Engineering, Finance and accounts, Human Resource and Administration, Shipping and documentation.

### **UnitIII -Textile Associations and Organizations**

Indian textile associations, SIMA, SITRA, SISPA, South Indian Spinners Association, Association of Man - Made Fibre Industry of India, Association of Synthetic Fibre Industry, Indian Spinners' Association, All India Texturisers' Association, National Textile Corporation Ltd, Confederation of Indian Textile Industry (CITI), The Cotton Corporation of India Ltd, The Clothing Manufacturers Association of India, Textile Machinery Manufacturers' Association (India), Indian Textile Accessories & Machinery Manufacturers' Association (ITAMMA), Federation of All India Textile Manufacturers Association (FAITMA), Federation of Indian Export Organization.

### **UnitIV - Government Policies and Incubation Centers**

Government policies for textile industries - Amended Technology Upgradation Fund Scheme for textiles industry (ATUFS), Scheme for Integrated Textile Parks (SITP), National Textile policy 2000, Foreign Direct Investment (FDI), SAATHI Scheme, and Merchandise export from India Scheme, Scheme for Capacity Building in Textiles Sector (SCBTS). Five Government Schemes for Retail Businesses- Raw Material Assistance,



Infrastructure Development Scheme, MUDRA Loans. Developing Training & Plug and Play Infrastructure.

Incubation Centers-Common Working Space, Test and demonstration facilities, Mediation and Network, Training and Coaching, Business Support.

### **UnitV- Textile Management**

Textile Management –Introduction, Inventory-Introduction - Sales Management -Formatting sales policies, structuring the sales force and its size, designing sales territories.

Human Resource Management - Meaning, objectives, scope and functions, importance of human factor -workers hygiene management-Importance– Measuresof Personal Hygiene-Workers Safety management-Types of hazards and hazard control measures-safe handling of materials using protective wear- sign boards-facilities at work place-Accidents and emergency security.

Environmentmanagement system- Importance, benefits- Disaster management in textiles and apparel industry, its rescue and relief.

### **References:**

#### **Text books:**

1. R.Nandagopal et al., Textile and clothing management, Allied Publishers pvt ltd. Delhi, 2004.
2. Anu Thomas,Startup India: Policies abound but limited impact on ground, ET online, 2017.
3. Dudeja V. D., Professional Management of Fashion Industry, Gagandeep Publications, Delhi, 2005.
4. NirupamaPundir, Fashion Technology Today and Tomorrow, Mittal Publications, New Delhi, 2007.
5. ManmeerSodhia and Pooja Chately,Fashion Marketing and Merchandising, Kalyani Publishers, New Delhi, 2003.
6. N. Gaither and G. Frazier, Operation Management, Thompsan, Asia, 2004.
7. S. A. Chunwala and D. R. Patol, Production and Operation Management, Himalayas,2004.
8. Decenzo and Robbins, Human Resource Management, Wiley, 6th edition,2004.

### **References:**

1. Gini Stephens Frings., Fashion from concept to consumer, Person education, inc,seventh edition, 2002.
2. Dorling Kindersley, Fashion, The Ultimate Book of Costume and Style, Published by Dorling Kindersley Limited; London, 2012.
3. Mamoria, C. B. amdMamoria, S., Personal Management, Himalaya Publishing Co., 2005.
4. Jack Donnelly, Universal Human Rights in Theory and Practice, Cornell University Press, New York, 2003.
5. Gordon A. Berkstresser, Textile Marketing Management, Noyes Publications, 1984.

### **COURSE OUTCOMES**

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

K1	CO1	Nature of Textile industry
K2	CO2	Identify the role of departments in apparel industry and production operations
K4	CO3	To Analyze the necessity of Indian textile associations and Organizations
K3	CO4	Analyze technical developments through government policies.
K4	CO5	Analyze textile management systems

### **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	M	S	S	S	M	S
CO2	S	S	S	S	S	S	S	S	S	S	M	S
CO3	S	S	S	S	S	S	M	S	S	S	M	S
CO4	S	S	S	S	S	S	S	S	S	S	M	S
CO5	S	S	S	S	S	S	S	S	S	S	M	S

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

<b>Course Code</b>	<b>P21TCP33</b>	<b>Advanced Garment Construction Practical</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Core</b>	<b>XVI</b>		<b>0</b>	<b>0</b>	<b>6</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K3: ApplyK4: AnalyseK5: EvaluateK6: Create</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To study about the theme formulation and garment designing ideas</li> <li>➤ To design garments and develop patterns using flat pattern techniques</li> <li>➤ To develop the knowledge of selecting suitable fabrics</li> <li>➤ To apply construction skill for garment development and enrichment</li> <li>➤ To learn the cost calculation for finished garment</li> </ul>					

### **Development of garments by incorporating flat pattern techniques.**

- a. Develop a theme, design garments and present flat sketches for Children/ Women's / Men's/special garments (any three)
- b. Develop patterns and drafting instructions for the developed garment design
- c. Selection of colour and fabrics suitable for developed design
- c. Construction of garments
- d. Finish the garments with accessories / embellishments.
- e. Calculate the cost of the garment.

