

MOTHER TERESA WOMEN'S UNIVERSITY

KODAIKANAL – 624 101

M.Phil. DEGREE COURSE IN TEXTILES & CLOTHING

(For candidates admitted from the academic year 2021-2022 onwards)



DEPARTMENT OF HOMESCIENCE

MOTHER TERESA WOMEN'S UNIVERSITY, KODAIKANAL

PROGRAMME OUTCOMES

The Expected Programme Outcomes on completion of M.Sc. Textiles and Clothing

PO1- Students 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- Acquire dexterity for self-development and competency

PO4- Understand current scenario of fashion and apparel design and adapt themselves to the changes in global fashion and commercial market.

PO5- Prepares them to acquire business relations by instilling technical and computer knowledge, statistical analytical skills, soft skills, confidence, ethics and moral values.

PO6- Qualify for industrial needs and start up units by providing professional skills

PO7- Explore research interest with creative skills towards sustainable environment practices.

PROGRAMME SPECIFIC OUTCOMES (PSO)

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

Course Name: M.Phil.Textiles and Clothing

Eligibility: M.SC (Costume Design and Fashion, Textile Science, Apparel Designing, Textiles and Apparel Design, Fashion Designing, Costume Design and Fashion Technology, Fashion Technology, Apparel Fashion Technology, Home Science with textile clothing and any other course related to textiles, clothing and fashion)

Medium: English

MOTHER TERESA WOMENS UNIVERSITY-KODAIKANAL**M.Phil. in Textiles and clothing**

Subject code	Subject	Hours	Credit	CIA	ESE	Total
Semester I						
M21TCT11	Research methodology	10	4	40	60	100
M21TCT12	Advanced paper in Textile Testing and Finishing	10	4	40	60	100
M21PST13	Common Paper Professional Skills	10	4	40	60	100
TOTAL		30	12			300
Semester II						
M21TCT21	Special paper related to project	10	4	40	60	100
M21TCD21	Dissertation + Viva Voce	20	14	120	80	200
TOTAL		30	18			300
TOTAL CREDITS		60	30			600

SPECIAL PAPER RELATED TO PROJECT

S.No	Subject
1	Sustainable Textiles
2	Textile Processing
3	Textile Testing and Fabric Processing
4	Textile Finishing
5	Garment Designing and Marketing
6	Nonwoven And Technical Textiles
7	Directed Study*

*Any new course can be added as a special paper by getting permission from BOS and Academic Council.

Course Title & Code	RESEARCH METHODOLOGY		
M21TCT11	Semester-I	Credits:4	Hours: 10
Cognitive Level	K2: Understand K3: Apply K4:Analyse		
Learning Objectives	<ul style="list-style-type: none"> • Understand concepts of research and statistical analysis. • Study different types of research • Learn about scientific investigation to solve problem, test hypotheses, develop or invent new products. • Gain knowledge on research process and report preparation • Different statistical tools and interpretation of data 		
Course Outcome	Upon completion of this course, the students will be		
	CO1: CO2: CO3: CO4: CO5:	Research design and concepts K2 Application of Statistics in research K3 Analysing the process of developing a Research Plan K4 Research process and report preparation K2 Efficient usage of different statistical tools and interpretation of data K3	
UNIT -I	Introduction to Research: Meaning of research-process of research, objectives of research.Developing a research proposal, presentation of a problem, objectives, method, work plan, personnel, facilities and budget. Identifying the problem- defining and delimiting the problem, types of research- fundamentals, applied, action, experimental and descriptive.		
UNIT-II	Hypothesis: meaning and importance, kinds of hypothesis. Variables-meaning and identification in relation to the research problem-independent, dependent, control and intervening variables. Research Design - Concept and Importance in Research – Features of a good research design – Exploratory Research Design –Descriptive Research Designs – concept, types and uses. Experimental Design: Concept of Independent and Dependent variables.		
UNIT - III	Research tools: questionnaire, interview schedule, observation, experimentation, attitude scale, check list, socio gram. Scaling techniques-different types- nominal, ordinal, interval and ratio.Characteristics of tools-reliability and validity. Sampling: Concepts of Statistical Population, Sample, Sampling Frame, Sampling Error, Sample Size- Sampling design- probability, non-probability sampling.		
UNIT-IV	Methods of Data Collection - Data Processing- Data analysis- quantitative and qualitative, presentation of data-tables, graphs, illustrations, foot notes		

