

**BHARATHIAR UNIVERSITY COIMBATORE – 641 046  
M.Sc. TEXTILES AND APPAREL DESIGN  
UNIVERSITY DEPARTMENT**

**VISION**

To provide customized academic programs that nurtures, motivates and inspires excellence in teaching and research, along with concern for the society.

**MISSION**

- To serve as a knowledge and skill hub for the professional development of students.
- To impact theoretical and practical training in advanced areas of Textiles and Apparel industry.
- To serve the textile industry and the society with creative research outcomes with insight development and a passion for science.
- To develop the competency of students for their excellence in career.

## **PROGRAMME OBJECTIVE (PO)**

On completion of M.Sc Textiles and Apparel Design Programme, the students are expected to

**PO1-** Use research based knowledge on developing the textile material that can serve the purpose for appealing garment design and functionality, evaluating with various evaluation techniques.

**PO2-** Apply knowledge of yarns and fabrics, finishing and domain knowledge appropriate for apparel design for producing creative fashion trends.

**PO3-** Design and evaluate solutions for different seasonal wear that are suitable for children, ladies and men's wear.

**PO4-** Create, select, adapt and apply appropriate techniques resources and modern computer design to develop functional garments in a fashionable manner with clothing appearance and fit with comfort.

**PO5-** Demonstrate knowledge and understanding in Technical textiles to offer solution for various garment design for specific function.

**PO6-** Communicate effectively with society to replicate the traditional trends and incorporated fashion in novel way in garment design.

**PO7-** Understand the global scenario and have the ability to engage in independent learning for continual development as a fashion garment designer.

**PO8-** Understand and follow professional ethics and global standards in garment designing.

**PO9-** Apply various quality evaluation methods for choosing appropriate fabrics for drapable garment manufacture for appealing fit.

**PO10-** Have strong confidence in ability to visual presentation and marketing to become successful garment designer.

**PO11-** Apply knowledge on Eco dye coloring and zero discharge measures for future sustainability.

**M.Sc. TEXTILES AND APPAREL DESIGN**  
**UNIVERSITY DEPARTMENT**  
**(For the students admitted from the academic year 2018-2019 onwards)**  
**SCHEME OF EXAMINATION – CBCS PATTERN**

Subject Code	Study Components	Ins. hrs / week	Exam				Credit
			Exam Hrs.	CIA	CEA	Total	
<b>Semester I</b>							
13A	PAPER –I Research Methodology & Statistics	4	3	25	75	100	4
13 B	PAPER- II Advanced Textile Science	4	3	25	75	100	4
13 C	PAPER - III Apparel Production Technology	4	3	25	75	100	4
13 P	PRACTICAL -I Innovative CAD Designing	5	4	30	45	75	3
13Q	PRACTICAL -II Advanced Draping	5	4	40	60	100	4
1EA	ELECTIVE –I	4	3	25	75	100	4
	Supportive I Offered by other Departments	2	3	12	38	50	2
	Mentor/Library/Seminar/Test	2	-	-	-	-	-
<b>Semester II</b>							
23 A	PAPER-IV Advanced Wet Processing	4	3	25	75	100	4
23 B	PAPER-V Technical Textiles	4	3	25	75	100	4
23 C	PAPER-VI Textile Testing	4	3	25	75	100	4
23 P	PRACTICAL –III Textile Testing	5	3	40	60	100	4
23 Q	PRACTICAL –IV- Advanced Garment Construction	5	4	40	60	100	4
2 EB	ELECTIVE –II	4	4	25	75	100	4
	Supportive II Offered by other Departments	2	3	12	38	50	2
	Mentor/Library/Seminar/Test	2	-	-	-	-	-
	* Internship Training						
<b>Semester III</b>							
33 A	PAPER- VII Apparel Quality Standards and Implementation	4	3	25	75	100	4
33 B	PAPER-VIII Clothing Appearance and Fit	4	3	25	75	100	4
33 C	PAPER-IX Eco Textiles and Sustainability	4	3	25	75	100	4
33 P	PRACTICAL -V Surface Enrichment on Textiles	5	4	30	45	75	3
33 Q	PRACTICAL -VI Portfolio Presentation	5	4	40	60	100	4
3 EC	ELECTIVE - III	4	3	25	75	100	4
	* Internship Report and Viva Voce	-	-	50	-	50	2
	Supportive III Offered by other Departments	2	3	12	38	50	2
	Mentor/Library/Seminar/Test	2	-	-	-	-	-
<b>Semester IV</b>							
43 P	Practical -VII CAD in Textile Designing	6	4	40	60	100	4
47 V **	Project work & Viva voce			-	-	200	8
	Mentor/Library/Seminar/Test	2	-	-	-	-	-
<b>TOTAL</b>						2250	90

\* Internship for 15 days after II Semester

\*\*For Project Report 80% Marks &amp; Viva-Voce 20% Marks

**ELECTIVE PAPER With effect from 2018-2019 onwards**

	SEMESTER – I	SEMESTER – II	SEMESTER – III
A DESIGNING	FASHION CONCEPTS AND DESIGNING	SOCIAL AND PSYCHOLOGICAL ASPECTS OF CLOTHING	CLOTHING CARE AND MAINTENANCE
B MARKETING	APPAREL MARKETING AND MERCHANDISING	VISUAL MERCHANDISING	ENTREPRENEURSHIP DEVELOPMENT
C INDUSTRY	FASHION COMMUNICATION	EXPORT DOCUMENTATION	TEXTILE ECONOMICS
D OTHERS	WORLD COSTUMES	FASHION RETAILING	HOME TEXTILES

**Supportive papers offered for other Department students:**

Subject Code	Title of the Paper	Instructional Hours/week	Internal	External	Total Marks	Total Credits
GS17	Fashion Concepts	2	12	38	50	2
GS88	Clothing Care	2	12	38	50	2
GS113	Sustainable Fashion	2	12	38	50	2

**Eligibility for Admission**

A pass in B.Sc – Costume Design and Fashion, Textiles and Apparel Design, Textiles and Fashion Design, Fashion Technology, Textile and Clothing, and any B.Sc degree related to Textiles or Fashion.

**Internship Training:**

All the students have to undergo summer training for period of minimum 15 days. Final reports have to be submitted which will be evaluated.

### **Industrial Visit**

Students have to undertake an Industrial / Institutional visit and have to submit report for evaluation.

### **Project work**

The report is the bonafide work carried out by the candidate under the guidance of a faculty authenticated and countersigned by the HOD. This project work must be presented and defended by the candidate in the Department attended by all faculties and reviewed by external examiner. Candidate who has presented the work as –Not qualified as per CBCS” must resubmit the project again in the ensuing academic year.

### **Question Paper Pattern:**

#### **1. PracticalComponents:**

The M.Sc Textiles and Apparel Design Core Practical Examination having the following Marks:

**Maximum Marks – 100**

**Internal Marks: 40**

Test – 10Marks

Model – 10Marks

Record - 20Marks

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Total = 40 Marks  
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**External Marks: 60 Marks**

#### **2. TheoryComponents:**

The M.Sc. Textiles and Apparel Design Core and Elective theory Examination having the following Marks:

**Core and Elective Papers:**

**Maximum Marks – 100**

**Internal Marks: 25**

Test -15 Marks; Assignment - 5 Marks; Seminar - 5 Marks

**External Marks: 75**

**Section A - 10x1=10 Marks (Question No. 1 to 10)**

Choose the correct Answer. Answer all questions. All questions carry equal marks.

**Section B – 5x5 = 25 Marks (Either or type – Question No. 11 to 15)**

Answer all questions. All question carry equal marks. Each answer should not exceed 2 pages.

**Section C – 5x8 = 40 Marks (Either or type – Question No. 16 to 20)**

Answer all questions. All Question carry equal marks. Each answer should not exceed 4 pages.

**Supportive Papers:**

**Maximum Marks – 50**

**Internal Marks: 12**

Test - 6 Marks; Assignment - 3 Marks; Seminar - 3 Marks

**External Marks: 38**

**Section A – 5x1=5 Marks (Question No. 1 to 5)**

Choose the correct Answer. Answer all questions. All questions carry equal marks.

**Section B – 3x3 = 9 Marks (Either or type – Question No. 6 to 8)**

Answer all questions. All Question carry equal marks. Each answer should not exceed 1 page. **Section C – 4x6 = 24 Marks (Either or type – Question No. 9 to 12)**

Answer all questions. All Question carry equal marks. Each answer should not exceed 2 pages.

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### Open Online Courses

This can be availed by the students at anytime during the course of study. The non- scholastic credit will be given along with the fourth semester marks

### List of Online Courses

S.NO	NAME OF THE COURSE	DURATION	AVAILABILITY
1.	Clothing and Textiles	5 Months	SWAYAM November 2016 to March 2017
2.	Fashion Design	2-3 hours per 7 week	COURSE ERA
3.	Who Made My Clothes?	5 weeks	Future Learn – University of Exeter
4.	Fashion and Sustainability: Understanding Luxury Fashion in a Changing World	6 weeks	Future Learn – London College of Fashion

Title of the Course: **PAPER –I:Research Methodology and Statistics** No. of Credits:**4**

Code No:**13A**

No. of Teaching hours:**4/Week**

### **Course Objectives:**

**CO1-** Learn and understand some basic concepts and methodologies of research and statistical analysis.

**CO 2-** Organize scientific investigation to solve problem, test hypotheses, develop or invent new products.

### **UNIT -I**

Meaning of Research - Types of Research - Significance of Research - Research Process. Defining the Research Problem - Sources, Identification, Selection and Statement, Review of related literature.