### **References**

1. Anita Tyagi, Handbook of fashion Technology, Sonali Publications, New Delhi, 2012.
2. Nancy J. S. Langdon and Sabine Pollehn, Sewing Clothes Kid;s Love, Creative Publishing International Inc. USA, 2010.
3. Peg Couch, Garment Construction: A Complete course on making clothing for fit and Fashion, Fox Chapel Publishing. USA, 2011.
4. Samantha Me Nes, Baby Couture, K.P. Books, USA, 2005.
5. Winifred Aldrich Metric, Pattern Cutting for Children's Wear and Baby Wear, Black Well Publishing, New Delhi, 2007.
6. Marie Clayton, Make your own clothes: Twenty custom fit pattern to sew, Collins & Brown, London, 2008.

**COURSE OUTCOMES**

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

K6	CO1	Developing theme and garment design
K3	CO2	Application of flat pattern techniques for pattern drafting
K4	CO3	Analyzation and collection of suitable materials for garment design
K3	CO4	Application of Garment construction and enrichment techniques
K5	CO5	Evaluation of cost of finished garment

**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S	M	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	M	S	S	S	M	S

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

**SEMESTER – IV**

<b>Course Code</b>	<b>P21TCR41</b>	<b>Project</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
			<b>0</b>	<b>0</b>	<b>22</b>	<b>8</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK5: AnalyseK6: Create</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To Identify Problem related to their area of interest</li> <li>➤ To understand the sources for carrying out research</li> <li>➤ To carry out research work and enhance problem solving skills and research knowledge</li> <li>➤ To Prepare research report and</li> <li>➤ To develop presentation skills</li> </ul>					

**The dissertation should be based on individual studies and carry the following format:**

## Preliminary

1. Title page
2. Certificate of originality by the guide
3. Declaration by the Candidate
4. Table of contents
5. List of tables
6. List of figures
7. Acknowledgement
8. Abstract
  - I. Introduction: Statement of the problem, significance, need for the study, objectives, and definitions.
  - II. Review of literature
  - III. Methodology: tools used, procedures, hypothesis.
  - IV. Results and discussion: tables and figures, statistical presentations, hypothesis testing.
  - V. Summary and conclusion
  - VI. Suggestion for the future study
  - VII. References

**COURSE OUTCOMES**

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

K4	CO1	Identification of research idea
K4	CO2	Analyze sources for conduct of Research
K3	CO3	Application of problem solving skills
K6	CO4	Creation of research report
K6	CO5	Development of presentation skills

<b>Course Code</b>	<b>P21TCE411</b>	<b>Personality Development</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Elective</b>	<b>I</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K1: RecallK2: UnderstandK3: ApplyK5: EvaluateK6: Create</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To study about evaluating personal appearance</li> <li>➤ To learn the process of skin treatment and make-up technique</li> <li>➤ To learn about selecting wardrobe and developing one's communication</li> <li>➤ To understand about developing one's personality traits</li> </ul>					

### **UnitI - Personal Appearance**

Self-evaluation – meaning, importance, evaluation of behaviour, personality, attitudes and perception. Personal appearance – importance -Posture - body language –Importance, Positive and negative body language - face to face communication – Importance, characteristics, benefits - positive and negative approach. Self-introduction- meaning, steps for an effective self-introduction.

### **UnitII - Skin treatment and Care**

Care of skin - cleansing, nourishing, vaporizing and toning technique – benefits, importance and types of cleansing.

Facials- Facial Massage-Electro therapy and Light therapy.

Facial Treatments-Aromatherapy

### **UnitIII - Make-up technique**

Make-up technique - Facial Makeup- Cosmetics for Makeup- Makeup color theory- Client Consultation- Corrective Makeup-Artificial Eyelashes -Special make-up -Safety Precautions technique

### **UnitIV - Selection of Wardrobe**

Wardrobe selection – Meaning, planning a wardrobe, Selection of colour and pattern of clothes to suit different personality –factors affecting wardrobe collection - Choice of costumes for different occasions and seasons.

### **UnitV - Communication Skills**

Developing communication skills – Communication – Introduction, importance, Nature, Scope, Process of communication -communication skills -Listening, Speaking, Reading, Writing-Definition, meaning, nature and scope,

Oral communication -Vocal noise, Voice training, activating tongue, relaxing facial muscles, breathing properly.

**REFERENCE BOOKS:**

1. Krishna Mohan and Meera Banerji, Developing communication skill, Trinity press, Lakshmi publication, Chennai, 2016.
2. BarunMitra, Personality Development and Soft Skills, Oxford University Press, 2012.
4. Janet Simms, A Practical Guide to Beauty Therapy, Neison Thomas Ltd, UK,2001.
4. Daniel K.Mroczek, Hand book of personality, Psychology press, New York,2014.