	and bibliographical presentations.
UNIT- V	Research reports- basic concepts of research report-format of report writing. Research Paper Writing – Layout of a Research Paper, Journals in Textiles, Impact factor of Journals, Publishing papers in journals, Ethical issues related to publishing, Plagiarism and Self-Plagiarism.
References Books:	<ol style="list-style-type: none"> 1. Research Methodology: Methods and Techniques, C.R. Kothari, Gaurav Garg, New Age International, 4th Edition, 2018 2. An Introduction to Statistical Methods, S P Gupta, Vikas Publishing House, New Delhi, 2009. 3. Devadas.R.P, A Handbook on methodology of Research, Sri Ramakrishna Vidyalaya, Coimbatore, 2000. 4. Kothari.C.R., Research Methodology, Methods and Techniques, Wiley Eastern Limited, New Delhi, 2004. 5. Kulbir Singh Sidhu, Methodology of Research in Education, Sterling Publishers Pvt. Ltd., New Delhi, 2006. 6. Gupta.S.P., Statistical Methods, Sultan Chand & Sons, New Delhi, 2002. 7. Srivastava.A.B.L and Sharma. K.K., Elementary Statistics in Psychology and Education, Sterling Publishers Pvt..ltd., 2003.

Mapping of COs with POs & PSOs:

CO	PO							PSO				
	1	2	3	4	5	6	7	1	2	3	4	5
CO1	M	S	S	S	S	S	S	S	S	M	M	M
CO2	M	S	S	S	S	S	S	S	S	M	M	M
CO3	M	S	S	S	S	S	S	S	S	M	M	M
CO4	M	S	S	S	S	S	S	S	S	S	M	M
CO5	M	S	S	S	S	S	S	S	S	M	M	M

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

Course Title & Code	ADVANCED PAPER IN TEXTILE TESTING AND FINISHING		
M21TCT12	Semester-I	Credits:4	Hours:10
Cognitive Level	K1: Recall K2: Understand K3: Apply K4: Analyse K5: Evaluate		
Learning Objectives	<ul style="list-style-type: none"> • Study about the properties of textile fibre and testing methods • Understand dye extraction and dyeing techniques • Study about the fabric properties and testing procedures • Understand various fabric finishing processes • Study environmental protection process of textile industries 		
Course Outcome	Upon completion of this course, the students will be		
	CO1: CO2: CO3: CO4: CO5:	Fiber Properties and testing methods K2 Dye extraction and dyeing techniques K1 Fabric properties and testing procedures K5 Fabric finishing processes K3 Environmental protection process of textile industries K4	
UNIT -I	Introduction to fibres – meaning - recent development of natural fibres – fibres extraction – fibres extraction techniques, fibres properties- physical and chemical, testing methods – fibres, yarns, fabrics.		
UNIT-II	Preparatory processes for grey fabric: Open width, Rope form, Continuous and Batch Finishing, De-sizing, Scouring, Bleaching, Mercerization. Dyes - introduction - extraction of dyes from natural sources – dyes extraction process, Mordants – definition – types – Natural dyes and mordants- Importance and applications.		
UNIT - III	Dyeing: Introduction to dyeing, Principles of dyeing, Methods of dyeing - dope, fiber, yarn, fabric and garment. dyeing techniques – application of dyes on various fibers/fabrics, Garments.- fixation techniques and after treatment of dyes fabrics. Evaluation of fastness properties of dyed materials, Ecological aspects of dyeing -Banned dyes and banned chemicals for dyeing, eco-friendly process. Printing - Methods of printing - Novel methods of printing - Digital, flexography, inkjet, blotch, water mark, roller, foam, bubble, air brush, electrostatic, photo printing, marble, warp printing, differential. Specialty printing- Rubber and khadi - Evaluation of fastness properties of printed textile material- Ecological aspects of printing process - Banned chemicals for printing, eco-friendly chemicals.		