### **UNIT-II**

Research Design - Meaning, Types of research designs, Basic Principles of experimental designs. Developing a Research Plan related to Textile Industry.

Sampling and its Techniques, Steps in sampling design, criteria for selecting a sampling procedure, Characteristics of a good sample design, different types of sample designs.

### **UNIT - III**

Methods of Data collection - Observation, Questionnaire, Interview.

Data Processing- Collection, Classification, Tabulation, Graphical Representation and Data Analysis.

### **UNIT-IV**

Research Report – Format of research report, Main body of the report, References and appendices, Style of writing, Typing the Report, Pagination, Tables and Figures, Evaluating the report. Plagiarism check.

### **UNIT- V**

Meaning and scope of statistics, Role of Statistics in research Softwares used for statistical analysis. Measures of central tendency and dispersion. Correlation- Co-efficient of Correlation and its Interpretation, Rank Correlation, Regression equation, Application of Chi-Square test, ANOVA test. (No calculations; only theory).

### **Reference Books (to be specified in the required format)**

1. Research Methodology, C R Kothari, K K Gupta, Published by for NewAge International (P)Ltd, New Delhi,(2004)
2. An Introduction to Statistical Methods, S P Gupta, Vikas Publishing House, NewDelhi, (2009)
3. Introduction to Research in Education, Donald Ary, Lucy Cheser Jacobs , WadsworthPub Co, 8<sup>th</sup> edition (2009)



4. Research in Education, Best J N, Prentice Hall, Delhi (1979)
5. Statistical method- An introductory text, J. Medho, New age International publishers, New Delhi(2005)

**Course Outcomes:**

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

**CO1** - Know about Research design and concepts and Developing a Research Plan related to Textile Industry.

**CO 2-** Understand the Role of research Softwares in evaluation.

**Course prepared by:** Dr.S.GraceAnnapoorani

**Course Verified by:** Dr.K.Sangeetha

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Title of the Course: **PAPER –II:Advanced Textile Science** No. of Credits: **4**  
Code No: **13 B** No. of Teaching hours: **4/week**

**Course Objectives:**

**CO 1** - Study about natural fiber, artificial fiber. Characteristics and formation

**CO 2** – Conversion of Yarn to Fabric by Weaving and Knitting Methods

**CO 3** – Non Woven Manufacturing Techniques

**UNIT I FIBRE SCIENCE**

**Textile fibres classification: Natural fibres:** Classification of natural textile fibres - Essential and desirable properties of textile fibres - morphological structure, Chemical composition, properties and end uses.

**Artificial fibres:** History of development, Polymer, Introduction of polyester, nylon, polyolefin, viscose regenerated fibre - Concepts of regeneration of fibre - Raw material for synthetic fibres - Manufacturing sequence of Synthetic fibres.

**UNIT II YARN MANUFACTURE**

**Pre - Cleaning of Cotton:** Ginning - Mixing, types of mixing & blending, Blow room, Lap feed, Chute feed systems – Carding.

**Preparatory Process:** Drawing – Breaker, finisher – Comber preparatory – Sliver lap, ribbon lap, uni lap – simplex.

**Yarn manufacturing:** Spinning – count – twist – conversion – yarn – classification of yarn – fancy yarns – sewing threads

**UNIT III FABRIC MANUFACTURE**

**Weaving:** Looms - Sequence of material flow – Weave – Draft plan – Peg plan – Loom Types – Primary and Secondary motions – Shuttle looms – Shuttle less looms – Hand loom – Power loom– Projectile loom – Rapier loom – Airjet loom – Waterjet loom – Multiphase loom - Dobby, e- Dobby, Jacquard, e- Jacquard, application of fabrics.

#### **UNIT IV KNITTING**

**Knitting** - Elements of knitting machine - Technology of loop formation - Geometry of loop structure - Relation between yarn count, machine gauge and stitch density. Classification of knit-structures

**Warp Knitting** - Introduction - Classification of warp knitting – Netting – Types - Lacing – Classification of laces.

#### **UNIT V NON-WOVENS**

**Concept of Non Woven**- Application of non-woven fabrics – Fibre - Characteristics needed for the manufacture of non - woven - Manufacturing passage for the felt preparation - Web characteristics and their influence properties - Process variable and their effect on properties of non woven.

**Bonding: Various** system of bonding the web and their merits, chemical, thermal, adhesive, mechanical - Flocked fabric - Laminates - latest development in non-woven industry. **Others:** Braiding – Basic braid structures – Crocheting – Tatting- End uses.

#### **REFERENCES:**

1. Textile Science, E.P.G. Gohl and L.D. vilensky, 2nd Ed., CB, Publishers, NewDelhi.
2. Technology of spinning, W.D. Klein, Textile Institute,Manchester.
3. Principles of weaving, Mark and Robinson, Textile instituteManchester.
4. Textiles fiber to fabric, corbman B.P, International Edn,1983.
5. Mechanism of Weaving, N.N. Banner.J.IVol – I & II TextileInstitute.

#### **Course Outcomes:**

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

**CO 1** –Natural fiber and its Classifications in detail.

**CO 2** –Yarn manufacturing and various methods.

**CO 3** –Fabric manufacturing by Weaving, Knitting and Non Woven

**Course prepared by:** Dr.M.Sumithra

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **PAPER –III:Apparel Production Technology**No. of Credits:**4**  
Code No:**13 C** No. of Teaching hours:**4/week**

#### **Course Objectives:**

**CO 1** –Study about the overview of apparel manufacturing industry.

**CO 2**-Study about apparel production analysis and finishing.

**CO 3** –Study about apparel production planning and control.

#### **UNIT –I**

**Apparel Manufacturing Industry:** Nature and Scope - Types of apparel manufacture problems fundamentals of apparel production - Basic types of apparel production process – Major function of apparel manufacturing - Engineering functions, Management functions. Apparel trade association. Material flow in apparel industry.

## UNIT -II

**Apparel Production Analysis:** Introduction to Garment Cutting, Marker Planning, Efficiency of Marker Planning, Methods of Marker Planning and Marker Use, Spreading of the Fabric to form a lay, Spreading Requirements, Methods of Spreading, Fabric Packages, Objectives of Cutting, and Methods of Cutting.

**Seam & Stitch:** Introduction to Seam, Stitch, Stitch Classification, Stitch Structure, Seam Formation, Joining Material, Surface Characteristics, Seam Appearance, Damages (Thermal and Mechanical), Seam Performance, Seam Degradation, Seam Failure and Seam Testing. Sewing thread and selection of sewing thread for different fabrics.

## UNIT – III

**Apparel Finishing:** Importance of Garment pressing and finishing, Types of Garments, pressing of Garments and Specialty Garment Finishes.

**Packaging and ware housing:** Types of packing and packing materials, quality specification, merchandise packing and shipping packing. Intra transport, ware housing, computerized storage systems.

## UNIT – IV

**Production Control:** Definition, objectives of production control, co ordination of production control department with other departments in the manufacturing organizations. Pre production functions – product acceptance, steps from prototype to production model, order requirements. **Work study:** Definition, Purpose, Techniques of work study. Procedure of work study. Work study in textile and apparel industries. Time and motion study in apparel industry.

## UNIT -V

**Plant loading and capacity planning:** Determination of machinery requirements for a new factory, calculation of labour requirements, application of line balancing techniques – Balance control.

## REFERENCES

1. Apparel Manufacturing and Engineering by T.Karthick et al, Springer publications, Singapore.
2. Introduction to Garment Manufacturing Technology By TRamchandran
3. Apparel manufacturing Hand book, Jacob-Solinger, j Bobbin Blonnem, Media Corporation – Columbia,(1988)

## Course Outcomes:

On successful completion of the course, the students gain knowledge about

**CO 1** –The complete functioning of apparel manufacturing industry.

**CO 2** – Apparel production analysis and finishing.

**CO 3** –Apparel production planning and control.

**Course prepared by:** Ms.K.Amutha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Practical I:Innovative CAD Designing** No. of Credits: **3**  
Code No: **13 P** No. of Teaching hours: **5/week**

**OBJECTIVES:**

- To illustrate the various garment design using CAD.
  - To Work on individual projects as well as set practical and experimental exercise.
1. Fashion illustrations by hand for various seasons and occasions (men, women and children)
  2. Fashion illustrations using CAD for various seasons and occasions (men, women and children)
  3. Preparing the specification sheet using CAD for industrial production.

**Course prepared by:** Ms.M.Jayakumari

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Practical II:Advanced Draping** No. of Credits:**4**  
Code No:**13 Q** No. of Teaching hours:**5/week**

**OBJECTIVES:**

- To drape creative designs on the dressform.
  - To convert the draped design into garment.
  - Draping and Garment construction for men, women and children's wear with Design Variations (Kimono, Raglan Sleeve Designs, Princess Shapers, Collars, Cowls, Pleats, Flounces, Ruffles).
1. Preparation of fabric for Draping
  2. Draping
  3. Converting or Truing the Pattern
  4. Pattern Development
  5. Construction of Garment
  6. Fitting of final garment on dressform

**Course prepared by:** Ms.K.Amutha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **PAPER –IV :Advanced Wet Processing** No. of Credits: **4**  
Code No: **23 A** No. of Teaching hours: **4/week**

**Course Objectives:**

**CO 1-** Learn about the pre and post dyeing wet processing with recent developments.

**CO 2-** Learn about dyes and chemicals, printing and finishing

**CO3-** Learn about the Bio technology and Effluent Treatment plants

**UNIT-I**

**Preparatory Processing:** Introduction, Fibre – Composition - Typical Sequence of Processes - General Wet Processing Sequence for Cotton Goods - Pre-Dyeing preparatory Processing - Desizing Starch - Scouring – Bleaching – Mercerisation.