**COURSE OUTCOMES**

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

K5	CO1	Evaluate their own personal appearance
K2	CO2	Gain knowledge on skin and facial care
K6	CO3	Acquire ideas on various make – up techniques along with safety precautions
K3	CO4	Attain knowledge about wardrobe selection and planning techniques
K1	CO5	Develop efficacy in communication

**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	M	M	S	M	M	M
CO2	S	S	S	S	M	S	M	M	S	S	M	S
CO3	S	S	S	S	M	S	M	M	S	S	M	S
CO4	S	S	S	S	S	S	M	M	S	S	S	S
CO5	S	S	S	S	S	S	M	M	S	S	S	S

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



<b>Course Code</b>	<b>P21TCE412</b>	<b>RETAIL BUSINESS</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Elective</b>	<b>I</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: AnalyzeK6: Create</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To learn about retail merchandising</li> <li>➤ To Understand about retail locations</li> <li>➤ To impart students the knowledge of about brands and private labels</li> <li>➤ To analyze the financial aspects of Merchandising</li> <li>➤ To plan Store Layout and Merchandise Presentation</li> </ul>					

### **Unit I - Retail Merchandising**

Retail Merchandising -The Marketing Channel, Retail organization structures, retail merchandising , Retailing Formats- Department stores specialty stores,hard – to – classify stores, Depth and breadth, discounting , Other Retailing Formats – non store retailers.

### **Unit II - Retail Locations**

Retail Locations -Unplanned shopping districts, planned shopping centers, the mix of stores in a shopping center. Retail growth and expansion – Retail ownership. International Retailing, Retailing Advertising.

### **Unit III - Brands and private labels**

Brands and private labels- -branded Merchandising ,Licensing, Private Labels, Private Labels as Brands. Merchandise Recourses – Manufacturers , Merchant Wholesaler – Distributors. Trade Shows.

### **Unit IV - Online Retail Business**

Online retail business - Introduction and Emergence of Internet retailing - Components of E-Retailing– Advantages – Shortcomings - Opportunities for Online retail in India – Challenges in E-Retailing- Integration of Brick and Mortar with E-retailing - multi channel retailing - challenges for adoption of digital commerce - essentials of online retailing - Model for online retailing- Future of E- retailing.

### **Unit V Store Layout and Merchandise Presentation**

Store Planning andStore design - elements- Store Layout,signage and graphics- – types of store layout - grid, loop, free form, and spine- Feature areas.Creating an appealing store atmosphere -Visual Merchandising – Fixtures -Merchandise Presentation techniques.

## References

1. John Donnellan, Merchandise Buying and Management, Fairchild Publications , New York 1996.
2. Ellen Diamond, Fashion Retailing: A Multi-Channel Approach, Prentice Hall, 2nd Edition, 2005.

### COURSE OUTCOMES

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

K2	CO1	Understand the concepts of retail merchandising
K3	CO2	Apply the concept in planning the retail locations
K4	CO3	Analyze brands and private labels
K4	CO4	Analyze the online retail business
K6	CO5	Development of store layout and merchandise presentation

### Mapping of Cos with POS & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	M	S	S	M	S
CO2	S	S	S	S	S	S	S	S	S	S	M	S
CO3	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	M	S	S	S	S
CO5	S	S	S	S	S	S	S	M	S	S	M	S

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

<b>Course Code</b>	<b>P21TCE413</b>	<b>Industrial and Clothing Psychology</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Elective</b>	<b>I</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: AnalyseK5: EvaluateK6: Create</b>					
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ To understand about theories of clothing</li> <li>➤ To enable the students to learn various industrial psychology</li> <li>➤ To equip the students with the knowledge on work in work place</li> <li>➤ To impart knowledge on clothing psychology</li> <li>➤ To understand the concept of psychology test</li> </ul>					

### **UNIT I - Theories of Clothing**

Theories of clothing – theory of modesty, immodesty, protections, adornment, combined need theory, other theories in fashion - Relation between clothing and other disciplines - Physical Health and Mental Health - Clothing and first impressions.

### **UNIT II - Industrial Psychology**

Industrial Psychology - Introduction, Concept and Meaning, Characteristics of Industrial Psychology, Scopes of Industrial Psychology-Major fields of Industrial Psychology-Major problems of Industrial Psychology-Personal Values and ethics in industrial organization.

### **UNIT III - Psychological Tests**

Meaning of Psychological Tests - Characteristics of psychological tests- Types of Psychological Tests - Limitations of psychological tests.

Meaning of attitude- Components of Attitudes - Attitudes Change- Changing other's attitude, Changing our own attitude.

### **UNIT IV - Ergonomics**

Ergonomics - Meaning- Concept of human engineering / Ergonomics – Importance and need- Fundamental ergonomic principles in workplace -problems at the workplace and ergonomics- benefits of a workplace ergonomics process.

### **UNIT V - Clothing psychology**

Socio-psychological impact of clothing-Colours in clothing psychology- Properties of colour-Effects of colour-Mood, Emotions, Behavior- Colour as marketing tool-colour psychology in apparel design.