UNIT-IV	Finishing of dyes on fabric- definition- objectives- fabric finishing- classification of finishing, finishing process- mechanical- calendaring, compacting, embossing, sueding, raising or napping, wool glazing, shearing, stabilization, decating, steaming and heat setting, sanforizing or preshrinking. Chemical- softening, elastomeric finishes, crease resident or crease proofing, soil release finishes, flame retardant treatment, peach finish, anti-pilling, stain, stain and soil resistant finishes, oil and water proofing, water- repellent finishes, anti-static finish, anti-mildew, mothproofing finishes, antibacterial finish, plasma finish- enzyme finishing- bio polishing, Special finishes- mosquito repellent finishes, nano finishes.
UNIT- V	Environment protection- Meaning, Importance – Environmental impacts of textile industries – Environment protection- by textile recycling, Effluent treatment of water- Important of eco-friendly processing- Application of enzyme in textile wet processing industry.
References Books:	<ol style="list-style-type: none"> 1. Angappan, P and R.Gopalkrishnan, Physical testing. SSM Institute of Textile Technology Students Co-operative stores Ltd., 2003. 2. Ajay Jindal and Rakesh Jindal, Textile Raw Materials. Abshishek Publications, (2006). 3. Booth, JE, Principles of Textile Testing, New Delhi :CBS Publishing, 1996. 4. Aridam Basu, Textile testing : Fiber, Yarn, Fabric, South Indian Textile research Association, 2006. 5. Navneetkaur, Comdex Fashion Design, Vol-I Fashion Concepts. New Delhi :Dream tech Press, 2010. 6. Pradip V. Mehta, "An Introduction to Quality Control for Apparel Industry" ASQC Quality press, 1992. 7. Cegarra, J. P. and Valladperas, J. The dyeing of textile manual, the scientific bases and the techniques of application. Italy: NecovaOflito, 1992. 8. Amutha K, A practical Guide to Textile Testing. Wood head Publishing India in Textiles, 2016. 9. Shenai, V. A. Azo dyes: Facts and figures. Mumbai: Sevak Publication, 1999. 10. R.S.Bhagwat, Wet Processing Machineries, Mahajan Publications, 2000. 11. Shenai. V.A, Technology of Dyeing, Sevak publications, Mumbai, 1995. 12. Miles. L.W.C, Textile Printing, SDC, England, 1994. 13. Manivasakam, N., Treatment of Textile Processing Effluents, Sakthi Publication, Coimbatore, 1995. 14. Rouette, H. K. Encyclopedia of textile finishes. Berlin: Springer Verlag, 2001. 15. Colliner, B. J & Tortora P. G. Understanding Textiles. (6th Ed.) Upper Saddle River, N. J: Prentice Hall Inc, 2001. 16. Finishing of Garments and Knits, NCUTE – Programme series held at Ichalkaranchi, IIT, Delhi, 2003.

Mapping of COs with POs & PSOs:

CO	PO							PSO				
	1	2	3	4	5	6	7	1	2	3	4	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

M21PST13 PROFESSIONAL SKILLS (Common Paper)

Hours 10/ Credits 4

Objectives:

1. To develop skills on ICT and apply them in teaching, learning and research.
2. To acquire knowledge on communication skills with special reference to its elements, types, development and styles.
3. To understand the concepts on Communication technology, Computer Mediated Teaching.
4. To develop different teaching skills and to develop Multimedia /E-contents in their respective subjects.

Unit I - Computer Application Skills

Fundamentals of Computers and windows, Operating System – MS – Office Components; Word: Equation editor, Table Manipulation – Formatting Features – organizational Chart. MS – EXCEL: Statistical Functions – Number Manipulation – Chart Preparation with various types of graphs. MS PowerPoint: PowerPoint presentation with multimedia features. Internet and its applications: E-mail and attachments – working with search engines.

Unit II - Communication Skills (English/Tamil/Both)

English: Skills of Communication: Listening, Speaking, reading and Writing – Writing Synopsis, Abstract and proposals. Developing good language abilities – Public speaking – Writing Skills.

Tamil: gapw;Wtpf;Fk; jpwd; - Ngr;Rj;jpwd; - ntspg;ghl;Lj; jpwd; - Ma;Tj;jpl;lk; - Ma;Tr;R&f;fk; jahhpj;jy;.

Unit III - Communication technology

Computer Mediated Teaching: Multimedia, E – Content, Satellite Based Communication – EDUSAT and ETV channels. Web: Internet I Education.