**Post Dyeing preparatory Processing:** Dyeing – printing – finishing - Synthetic fibres and Pretreatments - Process Sequence for Polyester / Cotton Blend.

### UNIT-II

**Dyes** – Classification of Dyes, Banned dyes - Dyeing Machines, Influence of Physical and Chemical Structure of Fibres on Dyeability - Types of Dyeing Machine, Jet, HT, Beam Dyeing Machine, Padding Mangle, and Jigger - Recent developments in dyeing.

**Printing:** Styles of Printing - Methods of Printing, Block, Flat, Rotary Screen, engraved Roller, Transfer, Duplex printing, Pigment Printing, Batik, Khadi - Fixation and After Treatment - Print Paste Formulation.

### UNIT-III

**Finishing:** Necessity for Finishing – Commercial importance of finishing - Mechanical finishes, heat setting, anti shrink, calendaring - Finishing chemicals – Resin finishing, Flame proof & flame retardancy, Soil Release Finish, Foam Finish, Water proof & Repellent - Micro encapsulation techniques in finishing process.

### UNIT-IV

**Bio - Technology in Textiles:** Enzymes & Proteins – Sources and Applications - Application of enzymes in Textile Chemical Processing - Mechanism of enzyme reactions – Bioscouring - Bio-bleaching, Combined bio - processing, bio washing, bio polishing, Denim fading, anti odour and anti microbial finishes, bio finishing and other applications - Evaluation of enzyme treated fabrics.

### UNIT – V

**Effluent Treatment Plants:** Detail study about characteristic of textile effluent Developments in membrane techniques in the effluent treatment - Energy conservation steps in chemical processing - Low wet pick-up techniques - Causes and remedies for water and air pollution – Bio-Technology in textile effluent treatment plants.

### REFERENCES:

1. Trotman, E.R.,—Dyeing and Chemical Technology of Textile Fibres, Charles Griffin & Co. Ltd., U.K., 1984.
2. R.S. Bhagwat, \_Wet Processing Machineries .Mahajan Publications, 2000
3. Shenai. V.A., -Technology of Dyeing, Sevak publications, Mumbai, 1995.
4. Miles. L.W.C., -Textile Printing, SDC, England, 1994, ISBN: 0901956570.
5. Manivasakam, N., -Treatment of Textile Processing Effluents, Sakthi Publication, Coimbatore, 1995
6. Dattye K. V and Vaidya. A.A., -Chemical Processing of Synthetic Fibres and Blends, John Wiley and Sons, New York, 1984
7. NCUTE – Programme series, Finishing of Garments and Knits, held at Ichalkaranchi, IIT, Delhi.

### Course Outcomes:

On successful completion of the course, the students will be able to understand about  
**CO 1-**Implement the pre and post dyeing wet processing in industry.

**CO 2-** Apply the types of dyes and chemicals, printing and finishing

**CO3-** Explore the techniques of Bio technology and Effluent Treatment plants

**Course prepared by:** Ms.M.Jayakumari

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **PAPER –V :Technical Textiles** No. of Credits:**4**  
Code No:**23 B** No. of Teaching hours:**4/week**

**Course Objectives:**

**CO 1** - Learn about fibers and methods used for the production of Technical Textiles.

**CO 2** –Learn in detail about the classifications of Technical Textiles.

**CO 3** –Learn about the application of the Technical Textiles.

**UNIT – I**

**Technical Textiles:** Definition, Applications, Globalisation and Future of Technical Textiles industry. **Technical Fibres:** High – Strength and high-modulus organic fibres, High chemical and combustion - resistant organic fibres, High performance inorganic fibres, Ultra-fine and noveltyfibres.

**UNIT –II**

**Medical Textiles:** Classification – fibres used, Non – Implantable, Implantable, Extra corporal devices, Health care/Hygiene Products

**UNIT -III**

**Agro Textiles** – - Introduction, fibers used Types, functions and properties, Characteristics and Applications in Agro products and in its field

**Build Tech:** - Introduction, fibers used Types, functions and properties, Characteristics and Applications in Architecture and in Building Construction.

**Geotextiles:** - Introduction, fibers used Types, functions and properties, Characteristics and Applications in its field.

**InduTech** - Introduction, fibers used Types, functions and properties, Characteristics and Applications - Theory of dust collection

**UNIT –IV**

**Protective Textiles:** Introduction, fibres used Types, functions and properties, Characteristics and Applications Fire Protective clothing, Heat – resistant garments, Water proof materials, Ballistic resistant Vests, Biological and chemical Vests, Military Protective clothing.

**Mobile Tech Textiles** - Introduction, fibres used Types, functions and properties, Characteristics and Applications of Mobile Tech, applications in all kinds of road transport vehicles, rail, and aircrafts.

**UNIT – V**

**Sports Textiles:** Introduction, fibres used, Types, functions and properties, Characteristics and Applications of Sports Tech.

**Smart and Intelligent Textiles** – 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 fields.

**REFERENCES:**

1. SabitAdanur, –Wellington Sears Handbook ofIndustrialTextilesCRCPress (1995)
2. Dr.S.GraceAnnapoorani “Agro Textiles and its Application”, Wood head publishing ltd, India (2018)
3. R SenthilKumar, –TextilesforIndustrial Applications| CRC Press(2013)
4. A. R. Horrocks and S. C. Anand, Hand book of Technical textiles, Wood head publishing ltd, England (2000)

**Course Outcomes:**

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

CO 1 –Know about textile fibers used for technical textiles

CO 2 – Understand the various applications of Technical Textiles.

CO 3 – Known about contribution of technical textiles in various fields.

**Course prepared by:** Dr.S.GraceAnnapoorani

**Course Verified by:** Dr.K.Sangeetha

Title of the Course:**PAPER –VI :Textile Testing**

No. of Credits:**4**

Code No:**23 C**

No. of Teaching hours:**4/week**

**Course Objectives:**

**CO 1** –Learn about the importance of textile testing and its role in quality control.

**CO 2** - Learn about the testing methods and instruments for testing of textiles.

**CO 3** –Learn about the national and international standards for textile testing.

**UNIT I**

Introduction to testing - Terminology of testing - Selection of samples for testing: fibre, yarn and fabric sampling. Standard RH and temperature for testing - Measurement of Moisture regain - Conditioning oven & Shirley Moisture meter.

**UNIT II**

**Fiber Testing:** Cotton fiber length - Baer Sorter, Fineness Sheffield micronaire, Maturity, Caustic Soda swelling, Strength - Pressley bundle strength tester, Stelometer. HVI, AFIS, Cottonscope. Determination of trash and lint in cotton - Shirley trash analyzer.

**Unit III**

**Yarn Testing:** Yarn numbering system - Conversion of count from one system to another - Instruments for count determination - quadrant balance, Beesley balance. Yarn strength testing - Principles of CRT, CRL, CRE – Single yarn strength tester, Lea strength tester. Yarn twist – direction of twist, twist multipliers, twist testers - tension type. Yarn Evenness - Classification of variation, methods of measuring evenness, Uster evenness tester- UT 6, UT J, UsterZweigle.

Yarn faults classification- UsterClassimat. Yarn hairiness – S3 value and crimp testing.

#### **UNIT IV**

**Fabric Testing:** Fabric Particulars – Length, width, crimp, weight, cover factor. Fabric Strength - Fabric tensile strength tester, tearing strength tester, hydraulic bursting strength tester. Fabric Abrasion - Martindale abrasion tester. Fabric Pilling - I C I Pill box tester. Fabric drape – Measurement by Drape meter. Fabric Stiffness - Shirley stiffness tester. Fabric crease resistance and crease recovery - Measurement of crease recovery. Fabric permeability - Shirley air permeability tester, fabric permeability to water, Bundesmann tester, OMMC test.

#### **UNIT V**

**Garment Testing:** Seam strength, Dimensional Stability, Spirality, Peel bond strength. Accessories Testing: Zipper, Buttons, Sewing thread.

**Colour Fastness of Textiles** - Crocking test, perspiration test, sunlight, laundering, drycleaning, Computer Colour Matching – Colour measurement and Whiteness Index.

#### **REFERENCES:**

1. Textile Testing, Angappan P and Gopalakrishnan R, SSM Institute of textile technology, KomaraPalayam
2. A Practical Guide to Textile Testing, Amutha.K, Woodhead Publishing India Pvt.Ltd., New Delhi(2016)
3. Principles of Textile Testing, Booth J E, Hoybooks, London(1970)
4. Technology of Textile Properties, Marjorie A Taylor, Forbes publications Ltd,London (1972).
5. Fiber Science, Mishra S. P. and Kesavan B. K., SSM Institute of textile technology, KomaraPalayam.
6. Objective Evaluation of Fabrics, Stylos G, John, Wiley & Sons USA

#### **Course Outcomes:**

On successful completion of the course, the students gain knowledge about the

**CO 1** –Importance of textile testing and its role in quality control.

**CO 2**-Testing methods and instruments for testing of textiles.

**CO 3** –National and international standards for textile testing.

**Course prepared by:** Ms.K.Amutha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **PRACTICAL III:Textile Testing** No. of Credits:**4**  
Code No:**23 P** No. of Teaching hours:**4/week**

#### **OBJECTIVES:**

- To test the quality parameters of the textiles using suitable instruments.
- To evaluate the quality based on the test results.
- To gain practical experience about the quality of textiles.