Clothing comfort-Pscho- Physiological factors of clothing comfort - Psychophysics and clothing comfort - Wear trail - Garment fit and comfort- Introduction - Body dimensions and pattern - Garment fit and comfort relationship – Factors related to garment fit - Measurement of garment fit.

## **TEXT BOOKS**

1. Carolyn Mair, The Psychology of Fashion (The Psychology of Everything), Taylor & Francis, 2018.
2. J.Fan, W.Yu and Hunter, Clothing appearance and fit science and technology, Woodhead Publishing, 2004.
3. Apurba Das, R. Alagirusamy, Science in Clothing Comfort, Woodhead Publishing India, 2010.

## **Reference Books**

1. Sharron J. Lennon, Kim K. P. Johnson, Nancy A. Rudd, Social Psychology of Dress, Bloomsbury Academic USA, 2017.
2. Jacqueline Morley, Fashion: The History Of Clothes, Sandy Creek, 2014.
3. Michael Jaffe Joseph D. Menczel, Thermal Analysis of Textiles and Fibers, Woodhead Publishing, 2020.
4. Susanne Kuchler, Clothing as Material Culture, Daniel Miller, 2005.
5. Susan B. Kaiser, The Social Psychology of Clothing: Symbolic Appearances in Context, Fairchild Books, 2nd edition, 1996.
6. Song G, Improving Comfort In Clothing, Woodhead Publishing Ltd., January, 2011.
7. J T Williams, Textiles for Cold Weather Apparel, Elsevier, 2009.
8. F. Wang, Chuansi Gao, Protective Clothing: Managing Thermal Stress, Woodhead Publishing Series in Textiles, 2014.
9. Vikram Bisenand Priya, Industrial Psychology, New Age International (P) Limited, Publishers, New Delhi, 2010.
10. Aswathappa K, Human Resource Management, Tata McGraw Hill, New Delhi, 2008.
11. Aamodt M.G, Cengage, Industrial Organizational Psychology: An Applied Approach, Learning Publications, USA, 2007.

## **Web Resources**

1. <https://checkify.com/blog/time-and-motion-study/>
2. <https://www.helpguide.org/articles/stress/stress-management>
3. <https://alejandraslife.com/7-cool-facts-about-fashion-psychology/>

**COURSE OUTCOMES**

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

K2	CO1	Theories of clothing
K3	CO2	Apply the concepts of industrial psychology
K4	CO3	Analyze and compare the concept human engineering
K6	CO4	Develop wide knowledge on clothing psychology
K5	CO5	Evaluate the various aspect of psychology test

**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	M	S	S	M	S
CO3	M	M	S	S	M	S	S	M	M	M	M	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	M	M	M	M	S

Strongly Correlating (S) - 3 Marks

Moderately Correlating (M) - 2 marks

Weakly Correlating (W) - 1 Mark

No Correlation (N) - 0 Mark

<b>Course Code</b>	<b>P21TCE421</b>	<b>CAD for Apparel and Fashion Design Practical's</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Elective</b>	<b>II</b>		<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K3: ApplyK4: AnalyzeK5: EvaluateK6: Create</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To understand about the applications of CAD software</li> <li>➤ To learn about creating design and content for garment logo and pamphlet suitable for apparel industry</li> <li>➤ To learn about designing garments based on a theme</li> <li>➤ To Create the illustration using CAD software</li> <li>➤ Evaluate the designed garment for selected theme</li> </ul>					

### Preparing garment designs using CAD

#### Application of Software's - Adobe Photoshop / Coral Draw / Adobe Illustrator

1. Present your collections of practicing the Photoshop/ Coral draw tools for enhancing images, Masking, transforms, working with layers, Merging and blending layers, text effects, duplicate, print design creation and repeat setting.
2. Creative design and content for garment Logo /pamphlet/ letter head and visiting card / fashion silhouette suitable for apparel and fashion industry.
3. Digital Fashion Portfolio Creation for Male/Female/children using the below concept (three garment collections for each category)
  - Health, safety and protective garments
  - Sports garments / leisure garment
  - Corporate/Office attire/work outfits/
  - Uniforms for restaurant/ Hotel/Spa/housekeeping/front desk/ office professionals

#### Text Book:

1. Melanie Bowles, Print, Make, Wear: Creative Projects for Digital Textile Design, Paperback, The People's Print, 2015.
2. Josephine Steed, Basics Textile Design 01: Sourcing Ideas: Researching Colour, Surface, Structure, Texture and Pattern, Paperback, Frances Stevenson, 2012.
3. Harold Carr and Barbara Latham, The Technology of Clothing Manufacture, Black Well, Berlin, 2004.
4. Frederick L. Chipkin, Adobe Photoshop Elements for Textile Design, Origin Inc., 2010.
5. Marianne Centner and Frances Vereker, Fashion Designers Handbook for Adobe Illustrator, John Wiley & Sons Ltd., United Kingdom, 2011.
6. Robin Schneider, Adobe for Fashion: Illustrator CS5, The ultimate guide to drawing flats, Lulu.com, 2012.