Unit IV - Pedagogical Skills

Micro teaching Skills: Skill of Induction, Skill of Stimulus Variation. Skill of Explaining, Skill of Probing Questions, Skill of Blackboard, Writing and Skill of Closure – Integration of Teaching Skills – Evaluation of Teaching Skills – Research Extension and Consultancy.

Unit V - Industrial Technology

Lecture Techniques: Steps, Planning of a lecture, Lecture Notes, Updating, Delivery of Lecture. Teaching – Learning Techniques: Team teaching, Group Discussion. Seminar, Workshops, Symposium and Panel Discussion – Games and Simulations – Web Based Instructions.

References

1. Michael D. and William Integrating Technology into Teaching and Learning: Concepts and Applications, Prentice Hall, New York.(2000).
2. Pandey S.K Teaching communication. Commonwealth publisher, Delhi.(2005).
3. Sharma. R.A, Fundamentals of education technology, Surya publication, Meerut.(2006),
4. Kum Babu A. and Dandapani S. Microteaching, Neelkamal Publications, Hyderabad, (2006),
5. Vanaja M and Rajasekhar S. Computer Education, Neelkamal Publications, Hyderabad, (2006),

AREA PAPERS
M21TCA21 -SUSTAINABLE TEXTILES

Unit I

Sustainability and Eco – Design – Introduction, definition and description of eco design. Textiles and clothing supply chain and the environment –increasing environmental awareness.

Unit II

Sustainable Textile Production – Sustainability issues in textile finishing. Key environmental drivers in the textile industry- legislation, Eco labels, Environmental management system (EMS), retailers, green consumers, pressure groups, controlled colouration. Production cycle in textile industry.

Unit III

Sustainability in Textile dyeing- Key factors for improving in dyeing, Extraction for natural dyeing, Ultra sonic and micro wave extraction, enzymatic extraction, solvent extraction, super critical CO2 extraction, Future trends.

Unit IV

Sustainable Fashion– Definition, importance of sustainable fashion (repurposed, recycled textiles), Suitability in fashion retailing, Fashion Logistic, Green Washing, Eco Fashion Designer

Unit V

Bio technology in Textile Processing-Enzyme application, Life cycle assessments of enzymes used in Textile industry, Bio desizing, bio scouring, bio bleaching, bio polishing, bio stoning, enzymatic degumming and enzymatic retting, future trends and application.

REFERENCES:

1. Subramanian Senthil Kannan Muthu, Roadmap to Sustainable Textiles and Clothing Eco Friendly Raw Materials, Technologies and Processing Methods, Springer Publication, UK, 2014.
2. Miraftab, M and Horrocks, A.R, Eco Textiles, The way Forward for Sustainable Development in Textiles, Wood Head Publishing Ltd., England, 2007.
3. Jennifer Farley Gordon, Collean hill, Sustainable fashion: Past, Present and Future, Bloomsburry Publishing, London, 2014.
4. Jochen strable, Green Fashion Retail, Springer Publication, UK, 2016.
5. Alison Gwilt, Timo Rissanen, Shaping Sustainable Fashion: Changing the way we make end use Cloths, Routledge, UK, 2012.
6. Richard Blackburn, Sustainable Textiles: Life Cycle and Environmental Impact, Elsevier, 2009.

M21TCA22-TEXTILE PROCESSING

UNIT-I

Wet processing-meaning-process sequence. Object and methods in singeing, Desizing, Scouring, Wool carbonizing, Weighting of silk. Wet processing equipment – kier – J box – pad roll – U box – Roller bed – Conveyor steamer – stenter.

UNIT-II

Bleaching –objects-types- Hypo chlorites – Hydrogen peroxide – sodium chlorite. Equipment's and chemicals for bleaching of cotton, viscose, cotton/ viscose, polyester/ cotton. Mercerization – objects - Methods – types of mercerization-chain and chainless methods.

UNIT III

Dyeing – properties of dyes, Characteristics of dyes, classification of dyes, Direct, Vat, Sulphur, reactive, naphthol, acid, Basic, disperse dyes and natural dyes. dyeing of fiber blends. Dyeing machines – fiber, yarn –cheese dyeing.

Fabric dyeing machines-working principles – hank package – jigger- HT Beam, jet – padding mangles.

Colour fastness to washing – light, rubbing & perspiration, computer colour matching-colour matching cabinet.