1. Determination of Yarn Count, lea strength and CSP



2. Determination of Single Yarn Strength
3. Determination of Twist of the given yarn
4. Determination of Fabric parameters- EPI, PPI, Thickness, GSM
5. Determination of Stiffness of the given fabric
6. Determination of Abrasion Resistance of the given fabric
7. Determination of Crease Recovery of the given fabric
8. Determination of Drape of the given fabric
9. Determination of Pilling of the given fabric
10. Determination of Tensile Strength of the given fabric
11. Determination of Tear Strength of the given fabric
12. Determination of Bursting Strength of the given fabric
13. Determination of Colour Fastness to Washing and Crocking of the given fabric
14. Determination of Colour Fastness to Perspiration of the given fabric
15. Determination of Dimensional Stability & Spirality of the given fabric

**Course prepared by:** Ms.K.Amutha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **PRACTICAL IV: Advanced Garment Construction**

No. of Credits: **4**

Code No: **23 Q**

No. of Teaching hours: **5/week**

**OBJECTIVES:**

- To Study about various garment construction
  - To learn about industry machine adjustment
1. **MACHINE ADJUSTMENTS:** Single Needle Lock Stitch Machine (SNLS) – Select fabrics of different construction and modify the stitches per inch and study the effects.
  2. **SPECIALIZED WORK WEAR:** Design and construct uniform clothing for people like Policemen / Army / Navy / Doctors / Industry Workers.
  3. **INNER WEAR:** Design and construct innerwear for men / women / children.
  4. **NEED BASED GARMENT:** Design and construct garment for Special people / Bed ridden patients.
  5. **GARMENT ACCESSORY MAKING:** Design and Construct Gloves / Cap / Socks / Veils / Belt / Bow / Tie / Bags.

**Course prepared by:** Dr.M.Sumithra

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **PAPER –VII: Apparel Quality Standards and Implementation**

No. of Credits: **4**

Code No: **33 A**

No. of Teaching hours: **4/week**

**Course Objectives:**

- CO 1** – Study about national and international standards pertaining to textile industry.
- CO 2** – Study about Eco standards pertaining to fabric and apparel.
- CO 3** – Study about quality management of apparel industry.

### **UNIT I**

Introduction to quality standards, importance, benefits, levels and sources of quality standards, British standards & ISO Standards for the Apparel Industry, ISO 9000 & 14000 standards, Eco Labeling & OKO Tex 100 standards, Made in Green, STeP, GOTS standards, ANSI standards, Textile Exchange standards, Cradle to Cradle certified standards.

### **UNIT II**

Sensitizing dye stuffs, allergic dyes, carcinogenic amines, red-listed as per Eco specifications, Eco management of textile and apparel industry, Global Scenario, Eco mark & Environment friendly textiles.

### **UNIT III**

Dry cleaning using ozone. Depleting chemicals, pH value, formaldehyde content, heavy metal content, Pesticides and herbicides, azo dye stuffs, Nickel, Pentachlorol phenols, colour fastness, brighteners, softening agents.

### **UNIT IV**

Garment defects - cutting defects, sewing defects, assembly defects, pressing, finishing and packaging defects.

Quality costs/ Cost of Quality (CoQ) and customer returns; inspection procedures -raw materials, in process, and final inspection. Quality control in final Inspection - AQL

### **UNIT V**

Total Quality Management (TQM): Implementation of TQM- Starting a quality control program, implementation of quality systems in production line, product specifications and analysis using analytical tools. Quality management through Inspection, testing and qualitytools.

### **REFERENCES:**

1. Managing quality in apparel industry, Pradeep V Mehta, NIFT Publications(1985)
2. An Introduction to quality control for the apparel industry, Mehta P V, MarcelDekker(1982)
3. Physical testing and quality control, Vo123, No. 1/2/3 textile Institute(1993)
4. Textile Testing, John Skinkle, Brooklyn Publication, New York (1947)
5. Textile Testing, P. Angappan&Gopala Krishnan, J.K.Publications
6. Sustainability in the Textile Industry- Chapter 5 Standards and Certificates, K.Amutha, Springer Publication, 2017.

### **Course Outcomes:**

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

**CO 1** – National and international standards pertaining to textile industry.

**CO 2** - Eco standards pertaining to fabric and apparel.

**CO 3** – Quality management of apparel industry.

**Course prepared by:** Ms.K.Amutha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **PAPER –VIII :Clothing Appearance and Fit** No. of Credits: **4**  
Code No: **33 B** No. of Teaching hours: **4/week**

**Course Objectives:**

**CO1:** Learn about perceptions of body appearance and its relations to clothing,

**CO2:** Understand the Assessment of clothing appearance and fit, 3D Body scanning, Sizing systems.

**CO3:** Recognize the need and the ability to understand cosmetic textiles.

**UNIT I**

**Perception of body appearance and its relation to clothing** – Introduction – Beauty - Facial attractiveness, body physical attractiveness, body image, modification of body appearance by dressing, fabric properties related to clothing appearance & fit.

**UNIT II**

**Assessment of Clothing Appearance** – Introduction - Assessment of fabric surface smoothness, seam appearance, crease retention, appearance retention of finished garments, and reliability of subjective assessment. Objective evaluation of fabric wrinkling, fabric pilling, seam pucker, overall garment appearance.

**UNIT III**

**Assessment of Clothing Fit** - Definition of fit - Influences on clothing fit, testing methods for dimensional fit, subject rating scales, subjective fitting guide. **3-d Body Scanning** – Introduction - global development of body scanners, principles and operations of body scanning technologies, bench marking. Challenges of 3D body scanning. Garment drape - measurement of fabric drape

**UNIT IV PERSONAL APPEARANCE AND GROOMING**

Cosmetic Textile-Development of cosmetic textiles using microencapsulation technology-air suspension coating-pan coating-emulsion hardening process-cosmetic textile products-advantages and disadvantages.

**UNIT V**

Human Anthropometrics and Sizing Systems- Terms and definitions - Traditional anthropometry, Historical development of sizing system, Latest national size survey using 3-D body scanner, international sizing, principles of sizing systems. Three-dimensional (3-D) apparel design systems for pattern generation and garment fit, virtual fitting on the internet.

**REFERENCES:**

1. Clothing appearance and fit: science and technology, J. Fan, W. Yu and L.Hunter.
2. Form and Fit, JayCalderin.
3. The complete photo guide to perfect fitting, SarahVeblen.
4. Digital Human Modelling, Vincent GDuffy.
5. Anthropometry, Apparel Sizing and Design, Deepti Gupta, NorsaadahZakaria.

**Course Outcomes:**

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

**CO1:** Perceptions of body appearance and its relations to clothing,

**CO2:** The concepts of assessment of clothing appearance and fit, 3D Body scanning, Sizing systems.

**CO3:** The principles of cosmetic textiles in textile industry.

**Course prepared by:** Ms.M.Jayakumari

**Course Verified by:** Dr.K.Sangeetha

Title of the Course:**PAPER –IX :Eco Textiles and Sustainability** No. of Credits:**4**

Code No:**33 C**

No. of Teaching hours:**4/week**

**Course Objectives:**

**CO 1** – Understand about Eco textiles and its importance.

**CO 2-** Explain the types of Ecology and structure of Eco system.

**CO 3** – Gain knowledge about natural fibers, dyes and finishes.

**CO 4-** Learn about Eco testing and eco standards.

**UNIT I**

**Eco-Textiles** - Introduction & needs for eco-textiles & its importance. Ecology - Production ecology, Human ecology & Disposal ecology. Structure and stability of the ecosystem. German ban on toxic dyes, chemicals and auxiliaries. Eco-Auditing and Eco-labelling, Eco mark on textiles.

**UNIT II**

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

**UNIT III**

**Natural Dyes-** History, importance. Types of Natural dyes- plant, animals and minerals- madder, indigo, catechu, myrobalan, pomegranate, lac, alum, Extraction methods & application methods, pre, meta and post mordanting. Characteristics of natural dyed fabrics. Commercially available natural dyes, recent development in Natural dyes.

**UNIT IV**

**Natural Finishes** - Need for natural finishes. Traditional plants & herbs used in natural finishing. Various plant Components, extraction methods and application. Recent natural finishes on textiles for various applications.

**UNIT V**

**Eco - Textiles Testing, Standards and Sustainability-** Processes adopted for eco-friendliness: Enzyme technology, Foam technology, Super critical carbon-di-oxide dyeing & Plasma technology- Glow-discharge method, Corona discharge method & Dielectric barrier discharge method. Toxicology of textile dyes. Eco testing instruments-working of Gas Chromatography, Mass Spectrometry, High Performance Liquid Chromatography, Atomic Absorption Spectrometry/Atomic Emission Spectrometry and Plasma Emission Spectrometry. Eco Standards for Textile.

**REFERENCES:**

1. Keith Slater, -Environmental Impact of Textiles, Wood head Pub. Ltd, Cambridge, 2003. ISBN:1-85573-541-5
2. ChristieR.M., -Environmental Aspects of Textile Dyeing, WoodheadPub.Ltd, Cambridge, 2007.ISBN:978-1-84569-115-8

3. MirafatabM.AndHorrocks R., -Eco Textilesl, Wood head Pub.Ltd,Cambridge, 2007.ISBN-13:9781-84569-214-8
4. Eco-Textiles\_98, Bolton Institute, Bolton,1998.
5. Eco-Textiles, Special Report, The Bombay Textile Research Association, Mumbai,February, 1996.
6. Eco Friendly Textiles: Challenges to the Textile Industry, Textiles Committee, Mumbai,1996.
7. Oeko-tex Standard 100, International Association for Research and Testing in thefield of Textile Ecology(Oeko-tex), Zurich, Switzerland, January,1997.
8. BIO-textiles as medical implants, M W King, B S Gupta, R Guidoin.
9. The Applications of Biotextiles in Tissue Engineering Ruwan Sumanasinghe1 and MartinW. King1
10. BlackburnR.S.,—BiodegradableandSustainableFibresl,WoodheadPub.Ltd,Cambridge, 2005.ISBN:0-84933-484-5.