7. Frankie Ng and Jiu Zhou, Innovative Jacquard Textile Design using digital technologies, Woodhead Publishing, London, 2008.
8. Gini Stephen Frings, Fashion from Concept to consumer, Prentice Hall Inc., New Jersey, 2002.
9. Stephen Nicholas Gray, CAD/CAM in Clothing and Textiles, Design Council Publisher, 1998.
10. Melanie Bowles, Digital Textile Design, Paperback, Ceri Isaac Illustrated, 2012.

## COURSE OUTCOMES

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

K3	CO1	Applications of CAD software's for fashion design
K6	CO2	Creation of design and content for garment logo and pamphlet suitable for apparel industry
K4	CO3	Analyze the garment design for theme
K6	CO4	Creating the illustrations using CAD software
K5	CO5	Evaluation the designed garment for selected theme

### Mapping of Cos with POS & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
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

<b>Course Code</b>	<b>P21TCE422</b>	<b>Business Communication</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Elective</b>	<b>II</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: AnalyseK6: Create</b>					
<b>Learning Objectives</b>	<b>The Course aims to</b> <ul style="list-style-type: none"> <li>➤ To study about communication process</li> <li>➤ To understand about the importance of listening</li> <li>➤ To learn about the business correspondence and presentation skills</li> <li>➤ To study the business communication techniques</li> </ul>					

### **UNIT 1- Communication**

Communication- meaning and definition, role of communication in business, main forms of communication business. Types of Communication-Forms of Communication.-Verbal and non-verbal communications.- Barriers -Scope of Communication.

### **UNIT II - Listening**

Listening-Definition-Listening Process-Types-Superficial, Appreciative, Focused, Attentive Evaluative,Empathetic-Barriers- poor listening, factors contributing to poor listening, Active listening-Strategies of developing active listening skills-Effective listening for better comprehension.

### **UNIT III - Presentation skills**

Presentation skills- Definition, Importance, features of a good presentation, components of presentation skills-Planning effective presentation- -Analyze the audience, Structure, verbal delivery, Body language and movement, form of language, equipment's and facilities, verbal and nonverbal, Interacting with audience and managing questions, Rehearsal.

### **UNIT IV - Business Correspondence**

Business Correspondence -Meaning and significance-Principles-Essentials of Business letters- - introduction, format and layout -E-mail- report writing,-writing skills - Elements of business letter- Formats - Types of business letter-Internal, External, Routine, Sales, Personalized, Circulars.

### **UNIT V - Letter Correspondence**

Letter Correspondence- Introduction, Objectives- - Requirement correspondence- definition, application letter, contact of resume and CV, interview letter, offer of employment, letter of acceptance, resignation letter, letter of recommendation.



**REFERENCE BOOKS:**

1. Krishna Mohan and MeeraBanerji, Developing communication skill, Trinity press, Lakshmi publication, Chennai, 2016.
2. Mary Ellen guffey, Essentials of communication, south – western collage publication Association for business communication, 2018.
3. PoojaKhanna, Business Communications, Vikas Publishing House Pvt.Ltd.,Noida,2015.
4. R.C. Bhatia, Business communication, Ane'sbooks Pvt.Ltd., New Delhi,2009.

**COURSE OUTCOMES**

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

K2	CO1	Business communication and its process
K2	CO2	Significance of active and poor listening
K6	CO3	Application of Presentation skills
K4	CO4	Analyze the principles of Business correspondence
K3	CO5	Application of business communication skills for letter correspondence

**Mapping of Cos with POS & PSOs:**

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	M	M	S	S	S	S
CO2	M	S	S	S	S	S	M	S	M	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	M	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

<b>Course Code</b>	<b>P21TCE423</b>	<b>Fashion Industry and Sustainability</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Elective</b>	<b>II</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: AnalyzeK6: Create</b>					
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ To Understand the concept of fashion industry and its sustainability</li> <li>➤ To learn about the concept of sustainability in clothing industry</li> <li>➤ To learn about relations of Fashion industry and Environment</li> <li>➤ To Understand the idea of green consumerism</li> <li>➤ To understandabout Sustainable Business Strategies</li> </ul>					

### **Unit I - Fashion sustainability**

Introduction- Fashion, Sustainability, Pillars of sustainability. Sustainable fashion-Meaning-Importance-Need- Social, Economic and Environmental concerns related to fashion - Business models for sustainable fashion-Sustainable clothing- Sustainable consumption practices for enhanced product life. in Sustainability in fashion-Benefits and challenges.