UNIT IV

Printing of woven and knitted fabric using different techniques – Stencil, Screen, Block, Flocking, Batik, Tie and dye style- Methods and equipment's used-Recent developments in Printing.

UNIT – V

Aesthetic finishes : Lustre - glazed, moire, schreiner, embossed. Drape - crisp andtransparent, sizing, weighting. Texture - sheared, brushed, embossed, pleated, flocked,embroidered, napped, fulled, Special purpose finishes: Stabilisation / shrinkage control - different methods, Shape retention methods, wrinkle free finishes.

Comfort related finishes - water repellent finishes, pilling resistance, Abrasion resistant
Biological control finishes - moth and mildew control Safety related finishes - flame retardant
Environmental problems in the finishing and dyeing Industry Effluent treatment of water - methods and process involved.

REFERENCE :

1. Jeyakodi Moses, J, "Laboratory Manual of Textile wet/chemical processing", Laser Park Publishing House, Coimbatore, 2007.
2. Shenal, V. A., Technology of textiles Processing, Chemistry of Dyes and Principles of Dyeing, A Sevak Publication, Bombay, 2002.
3. Gulrajani M.L., Deepti Gupta, Natural Dyes and their Application to Textiles, Indian Institute of Technology, New Delhi,1992.
4. Mauguire King, Advance in the dyeing and finishing of technical textiles, Woodhead Publication, 2013.
5. Asim Kumar Roy Choudhury, Textile preparation and dyeing, Science Publishers, USA, 2006.
6. M.L. Gulkajami, Advanced in the Dyeing and Finishing of Technical Textiles, Wood Head Publishing, Oxford Cambridge, Philadelphia, and New Delhi, 2013.
7. Sara J Radolph and Anna L Langford, Textiles - Ninth edition, Prentice hall, New Jersey, 2002.
8. J L Smith, Textile Processing, Abhishek Publications, Chandigarh, 2003.

M21TCA23 -TEXTILE TESTING AND FABRIC PROCESSING

Unit – I

Fiber, Yarn and Fabric Testing - Fiber testing – Fiber Dimension – Fiber Fineness, Fiber Length, Fiber Diameter. Yarn testing – Breaking Strength, Linear Density, Yarn Twist, Yarn Evenness, Yarn Hairiness, Yarn Bulk and Friction. Fabric testing – Fabric weight, Fabric Thickness, Breaking Strength, Bursting Strength, Crease Recovery, Abrasion Resistance, Colourfastness, Air Permeability, Water Permeability, Testing for Comfort, Evaluation of Fabric Hand, Whiteness Index, Residual Starch.

Unit – II

Functional and Characterization Tests Textile testing – Spectrophotometer, SEM, FE-SEM, FTIR, HPLC, GCMS, Atomic Absorption Spectrometry/Atomic Emission Spectrometry and Plasma Emission Spectrometry, Differential Scanning Calorimetry. References:

Unit – III

Enzyme treatment – Introduction to Enzymes, Application of Enzymes in Textiles, Mechanism of Enzyme action – Lock and Key theory, various Enzymes used in Textile processing, Enzyme in Textile process, Evaluation of Enzyme treated fabrics.

Unit –IV

Nano technology- Introduction to Nano particles and Nano technology, Preparation of Nano particles and Composites, Application of Nano technology in wet processing, Types of Nano finishes – Antibacterial, Ant odour, UV Protective, Water Repellent, Self-Cleaning, Flame Retardant, Wrinkle Resistant.

Unit –V

Finishes - Innovative Finishes in Fabrics –Softening, Crease resistant, Antistatic, Antimicrobial, Odour proof, Water proof, Flame proof, Soil release, Mildew and Mothproof, Mosquito repellent. Micro-encapsulation technique in Finishing. Garment washing–Stonewashing, Acid washing, Enzyme washing, Emerisation, Laser fading, Ozone fading

REFERENCE

1. Amutha K, A practical Guide to Textile Testing. Wood head Publishing India in Textiles, 2016.
2. Ajay Jindal and Rakesh Jindal, Textile Raw Materials, Abshishek Publications, 2006.
3. AridamBasu, Textile testing : Fiber, Yarn, Fabric,.South Indian Textile research Association, 2006.
4. Shenai – Technology of Textile Finishing – Sevak Publication, 1995.