**Course Outcomes:**

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

**CO 1** –Understand theimportance of Ecology and Structure of Eco system

**CO 2** - Apply various technique toextract the natural fibres for making eco textiles.

**CO 3** – Extract and apply natural dyes and finishes for eco textiles.

**CO 4** -Gain knowledge on Eco testing and Eco standards.

**Course prepared by:** Dr.K.Sangeetha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **PRACTICAL V:Surface Enrichment on Textiles** No. of Credits: **4**  
Code No: **33 P** No. of Teaching hours: **5/week**

**OBJECTIVES:**

- To design products for printing, painting, dyeing, texture, smocking, ribbon work etc.
  1. Printing – a) Screen, Block, b) Spray,Stencil
  2. FabricPainting
  3. Dyeing - resist & discharge - a) Tie & dye b)batik.
  4. Texture printing by combining any three different types ofttextures.
  5. Smocking with differenttechniques
  6. Designing and making of any three traditionalembroideries
  7. Ribbon work on textiles
  8. Collection of samples for traditional Textiles – Bandhani, Patola, Ikat, Pocchampalli.
  9. Adaptation of traditional designs from craft items and modifying as per moderntrends.
  10. Collage work for textiledesigns

**Course prepared by:** Dr.M.Sumithra

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **:PRACTICAL VI:Portfolio Presentation`** No. of Credits: **4**  
Code No:**33 Q** No. of Teaching hours:**5/week**

**OBJECTIVES:**

- To develop portfolio with sketches, Concept, Mood Boards.

**Portfolio Presentation for any 5 Theme with the following components**

1. Designerprofile
2. Customerprofile
3. Themeboard
4. Inspiration board
5. Mood board
6. Colourboard
7. Fabric board
8. Flatpresentation
9. Design developmentboard
10. Accessoryboard
11. Photographicboard

**Course prepared by:** Dr.S.GraceAnnapoorani

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **PRACTICAL VII: CAD in Textile Designing** No. of Credits: **4**  
Code No: **43 P** No. of Teaching hours: **6/week**

**OBJECTIVES:**

- To learn about doobby, Jac draw, Jac weave, print tex, 3D studios softwares.
  - To Work on individual projects as well as set practical and experimental exercise.
1. Pattern layout and marker efficiency using specificationsheet
  2. Designing fabricsfor Plain Weave, Rib, Twill Weave, Satin, Sateen, Dobby and JacquardWeave

**Course prepared by:** Ms.M.Jayakumari

**Course Verified by:** Dr.K.Sangeetha

Title of the Course:**Supportive paper:Fashion Concepts**

No. of Credits: **2**

Code No: **GS17**

No. of Teaching hours: **2/week**

**Course Objectives:**

**CO 1-** Understand and adapt the ethics of fashion

**CO 2-** Design and apply the fashion techniques

**CO 3-** Understand the colour harmony in fashion design

**UNIT -1**

Definition –Fashion, style, fashion and classic. Color chart-Prang colour chart, Value chart and Intensity chart

**UNIT-2**

Illustrate garment designs for the Elements of Design –Line, Colour, Texture, Shape or Form and Size

**UNIT-3**

Illustrate garment designs for the Principles of Design - Balance in dress, Harmony in dress, Emphasis in dress, Proportion in dress and Rhythm in dress

**UNIT-4**

Illustrate the Colour Harmony in Dress Design -Monochromatic colour harmony, Analogous colour harmony, Complimentary colour harmony, Double Complimentary colour harmony, Split Complimentary colour harmony and Triad colour harmony

**UNIT-5**

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.

**Reference Books (to be specified in the required format)**

1. Elements of Fashion and Apparel Design By, G. J. Sumathi, New Age International, 2007
2. Art in everyday life by-harriet Goldstein,2007,Macmillan,
3. Fashion design, the art of style by Jen Jones, Capstone,2007

**Course Outcomes:**

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

**CO 1-** Adapt and exhibit the ethics of fashion

**CO 2-** Apply the fashion and designing techniques

**CO 3-** Manifest the colour harmony in fashion design

**Course prepared by:** Ms.M.Jayakumari

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Supportive paper :Clothing Care** No. of Credits: **2**  
Code No: **GS88** No. of Teaching hours: **2/week**

**Course Objectives:**

**CO 1** –Learn about classification of Textile Fibers and their characteristics.

**CO 2-** Different types of washing care for the various materials.

**CO 3-** Requirement for the care labeling.

**UNIT I**

**Textile Fibres:** Introduction, Classification, General care of different fibres – Cotton, linen, wool, silk, nylon, polyester, acrylics, rayon, acetate.

**UNIT II**

**Wardrobe** - Definition and wardrobe planning. **ClothingSelection-** Factors to be considered for clothingselection.

**UNIT III**

**Laundering:** Water, detergents, laundry equipments – Household and commercial, laundry procedure for various fibre fabrics – Cotton and linen, woollens, silk and synthetics.

**Dry Cleaning:** Definition, dry-cleaning operations and materials.

**UNIT IV**

**Stain Removal:** Identification and classification of stains, general procedures of stain removal, principles of stain removal, classification of stain removers.

**UNIT V**

**Care Labels:** Various systems of care labelling, washing, bleaching, drying, ironing, and dry-cleaning instructions. Placement of labels on garments.

**Reference Books (to be specified in the required format)**

1. **Clothing Care Manual**, Isabel MakwaraMupfumira, NyaradzoJinga, Strategic Book Publishing Rights Agency,2014
2. **Fabric Care**, D. Noemia Souza, New Age International,1998

**Course Outcomes:**

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

**CO 1** –Knowabout Textile Fibers and their characteristics.

**CO 2-**Understand about stain removal and its techniques

**CO 3-**Know about care Labeling and its uses

**Course prepared by:** Dr.M.Sumithra

**Course Verified by:** Dr.K.Sangeetha



Title of the Course: **Supportive paper:SustainableFashion** No. of Credits: **2**  
Code No: **GS113** No. of Teaching hours: **2/week**

**Course Objectives:**

**CO 1** –Learn about sustainability of Fashion industry.

**CO 2**-Learn about ethical fashion.

**CO 3**-Learn about Eco textiles and Eco friendly fashion labels.

**UNIT I**

Introduction: Fashion, Sustainability, Pillars of sustainability, Sustainable fashion – meaning and importance.

**UNIT II**

Clothing lifecycle, clothing care, fast and slow fashion, clothes repair and re-use.

**UNIT III**

Ethical fashion: concepts of recycling and upcycling. Carbon footprint, water footprint and energy consumption of fashion industry.

**UNIT IV**

Eco-textiles, green consumerism and waste reduction, consumer responsibility towards sustainable fashion.

**UNIT V**

Sustainable fashion designers, sustainable fashion brands, Eco-friendly fashion labels.

**Reference Books**

1. Black, S. (2013). Sustainable Fashion Handbook, London, Thames andHudson.
2. Brown, S. (2013). Re-Fashioned- Cutting Edge Clothing from UpcycledMaterials, London, LawrenceKingPublishing.
3. Fletcher, K. (2012). Fashion and Sustainability- Design for Change, London, Lawrence KingPublishing.
4. Yamase, K. (2012). Cut up Couture- Edgy Upcycled Garments to Sew, U.S.A. Interweave.
5. Fletcher, K. (2008). Sustainable Fashion and Textiles- A Design Journey, London, Lawrence KingPublishing.
6. Phillips, J. (2013). Sustainable Luxe- A Guide to Feel Good Fashion, London, Create SpacePublishing.

**Course Outcomes:**

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

**CO 1** –Sustainability of Fashion industry.

**CO 2**-Ethical fashion.

**CO 3**-Ecotextiles and Eco friendly fashion labels.

**Course prepared by:** Ms.K.Amutha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Elective I :Fashion Concepts and Designing** No. of Credits: **4**  
Code No: **1EA** No. of Teaching hours: **4/week**

**Course Objectives:**

**CO1:** Apply knowledge of designs effectively

**CO2:** Implement the learned concepts as a designer

**CO3:** Study about the colouring & texture for fashionable design.

**UNIT - I**

Elements Of Design: - Basic Elements - Designing of costumes using elements of design - line, dot, curves, texture, shine, rough, silhouettes, color - Define Application of Principles: Balance, rhythm, harmony, repetition, grading, unity, symmetry.

**UNIT - II**

Colour Theory:- Color Theory: Color wheel - primary, secondary, transparency - Techniques of color mixing - Color Contrast and Attributes: interaction, harmony, psychology, mood, culture and expression - Composition: Color, space, movement, balance, asymmetry, rhythm, shapes, proportion - Aspects / temperature of color-warm cool, hot, cold, dark, pale and bright - Application of Principles in garment Designing for latest trends - Dimensions of color- hue, Intensity, value, chroma - Basic color schemes- achromatic, analogues, monochromatic, complimentary, and neutral - Rendering techniques.

**UNIT - III**

Textures and Design: - Personal appearance and fit - Textures-types of textures - Textural effects, using textures in designs – Color and texture of the fabric. Design feature, Personal appearance and fit for different figure types.

**UNIT – IV**

An overview on Indian and global Fashion designers

Understanding Fashion designer – types – classicist, idealist, influenced, realist and thinking poet. Indian Fashion designers– Haute couture – Manish Malhotra, Wendell Rodricks, AbuJani and Sandeep Khosla, TarunTahiliani, JJ Valaya, Rina Dhaka, Manish Arora , RohitBal, RituBeri, Ritu Kumar , Omi Gurung, Shilpa Reddy, VikramPhadnis, Neeta Lulla, Erum Ali, Payal Jain.