### **Unit II - Sustainability in Clothing Industry**

Recycling and upcycling- Concepts and benefits- Carbon footprint, water footprint and energy consumption of fashion industry.Sustainability in Clothing Industry -Clothing lifecycle, fast and slow fashion, clothes repair and re-use. Value and Green aesthetics- Ethical design-Concept of Zero waste fashion design-Product service system (PSS) for sustainable fashion- PSS design thinking and PSS consumer adoption - Multi-life Garments through Modular Structures and Supplemental Services Consumer engagement and business innovation. Sustainable fashion designers, sustainable fashion brands, Eco-friendly fashion labels

### **Unit III- Fashion Industry and Environment**

Fashion and Environment –Fashions environmental impact -Water pollution, water consumption, Micro fiber pollution, Waste and disposal, chemical usage, carbon emissions, soil degradation. Reducing environmental impact in fashion industry-buy less, buy clothes from sustainable brands, buy better quality, think before disposal, buy second hand, swap and rent clothing, cloth washing practice.

### **Unit IV - Green Consumerism**

Green consumerism -Meaning-Importance- green consumerism and waste reduction-Green consumer – Possible ways to become green consumer- Green Marketing Strategies. 3Rs – Reduce, Reuse and Recycle. Ways to increase the sustainability of fashion -Raise awareness, Radical Rethinking, Increase corporate and consumer responsibility, Push for alternatives, Introducing effective policy.

### **Unit V - Sustainable Business Strategies**

Sustainable Business Strategies - Environmentally Friendly Operation Strategies - Design for environment, environmental management systems, product stewardship programs, supply chain management, total quality management and Just-in-time. Marketing Mix for Green Products-Product, place, promotion, price.Product Life Cycle in Fashion Industry- Materials, Production, Distribution and Transportation, Product Use, End of Use. Textile recycling-Available recycle options - convenience of recycle options- Re-design solution package.

Consumer behaviors and attitudes- Media and information reliability, Green clothes and information credibility.

### Reference Books

1. Yamase K, Cut up Couture- Edgy Upcycled Garments to Sew, Interweave, 2012.
2. Fletcher K, Sustainable Fashion and Textiles- A Design Journey, Lawrence King Publishing, 2008.
3. Phillips J, Create, Sustainable Luxe- A Guide to Feel Good Fashion, Space Publishing, 2013.

### Online Reference

- 1 <https://www.coursera.org/learn/sustainable-fashion>
- 2 <https://www.edx.org/course/circular-fashion-in-a-sustainable-clothingindustry>
- 3 <https://www.my-mooc.com/en/mooc/sustainable-fashion/>
- 4 <https://www.sustainablefashionmatterz.com/what-is-sustainable-fashion>

### COURSE OUTCOMES

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

K2	CO1	Fashion industry and its sustainability
K2	CO2	Sustainability in clothing industry
K4	CO3	Analyzing Fashion industry and Environment
K3	CO4	Becoming green consumer
K6	CO5	Development of Sustainable Business Strategies

### Mapping of Cos with POS & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	S	S	S	M	S
CO2	S	S	S	S	S	S	S	S	S	S	M	S
CO3	S	S	S	S	S	S	S	S	S	S	M	S
CO4	S	S	S	S	S	S	S	S	S	S	M	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

<b>Course Code</b>	<b>P21TCN211</b>	<b>Fundamentals of Apparel Design</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>NME</b>	<b>I</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: Apply</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To impart thorough knowledge on the parts and function of the sewing machine.</li> <li>➤ To enable students to gain knowledge about seams and seam finishes.</li> <li>➤ To gain skills in sewing techniques</li> </ul>					

### **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 and types.

### **Unit II - Fullness and Skirts**

Fullness- Definition, Types of fullness – Darts-single, double and dart tuck- Tucks-Pin, cross, corded, scalloped, group – Pleats – knife, box, inverted box, kick, pinch – flares-godets- gathers -hand and machine –shirring and frills. Skirts: Different types of skirts.

### **Unit III - Necklines, finishes and Collars**

Neck lines-Introduction, types - Neck line Finishes-Definition and types-Bias facing and bias binding – single and French or piping.

Collars – definition, parts of collar, factors to be considered in designing collar, types of collar.

### **Unit IV - Sleeves**

Sleeves: - Classification of sleeves, types of sleeves- plain, puff at top, bottom, top and bottom, bell, bishop, circular, leg-o-mutton - sleeveless styles – Raglan, kimono and Magyar sleeves.

### **Unit V - Fasteners**

Fasteners - Buttons and its types. button hole- types of buttonhole Button loops- thread loops, fabric loop, corded loop, corded frogs -hooks and eye, press buttons, zippers, eyelets, Velcro, frogging and other types of fasteners.

### **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 OUTCOMES

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

K2	CO1	Parts and function of the sewing machine
K2	CO2	Seams and seam finishes
K3	CO3	Different types of fullness
K3	CO4	Necklines and finishes
K3	CO5	Different types of sleeves and collars

### Mapping of Cos with POS & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
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

<b>Course Code</b>	<b>P21TCN212</b>	<b>TRADITIONAL TEXTILES AND COSTUMES OF INDIA</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>NME</b>	<b>II</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K1: RecallK2: UnderstandK3: ApplyK4: Analyse</b>					
<b>Learning Objectives</b>	<b>The Course aims</b> <ul style="list-style-type: none"> <li>➤ To introduce students to the various traditional textiles of India</li> <li>➤ To acquaint students with give an understanding of Costumes and Accessories of North India</li> <li>➤ To impart students an overview of Costumes and Accessories of South India</li> <li>➤ To learn students with traditional woven and printed textiles</li> <li>➤ To impart students with an understanding of traditional Embroidery of India</li> </ul>					

### **Unit I - Traditional Indian Textiles**

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

### **Unit- II Costumes and Accessories of North India**

Men's attire, women's attire: upper wear and bottom wear. Accessories used in different states - Uttar Pradesh, Gujarat, Madhya Pradesh, Rajasthan, Orissa, West Bengal, Manipur, Jammu and Kashmir, Himachal Pradesh, Assam, Punjab, Haryana and Maharashtra.

### **Unit III Costumes and Accessories of South India**

Costumes and Accessories of South India - Men's attire, women's attire: upper wear and bottom wear. Accessories used in different states - Tamil Nadu, Kerala, Andra Pradesh and Karnataka

### **Unit IV Traditional Woven and Printed Textiles of India**

Traditional Woven and Printed Textiles of India - Dacca Muslin, Jamdhani, Chanderi, Brocades, Balucher, Kashmir shawls, Bandhani, Patola, Kalamkari and Block printing - historical importance - features-motifs, materials used and colours - uses.

### **Unit V Traditional Embroidery of India**

Traditional Embroidery of India-Phulkari, Chikankari, Kantha, Kutch, Kathiawar, Sindh, Kasuthi and ChambaRoomal -historical importance - Salient features of each type of embroidery- colours, motifs and materials used.

### **References:**

1. Gillow.J& Barnard. N, Indian Textiles, Om Books International, New Delhi, 2014.
2. Lynton, The Sari, Thames and Hudson Ltd, London, 2002.

3. Vandana Bhandari, Textiles and crafts of India Arunachal Pradesh, Assam Manipur, National Institute of Fashion Technology, Prakash Books, New Delhi, 2015.
4. Premalatha Mullick, Textile Designing, Kalyani Publishers, New Delhi, 2007.
5. Shailaja. D. Naik Traditional embroideries of India, APH publications, New Delhi, 2012.
6. Sankar K. Roy, Textile traditions of northeast India, Indira Gandhi Rashtriya Manav Sangrahalaya, Bopal and orient publishers, New Delhi, 2008.
7. Ritu Kumar, Costumes and Textiles of Royal India, Antique collectors club, 2008.
8. Parul Bhatnagar, Traditional Indian Textiles, Abhishek publications, Chandigarh, 2004.

## COURSE OUTCOMES

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

K1	CO1	Various traditional textiles of India
K2	CO2	understanding of textile North Indian costumes
K2	CO3	Overview of south Indian Costumes
K4	CO4	Analyze about woven and printed textiles
K3	CO5	Application of Traditional Embroideries on recent trends

### Mapping of Cos with POS & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	M	S	S	S	M	S
CO2	S	S	S	S	S	S	M	S	S	S	M	S
CO3	S	S	S	S	S	S	M	S	S	S	M	S
CO4	S	S	S	S	S	S	M	S	S	S	M	S
CO5	S	S	S	S	S	S	M	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

<b>Course Code</b>	<b>P21TCN213</b>	<b>Principles of Fashion Design</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>NME</b>	<b>III</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: AnalyzeK6: Create</b>					
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ To Understand the concept of fashion and Terminologies</li> <li>➤ To learn about the Elements of design</li> <li>➤ To understand on principles of design</li> <li>➤ To Understand the colour theory and harmonies</li> <li>➤ To develop design using fashion principles</li> </ul>					

### Unit I -Fashion

Terms related to the fashion industry – Fashion, Style, Fad, classic, collection, chic, custom made, mannequin, fashion, show, trend forecasting, high fashion cycle, haute couture, couture, couturier, fashion director, fashion editor

### Unit II - Elements of Design

Design, structural Design, Decorative Design, - Ornamental Design. Elements of design- Line – Vertical line, horizontal line, diagonal line, curved line, broken lines, V-neck line – shape, texture and color.

### Unit III - Principles of Design

Proportion or scale – Balance- Symmetrical, Asymmetrical and radial, Emphasis- Plain background, decoration, contrast color, Rhythm - Repetition, alteration, progression, continuous line movement Harmony - line shape color texture and idea.

### Unit IV - Colour

Definition, Elements of color, Hue, value and intensity, classification of color - primary, secondary, tertiary, Colour theory, Prang and Munsell colour chart and colour schemes, Important colour qualities and selection of colour for various occasion and seasons

### Unit V - Application on garments

Application of elements on garment design -Application of colour and Principles of design in dress - Harmony through colour, Emphasis through colour, Proportion through colour, Rhythm through colour and Balance through colour.