Global Fashion designers - France, Italy, America, Britain, Fareast- Contributions of well known designers from France-Agnes,SophieAlbou Italy- Pierre Cardin, Roberto Cavalli America - AdamsAdrian,JosephAbboud. Britain -Basso & Brooke and Fareast Countries - Sandy Powell, ValentinoGaravani.

**UNIT – V**

To develop wardrobe collection for different seasons and design costumes for different themes.

**Reference Books (to be specified in the required format)**

1. Fashion DesignByJaniceG.Ellinwood.
2. Fashion RenderingwithColorlByBinaAbling.
3. Fashion Color Harmonyl ByHibeaki, PublisherRockford.

4. The Art of Costume and Personal Appearance By Grace Margaret Morton.
5. Individuality in Clothing Selection and Personal Appearance Hardcover – Import, 11 Jun 1999 by Suzanne Marshall , Hazel Jackson, M. Sue Stanley Ph.D. , Mary Kefgen, Phyllis Touchie-Specht Fashion – From concept to consumer – Gini Stephens Frings , 6th edition, prentice Hall(1999).

**Course Outcomes:**

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

**CO1:** Apply design concepts and techniques effectively

**CO2:** Implement the design concepts in dress designing

**CO3:** Explore the colouring & texture for designing.

**Course prepared by:** Ms.M.Jayakumari

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Elective I :Apparel Marketing and Merchandising** No. of Credits: **4**  
Code No:**1EB** No. of Teaching hours: **4/week**

**Course Objectives:**

**CO 1** - Learn about Buying Behavior and Marketing Techniques

**CO 2**- Difference between Marketing and Merchandising

**CO 3** – Learn about Market Research and Garment Costing

**UNIT I**

Marketing- Marketing Concepts, Marketing Management, Marketing System, Marketing environment, Marketing Organisation, Strategic Marketing Process, Competitive marketing strategy - Marketing of Apparel and Fashion Products.

**UNIT II**

**Buying Behaviour**- Factors influencing buying behaviour - Buying process segmentation: Market segmentation - Segmentation Variables - Target Marketing market measurement- Market Potential - Estimation - Demand Forecasting - Methods of forecasting.

**UNIT III**

**Marketing Mix** - Product, Price - Promotion and Distribution - Advertising and Sales Promotion – Public Relations - Case study.

**Product Life Cycle** - Life cycle of product - Marketing strategy for various stages of life cycle - New product development - Case study.

**Marketing Research:** Purpose, Procedure and Applications - Theories in Market Research – Trickle - up, Trickle – down and other theories - Case Study.

**UNIT IV**

**Merchandising** - Merchandise – definition - Apparel and Fashion Merchandising - Role of Merchandiser – Types of Merchandises - Export House, Manufacturer, Buying House, Buying Agency and Comparison between them - Selection of Buyers and Buying Agencies - Merchandising Correspondence - Orders, handling of orders and dealing with manufacturers - Advertising - Trade fair participation and other methods of sales promotion in merchandising.

## UNIT V

**Garment Costing** – Introduction - Terms and purposes, Cost terminology, direct and indirect costs, Cost behavior patterns: variable costs & fixed costs, total costs and unit costs - pricing decisions and cost management, target costs. Process optimization, quality improvement and cost reduction techniques — Methodology for spinning, weaving, knitting, chemical processing, garment making - Case Studies. Export Cost - Basic T-shirt, Ladies night wear, Pyjama, striped T-shirts, etc.

### Reference Books (to be specified in the required format)

1. Philip Kotler, *Marketing Management*, PrenticeHall Inc 1996
2. Taarno, Guerreiro&Judelle–*Inside the fashion business* 1995
3. *Clothing Retailing in Europe*, Corporate intelligence on retailing, 1997
4. *The Textile Industry, Winning strategies for the new millennium* volume 2, Textile Institute., 1999.
5. Evelyn C. Moose, *Wey II.–Path For Merchandising* 1999. Jarnow.J&Dickerson.K.G,
6. *Inside the Fashion Business*, PrenticeHall, 1997.

### Course Outcomes:

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

**CO 1** –About textile marketing and their Strategies

**CO 2**- About merchandising and Market research in Textile industry

**CO 3** – About Garment costing

**Course prepared by:** Dr.M.Sumithra

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Elective I :Fashion Communication** No. of Credits: **4**  
Code No:**1EC** No. of Teaching hours: **4/week**

### Course Objectives:

**CO1** - Develop skills to communicate fashion

**CO2** –Obtain ability to design their own concepts

**CO3** - Ability to present the visual communication

## UNIT – I

**Fashion and the communication process:** What is Fashion? The Theories of fashion adoption need for promotion of fashion, need for the communication process, communication through different media.

## UNIT –II

**Written Communication:** Fashion writing, creative writing reporting features, editing and printing techniques, image management and advertising, public relations, press laws and media ethics.

## UNIT – III

**Visual Communication:** Fashion photography, windowdisplayand multimedia – audio, still images, animation, video footage and interactivity.

#### **UNIT – IV**

**Communication:** Communication in practice,Scripting shows, conducting interviews, reporting events, fashion critics, planning PR campaigns, formulating case studies, designing catalogues and brochures.Visualization of décor and ambience, preparing short films/audiovisuals, choreography of fashionevent.

#### **UNIT – V**

Designing of own fashion magazines/ Designing of own fashion brochures by the students/ designing a look book/designing a line planning.

#### **Reference Books (to be specified in the required format)**

1. Farbey, A.D.: How to Produce Successful Advertising, Kogan Page India Pvt.Ltd.
2. Jethwaney, J.N. (1999): Advertising, Phoenix Publishing House Pvt.Ltd.
3. Roundy, N. and Mair, D. (1985): Strategies for Technical Communication, Little Brownand Company, Boston,Toranto.

#### **Course Outcomes:**

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

**CO1** - Implement developed skills to communicate fashion.

**CO2** –Design based on their own concepts

**CO3** -Implement the techniques of visual communication

**Course prepared by:** Ms.M.Jayakumari

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Elective I :World Costumes**

No. of Credits: **4**

Code No:**1ED**

No. of Teaching hours: **4/week**

#### **Course Objectives:**

**CO 1**- Learn about world costumes in detail for American, European and Far Eastern Countries

**CO 2** –Learn about the dyed and Printed Textiles of India

**CO 3** - Learn about the Traditional Costumes of India

#### **UNIT I**

America -Inuits and Aleuts, American Indians of the southwest, American Indians of Plains and northwest, Amish costumes, Guatemala, Mexico, Colombia, Peru and Bolivia, Chile and Brazil.

#### **UNIT II**

European countries - Egypt, Greece, Roman, Norway, Sweden, Denmark, Scotland, Austria, Switzerland, Hungary, Poland, Ukraine

#### **UNIT III**

Far Eastern Countries - Mongolia, China, Japan, North and South Korea, Sri Lanka, Pakistan,

Burma, Thailand, Philippines, Africa- Costumes of North, East, West and South, Middle East Countries Turkey and Iran, Costumes of Arab Peninsula.

#### **UNIT IV**

Study of dyed and printed textiles of India – Bhandhini, Patola, Ikkat, Kalamkari. Study of women textiles – Banarasi muslin, Banarasi, Silk sarees of Kanchipuram, Kashmir shawls.

#### **UNIT V**

Traditional Costumes of India

South India - Tamil Nadu, Kerala, Andhra Pradesh, Karnataka, West India - Maharashtra, Gujarat, Madhyapradesh, East India - Orrisa, Bihar, Mizoram, Tirupura, Nagaland, West Beengal, , Assam, Sikkim.

North India - Rajasthan, Haryana, Punjab, Himachal Pradesh, Uttarpradesh, Jammu and Kashmir.

#### **Reference Books**

1. Costumes of Indian and Pakistan, Das S N, D B TaraporevaIa Sons & Co, Bombay(1958)
2. Historic Costume, Chas A, 'Bernard and Co, illinois (1961)
3. Costume through the Ages, Laver, JamesSimon and Schuster, New York(1968).
4. Costumes throughout the Ages, Eoan C C, J BLimancott
5. The History of Costume; Kemper, RachelH
6. Indian Costume –G.H Ghosrye, Popular books PvtLtd
7. The costumes and textiles and India – Jamila BrijBhushan, D B Taraporevala Sons &Co, Bombay(1958)
8. Costumes of India –DorrisFlynn, Oxford &IBH Publishing Co,Delhi(1971).

#### **Course Outcomes:**

On successful completion of the course, the students will be able understand about

**CO 1-** Costumes of various countries

**CO 2** –The traditional method of dyeing and printing the fabrics

**CO 3** - The Traditional Costumes of India

**Course prepared by:** Dr.S.GraceAnnapoorani

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Elective II:Social and Psychological Aspects of Clothing**

No. of Credits: **4**

Code No: **2EA**

No. of Teaching hours: **4/week**

#### **Course Objectives:**

**CO 1** – Learn about the origin of clothing.

**CO 2-** Study the clothing comfort and factors.

**CO 3** – Gain knowledge on garment fit and comfort.

#### **UNIT – I**

Origin of Clothing - Theories of clothing – theory of modesty, immodesty, protections, adornment, combined need theory, other theories in fashion - Relation between clothing and

other disciplines - (a) Physical Health- (b) Mental Health - Clothing and first impressions

### **UNIT – II**

Psycho- physiological factors of clothing comfort - Psychophysics and clothing comfort - Wear trial techniques - Psychological aspects of aesthetic comfort.

### **UNIT – III**

Thermal transmission – Introduction - Thermo- regulations in human body - Thermal distress - Thermoregulation through clothing system - Thermal comfort of clothing - Transient heat flow and warm- cool touch of fabrics - Measurement of thermal transmission characteristics - Parameters for expressing thermal characteristics - Thermal transmission characteristics of fabrics

### **UNIT - IV**

Relation between clothing and the wearer - Personality and self concept - Motivation in clothing choices - Individual values, interests and attitudes related to clothing - Behavior and clothing choices, practices and effect and clothing on the individual - Clothing and Society - Clothing and social behavior - Clothing influenced by religion and culture - Clothes and conformity - Clothes and occupation - Uniforms in schools and college - Clothes and colour and impact of colour.

### **UNIT – V**

Garment fit and comfort - Introduction - Body dimensions and pattern - Garment fit and comfort relationship - Factors related to garment fit - Measurement of garment fit

### **Reference Books**

1. Avis, M. Dry (1961): The Psychology of Jung, Methuen &Co.,London.
2. Horn, Marilyu J. (1968): The Second Skin, Houghton MifflinCo.,USA.
3. Flugel, J.C. (1950): The psycho – analytical study of the family, The Hogarth Press &The Institute of Psycho Analysis, London.
4. Richard Wollheim (1985):Frend, Fontana Press,London.
5. Apurba Das and R. Alagirusamy (2010): Science in Clothing Comfort.

### **Course Outcomes:**

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

**CO 1** – Learn about the origin of clothing.

**CO 2**-Design garments with clothing comfort factors for various purposes.

**CO 3** -Design garments with suitable and appealing fit.

**Course prepared by:** Dr.K.Sangeetha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Elective II :Visual Merchandising** No. of Credits: **4**  
Code No: **2EB** No. of Teaching hours: **4/week**

**Course Objectives:**

**CO 1** – Learn about the techniques followed in display settings

**CO 2**- Study the planning of merchandising

**CO 3** – Gain knowledge about display techniques

**UNIT I**

**Introduction** – Why do we display?, Color and Texture, Line and Composition light and Lighting.

**UNIT II**

**Visual merchandising and planning** – Visual Merchandising and Planning, Setting up a display shop, Store planning and design, Visual merchandising and the changing face of Retail.

**UNIT – III**

**Display and Display Settings** - Types of display, one – item, line of goods, related merchandise, assortment, promotional vs. institutional; Type of display settings - Realistic, environmental, semi-realistic, fantasy, abstract. Store and window settings - Exterior of the store, signs, marquees, outdoor lightning, banners, planters, awning; Window in store front - The angled front, the arcade front, the corner, display, closed back, open-back, island, shadow boxes, elevated, deep, tail. Music & Lighting - Selection of music. Advantages & disadvantages of using music, understanding lighting patterns. Role of lighting in visual merchandising, Colours and types of lightings.

**UNIT IV**

**Mannequin** - Types of mannequins - realistic, semi realistic, abstract, semi abstract, headless; dressing up of mannequin. Alternatives to the mannequin, Dressing the three dimensional form. **Fixtures:** Fixtures, Visual merchandising dressing fixtures, Modular fixtures and system in store planning. Furniture as Props

**UNIT V**

**Visual Merchandising and Display Technique** – Attention – Getting devices, Familiar symbols, Mashing and Proscenia sale ideas, Fashion accessories, Graphics and signage, Fashion shows, Career opportunities in Visual merchandising.

**References Books:**

1. Martin M.Pegler, –Visual Merchandising and Display, fifth edition, Berg Publishers, UK, 2006.
2. Lainestone, Jean Samples, –Fashion Merchandising – An Introduction, McGrawHill Book Co, 2001.
3. Diamond, J, –Fashion Retailing-A Multi – Channel Approach, Second Edition, PrenticeHall, New Jersey, 2000.
4. Fashion Merchandising & Information, John Wiley & Sons, PRISCO, Australia. Ltd (1986)
5. Fashion Merchandising, Mery.D. Troxell, Elaine Store Gregg division, Mc Grow-Hill (1981)



6. Fashion Merchandising Introduction Evelyn Grace,–Prentice-Hall(1978)
7. Visual Merchandising, Hearst books, ST publications incorporated (1997)
8. The business of fashion inside outside KittyDickerson

**Course Outcomes:**

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

**CO 1** – Know about the new techniques of the display setting

**CO 2**–Know visual merchandising and planning

**CO 3**-Study the store planning

**Course prepared by:** Dr.M.Sumithra

**Course Verified by:** Dr.K.Sangeetha

Title of the Course:**Elective II :Export Documentation** No. of Credits: **4**  
Code No: **2EC** No. of Teaching hours: **4/week**

**Course Objectives:**

**CO 1** - Study about international trade and trade policies.

**CO 2**-Study about export and import procedures and documentation.

**CO 3** – Indian garment trade policies on export- details of special incentives.

**UNIT- I** Introduction to international trade, Global scene, Prospects for Indian Apparel in overseas market, Globalisation, GATT and WTO. Meaning and Definition of Export – Classification – Strategy and Preparation for Export Marketing – Export Marketing Organizations – Registration Formalities – IEC – RCMC – Export Licensing – Selection of Export Product – Identification of Markets – Methods of Exporting – Pricing Quotations.

**UNIT- II** Foreign trade document -need - types of documents related to goods, invoice to goods, invoice packing note and list - certificate relating to shipments - shipping bill- cart ticket - certificate of measurement - Bill of lading - airway bill - documents related to payment -letter of credit - bill of exchange - bank certificate for payment - document related to inspection.

**UNIT- III** Steps in Export Procedure – Export Contract – Forward Cover – Export Finance – Institutional framework for Export Finance – Excise Clearance – Pre-shipment Inspection – Methods of Pre-shipment Inspection – Marine Insurance – Role of Clearing and Forwarding Agents – Shipping and Customs Formalities – Customs EDI System – Negotiation of Documents Realisation of Exports Proceeds. Recent export policies of the government

**UNIT –IV**

Foreign Trade Policy – Highlights – Special Focus Initiatives – Duty Drawback – Deemed Exports – ASIDE – MAI & MDA – Star Export Houses – Town of Export Excellence – EPCG Scheme – Incentives for Exporters. Preferential trade agreements-GSP, IJCEPA, IKCEPA. Export Promotion Councils-Commodity Boards – FIEO – IIFT – EOUs – SEZs – ITPO – ECGC- EXIMBank.

## **UNIT- V**

Aligned Documentation System – Commercial Invoice – Shipping Bill – Certificate of Origin – Consular Invoice – Mate’s Receipt – Bill of Lading – GR Form – Types of Marine Insurance Policies. Customs - meaning, definition, types, exercise and customs, clearance of export cargo shipment of goods and port procedures - claiming duty draw backs and other benefits

### **Reference Books**

1. Handbook of Import-Export Procedures – Ministry of Commerce, -, Government of India, NewDelhi
2. Export: What, Where and How, Paras Ram, AnupamPublishers,Delhi
3. Exports : Do it Yourself, Mahajan M.I., Snow White Publications, NewDelhi
4. Export Marketing, TAS Balagopal , Himalaya PublishingHouse
5. Export Documentation and Procedures, , Nabhi Publications, NewDelhi
6. International Marketing Management, R.L. Varshney, SultanChand
7. International Marketing, Terpstra, HoltSaunders
8. International Business, Concept, Environment and Strategy, SharanV
9. Export Management, D.C. Kapoor, VikasPublishingHouse
10. Govt. of India: Hand book of import and export procedures Bose. A, Streamline yourexpert paper work, International trade form Oct - Dec 1965

### **Course Outcomes:**

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

**CO 1** –Know about international trade and trade policies.

**CO 2**- study about export and import procedures and documentation.

**CO 3** – Indian garment trade policies on export- details of special incentives.

**Course prepared by:** K.Amutha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Elective II:Fashion Retailing**

No. of Credits: **4**

Code No: **2ED**

No. of Teaching hours: **4/week**

### **Course Objectives:**

**CO1**- Learn about merchandising history and methods,

**CO 2**- Understand about branding and brand merchandising

**CO3**- Develop merchandising and leadership skills to excel in their profession

### **Unit –I**

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 – 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 - Branded Merchandising, Licensing, Private Labels, and Private Labels as Brands. Merchandise Resources – Manufacturers, Merchant Wholesale – Distributors. TradeShows.

### **Unit –IV**

The financial aspects of Merchandising – Measures of Productivity – Productivity, turnover, Stock - to – sales Ratio, sales per Square foot, Space Management. Retail pricing - Mark-up. Markdowns, Residue merchandise, maintain Mark-up. Tactical price changes, Managing Markdowns, Promotional Pricing, Deceptive pricing, Resale price Maintenance.

### **Unit –V**

Store Layout and Merchandise Presentation – Store Planning and Design, Visual Merchandising, Store Layout, Fixtures, Merchandise Presentation, signs.

### **Reference Books**

1. Merchandise Buying and Management, John Donnellan Fairchild Publications ,New York1996
2. Retailing: A Multi-Channel Approach ,Ellen Diamond, Prentice Hall2nd Edition, 2005

### **Course Outcomes:**

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

**CO1-** Explore methods and merchandising history

**CO 2-** Understand about branding and brand merchandising

**CO3-** Implement the developed merchandising and leadership skills to excel in their profession

**Course prepared by:** M.Jayakumari

**Course Verified by:** Dr.K.Sangeetha

Title of the Course:**Elective III:Clothing Care and Maintenance**

No. of Credits: **4**

Code No: **3EA**

No. of Teaching hours: **4/week**

### **Course Objectives:**

**CO 1 –** Know about the water types and purification.

**CO 2-** To learn about the maintenance of clothing and stain removal.

**CO 3 –** Understand the care labels and packing

### **UNIT – I**

Water- types- soft water-hard water- purification of water. Soaps, detergents – types – manufacturing – properties.