### Text Books

1. Kathryn Mc Kelvey and Janine Munslow, Fashion Design: Process, Innovation and Practice, Blackwell Science Ltd., Blackwell Publishing Company, UK, 2005.
2. Jenny Davis, A Complete Guide to Fashion Designing, Abhishek Publications, Chandigarh, 2006.
3. Mahadevan, M.G., Textile colouring, Abhishek Publication Chandigarh, 2008.
4. Premlata Mullick, Text book of Textile Designing, Kalyani Publishers, Ludhiana, 2006.



5. Parachure, J. W, Fundamentals of Designing for Textiles and other end use, Woodhead publishing, India, New Delhi, 2009.
6. G. J. Sumathi, Elements of Fashion and Apparel Design, New Age International, 2007.
8. Harriet Goldstein, Art in everyday life, Macmillan Company, 2007.
9. Jen Jones, Fashion design: The art of style, Capstone press, 2007.

## COURSE OUTCOMES

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

K2	CO1	Fashion industry concepts
K3	CO2	Apply Elements of design
K3	CO3	Apply Principles of design for clothing
K6	CO4	Create ideas using colour theory and harmonies
K4	CO5	Design creation using fashion principles

### Mapping of Cos with POS & PSOs:

CO/ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	S	S	S	S	S	S	S	S	S	S	M	S
CO2	S	S	S	S	S	S	S	S	S	S	M	S
CO3	S	S	S	S	S	S	S	S	S	S	M	S
CO4	S	S	S	S	S	S	S	S	S	S	M	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

<b>Course Code</b>	<b>P21TCV11</b>	<b>Sustainable Fashion Product Development</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Value Added Programme</b>			<b>0</b>	<b>0</b>	<b>30</b>	<b>2</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: AnalyseK5: EvaluateK6:Create</b>					
<b>Learning Objectives</b>	<b>The Course aims to</b> <ul style="list-style-type: none"> <li>➤ To make analysis of market business</li> <li>➤ To understand and generate idea for product development</li> <li>➤ To source materials for product development</li> <li>➤ To develop and design sustainable product</li> <li>➤ To analyse cost of the product and report preparation</li> </ul>					
<b>Module</b>	<b>Topic/Activity</b>					<b>Hours</b>
Module 1	Market research for sustainable product development					4hours
Module 2	Generate idea for product design and determine key criteria					4hours
Module 3	Design creation and technical specification					4hours
Module 4	Sourcing materials for product development					4hours
Module 5	Prototype product development and conversion to second life/final product					8hours
Module 6	Cost analysis for product development					1hours
Module 7	Report development and Product presentation					5hours

## COURSE OUTCOMES

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

K4	CO1	Market research
K6	CO2	Idea generation for product development
K2	CO3	Could source the material for the product
K3	CO4	Develop product
K5	CO5	Analyse cost of the product

<b>Course Code</b>	<b>P21TCV42</b>	<b>Fashion Event Management</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Value Added Programme</b>			<b>30</b>			<b>2</b>
<b>Cognitive Level</b>	<b>K2: UnderstandK3: ApplyK4: AnalyseK5: EvaluateK6:Create</b>					
<b>Learning Objectives</b>	<p><b>The Course aims to</b></p> <ul style="list-style-type: none"> <li>➤ To impart awareness on various fashion events</li> <li>➤ To learn the various practical steps required for successful organization of fashion events</li> <li>➤ To gain practical knowledge related to the coordination of different activities</li> </ul>					
<b>Module</b>	<b>Topic/Activity</b>	<b>Hours</b>				
Module 1	Event management – Introduction, principles and purpose. Types of fashion events- fashion show, fairs, trade show and product launch. Role of an event coordinator-administration, design, marketing, operations, risk and creating an event plan. SWOT analysis.	6 hours				
Module 2	Fashion event planning requirements - theme creation, targeting the audience/vendors, schedule planning, finding a venue, budget, guest lists and invitations. Organizing the required committees, preparing duty charts, source of finance.	6hours				
Module 3	Fashion event venue requirements - stage/ booth design, lighting and allied audio- visual effects, seating patterns and plan, ensuring legal compliance, safety and security, licenses and permissions to be obtained.	6hours				
Module 4	Catwalk presentation requirements – merchandise selection, model selection, music and choreography, final show sequence rehearsals and wardrobe assistants. Preparation of programme booklet, catering arrangements and progress monitoring through checklists.	6hours				
Module 5	Promotion – media selection-building media relations and preparing press release-poster and pamphlets – catering arrangements. Risk management for prevention of hazards, security for people and merchandise.	6hours				

### COURSE OUTCOMES

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

<b>K4</b>	<b>CO1</b>	Develop knowledge on fashion event management
<b>K6</b>	<b>CO2</b>	Steps in planning fashion show event
<b>K2</b>	<b>CO3</b>	Could decide stage designing, audio and visual effects for events
<b>K3</b>	<b>CO4</b>	Relate the process of merchandise selection and model selection for fashion show
<b>K5</b>	<b>CO5</b>	Develop knowledge on promotion and risk management