### **UNIT-II**

Laundering – objects – methods - laundering of white - coloured, cotton, silk, wool, synthetic fabrics, lace materials, carpets. Clothing storing- mending - darning- seasonal care.

### **UNIT-III**

Dry cleaning - chemicals used - sequence - method - commercial dry cleaning. Washing machines – types - working principles.

### **UNIT-IV**

Ironing and pressing - hot air, steam, permanent pressing, thumble drier –hydro extractor - working principle.

### **UNIT-V**

Stain - classification – removal of known and unknown stains - rules in removing fresh and old stains. Stain removers - grease solvents – absorbents - washing soda - borax.  
Care labels – importance- symbols – uses. Packing – importance – care of import & export packing.

### **REFERENCES**

1. Fabric care- Noemia.D\_Souza.
2. Fundamentals of textiles and their care-Susheela.D
3. House hold textiles and laundry work-Durga.D
4. Textiles fiber to fabric- Bernard.P.Carbman, MC Graw gill internationalEdition.

### **Course Outcomes:**

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

**CO 1** – Gain knowledge about clothing care

**CO 2**- Know about various process in maintenance of clothing

**CO 3** – Study about the packing sector in textile industry

**Course prepared by:** Dr.K.Sangeetha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Elective III:Entrepreneurship Development**No. of Credits: **4**

Code No: **3EB**

No. of Teaching hours: **4/week**

### **Course Objectives:**

**CO 1** –Study about Entrepreneur Skills.

**CO 2**-Study about project formulation and classification of Industries

**CO 3** – Funding agencies and entrepreneur regulations.

### **UNIT-I**

Definition of Entrepreneur – Functions of entrepreneurship - Types and problems. Recent trends and development in entrepreneurship. Characteristics of an entrepreneur, Entrepreneurship development, Process of Entrepreneurship development.

### **UNIT-II**

Project identification - Classification. Project formulation - Feasibility analysis and report. Selection. Project appraisal – Concepts and Methods - Cash flows, Payback period, ROI

Methods of minimizing risk.

### **UNIT-III**

Steps for starting a small scale enterprise. Preparation of Project report and Business plan. Procedure and formalities for registration, Types of organization – Sole proprietorship, Partnership, Joint stock company, Selection of types of Organization, Factors influencing the choice of organization.

### **UNIT-IV**

Factors influencing entrepreneurship, Institutional finance to entrepreneurs - Commercial Banks. Other financial Institutions - IDBI, IFCI, ICICI, IRBI, LIC, UTI, SIDC, SIDBI, EXIM Bank, Role of Government in entrepreneurship development.

### **UNIT-V**

Institutional support to entrepreneurs - Need for support - NSIC, SIDO, SSIDC, SISI, SFC, DIC, TCO, TIIC, Kadi and Village Industries Commission, Industrial Estates. Issues of prospects of entrepreneurship in India, Global entrepreneurship, Trends in entrepreneurial enterprises-TQM, WTO, Green products, Research and Innovating etc., Entrepreneurship in Textile Industry, Textile and MSME.

### **Reference Books (to be specified in the required format)**

1. Entrepreneurship development, C.B. Gupta & N.P. Srinivasan, Sultan Chand & Sons(1992)
2. Entrepreneurship development, S. Khanka, S.Chand limited(2006)

### **Course Outcomes:**

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

**CO 1** –Functions of entrepreneurship and problems faced by entrepreneur

**CO 2**-Classification of Industries and its formation

**CO 3** –Institutional support to entrepreneurs from various funding agencies

**Course prepared by:** Dr.M.Sumithra

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Elective III:Textile Economics**

No. of Credits: **4**

Code No: **3EC**

No. of Teaching hours: **4/week**

### **Course Objectives:**

**CO 1** –Study about origin, growth and development of textile industry.

**CO 2**-Learn about Government plans for technological developments in fiber and spinning industry.

**CO 3** – Technical developments in fabric manufacturing and finishing industries.

### **UNIT I**

Origin, Growth and Development of Indian Textile Industry - Cotton, Wool, Silk – Rayon, nylon, polyester, acrylic, Man-Made Textiles, Readymade garments

## **UNIT II**

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

## **UNIT III**

Technological developments in Fibre Industry, Significance and uses – Technological developments in Yam Industry, significance and uses.

## **UNIT – IV**

Technological developments in Fabric Industry -woven, significance and uses - Technological developments in Fabric Industry - knitting, significance and uses - Technological developments in Garment Industry, significance and uses

## **UNIT V**

Technological developments in Printing and Dyeing Industry, significance and use – Technological developments in Processing Industry, significance and uses.

### **Reference Books (to be specified in the required format)**

1. Textiles - Fiber to fabric, Bernard P Corbman, 6th edition, McGraw HillBookCo,Singapore
2. Fabric forming systems, Peter Schwartz, Trevor Rhodes, Mansour Mohammed,Noyes' Publications, New Jersey, USA(1996).
3. Fabric Care, Normia D'Souza, New Age International Pvt Ltd, New Delhi Journals:
4. Indian Textile Journal- Business Press P. Ltd, Maker Tower B-18floor, Cuffparade, Mumbai - 400009.
5. Indian Cotton Mills Federation - ICM - Textile Centre 34 P-d, Mello Road, Mumbai4009
6. Indian Silk, Central Silk Board, Ministry of Textiles, M G Road, Bangalore - 560001.
7. Man-made Textiles in India - SASMIRA, Sasmiramarg, Worli,Mumbai
8. Textile Magazine, Magazine House, 710 Mount Road,Chennai
9. Textile trends, East land Publications Pvt Ltd, 44 Chittranjan Avenue,Calcutta-12.
10. Handloom Export Promotion Council 622 Mount RoadChennai
11. Garments India, Garment India Press, 53 South West Road,Chennai-17
12. Indian Jute Bulletin-Indian Regional office, 4K S Pay road, Calcutta -1.
13. Hosiery and Textile Journal-International Magazine Home-164 ModiStreet,Fort, Mumbai
14. Textile Highlights, 396, Veerasavarkarmarg, Poabhadevi, Mumbai-25
15. Clothing News Bulletin, Clothing Manufacturers Association of India House,Mumbai-26
16. The Textile Institute and Industry, 10 Back Brance. Street, Manchester

### **Course Outcomes:**

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

**CO 1** –Origin, growth and development of textile industry.

**CO 2** –Governmentplans for technological developments in fiber and spinning industry.

**CO 3** –Technical developments in fabric manufacturing and finishing industries.

**Course prepared by:** K.Amutha

**Course Verified by:** Dr.K.Sangeetha

Title of the Course: **Elective III:Home Textiles**

No. of Credits: **4**

Code No: **3ED**

No. of Teaching hours: **4/week**

**Course Objectives:**

**CO1** - Learn about Home Textiles in India.

**CO2**- Different Types of Home Textile production and Application

**CO3**- Functional requirement for the application of Home Textiles

**UNIT – I**

**Home Textile in India:** Introduction, history, exports - Trends in home textile industry – Domestic and Global market for home textiles, Major production centers in India.

**Home Textile Products** - Role of fabric in interior furnishing – Properties required – Factors affecting that selection of fabrics - Different fibres used, Standard sizes, Fabric requirement and cost calculations.

**UNIT – II**

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

**Bed Linens** - Definitions – design & size - Bed spread designs – chenille and organic bed spreads – dimensions – Bed sheets – types – fitted sheets – manufacturing process – bed skirts – types – mattress – domestic and international market for bed linens – pillows - Quilt: types – Machine, Hand quilting – Knotted and tied – Trapunto – Shadow trapunto – export and import contributions – process sequence for bed linen – scope in global market.

**UNIT – III**

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

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

**UNIT - IV**

**Table Linens** - Place mats and table cloths - Definition – Placemats – Varieties of placemats – Making process flow – Instruction – tips & warnings – Reversible placemats – Stone placemats – table cloths – Types, material & manufacturing.

**Kitchen Linens** - Introduction - Material used – Kitchen products – Oven mitten – Pot holder – Apron – Napkins – Doilies – Kitchen mats – Dining table cloth – teacozy–kitchen curtain– Table runner – Kitchen rugs – Types of stitches and seams used.

**UNIT – V**

**Floor Coverings:** Definitions – Fibre used – Types of carpets – Comparison of carpets – broad loom carpets — Benefits of carpets and rugs - Carpet cushions – Manufacturing Process – Rugs Types of rugs – Knots and oriental rugs – Embroidered rugs – Natural leather rugs –Advances - Earth carpets – Thinking carpets – Magic carpets – Lawn carpets.

**Bath Linen:** Categories – bath robe – Sizes & design elements - Terry towels – Classification – Ranges – Fibre used – Standard sizes – Manufacturing flow chart – Construction of terry towels Market share – Production centers.

**Reference Books**

1. T. Karthick et.al —Home Textiles Astral International Pvt Ltd, NewDelhi.
2. Ghosh,Dr. Ashis Kumar—Traditional KnowledgeofHousehold|DayaPublishingHouse
3. Kapoor,HemantandAashimaArora—HomeTextiles|AstralInternationalPvtLtd,NewDelhi

**Course Outcomes:**

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

**CO1** –Home textiles and its products

**CO2**- Different types of home textile manufacturing and applications

**CO3**- Functions of Home textiles

**Course prepared by:** Dr.M.Sumithra

**Course Verified by:** Dr.K.Sangeetha