M21TCA24–TEXTILE FINISHING

UNIT 1

Textiles- classification of fibers, Classification of Fabric –Woven, Nonwoven, Knitting, General Properties of Textiles Fabric.

UNIT 2

Nonwoven Fabrics –Definition, Classification of Nonwoven Fabrics, Nonwoven Fabric Bonding Techniques, Uses of Non-Woven Fabrics in Textiles, importance of nonwoven fabric in medical textiles.

UNIT 3

Introduction- process of herbs, Method of extraction- solvent used for extraction-methanol and ethanol. Method of extraction, application of extract on fabric using Pad-dry- cure.

UNIT 4

Finishing-definition, classification of finishing, Mechanical finishes, Chemical finishes, antimicrobial finish- importance of antimicrobial finishing on fabrics.

UNIT 5

Antimicrobial testing- bacterial and fungal testing. Testing of finished fabrics - air permeability, fabric thickness, fabric Gram square Meter, Absorption.

REFERENCE:

1. Mauguire King, Advance in the dyeing and finishing of technical textiles, Woodhead Publication, 2013.
2. Asim Kumar Roy Choudhury, Textile preparation and dyeing, Science Publishers, USA, 2006.
3. M.L. Gulkajami, Advanced in the Dyeing and Finishing of Technical Textiles, Wood Head Publishing, Oxford Cambridge, Philadelphia, and New Delhi, 2013.
4. Sara J Radolph and Anna L Langford, Textiles - Ninth edition, Prentice hall, New Jersey, 2002.
5. J L Smith, Textile Processing, Abhishek Publications, Chandigarh, 2003.
6. Shenai, Technology of Textile Processing, Vol 3, 4, 6, 10. V.A, Sevak Publications, Mumbai, 1996.

7. Dr NalankalliG.S. Jayaprakash, Textile finishing, First Edition, SSM Institute of Textile Technology, 1997.
8. KanwarVarinder Pal Singh, Elementary Idea of Textile Dyeing, Printing and Finishing, Kalyani Publishers, Ludhiana, New Delhi, Noida, 2004.
9. M.L. Gulrajini&Deeptigupta, Natural dyes & their application to textiles, New Delhi Publications, 1990.

M21TCA25 -GARMENT DESIGNING AND MARKETING

UNIT – I

Designing - Design variables with Elements and Principles. Design concepts inspiration. Fashion Sketching rough and final sketch. Idea generation techniques – Mind mapping, Brain Storming, Story Boarding, Attribute Listing, Visualization and Visual prompts, Reverse Thinking, Daydreaming.

UNIT - II

Textile design – Creation of Weave Design and Print Design, CAD in Textile Design Creation of Garment Designs – for Special occasions and Seasons. Accessory Designing - Selection, Types of Jewellery, Hand bags, Belts, Scarves, Hat, Footwears, Watches and Others.

UNIT – III

Garment Production Machineries and Equipment's- Fabric Inspection, Pattern making and Grading, Spreading, Marking, Cutting, Sewing, Finishing, Pressing, Packing and Storage.

UNIT -IV

Marketing – Fashion Marketing Process – Understanding Fashion consumer- Decision making, Psychological Process of consumer behaviour, Sociological aspects of consumer behaviour. Fashion Marketing Communications - Advertisement, Sales promotion, Public relation, Personal selling, Celebrity endorsement, Visual Merchandising and Communication, Fashion Marketing Process, e- marketing.

UNIT- V

Retail Merchandising – The Marketing channel, Retail organization, Structures, Retail merchandising, Retailing formats – Departmental stores, Specialty stores, Other retailing Formats – Non store retailers, Store Layout and Merchandise presentation – Store planning and Design, Visual Merchandising - Elements and Techniques.

REFERENCES:

1. OlieverGerval (2009), Fashion Accessories, A& C Black Publishing's, Great Britain.
2. Diamond Jay (2008), Fashion Apparel, Accessories and home furnishings, Pearson Education, India, New Delhi.
3. Harold carr and Barbara Latham, Technology of Clothing manufacture – Black well science inc. USA, 2000.

M21TCA26 -NON WOVEN AND TECHNICAL TEXTILES

Unit – I

Non – woven – Introduction – definition, classification and scope and application of nonwoven – fibres used, web preparation, opening, cleaning machine, production of parallel laid web, cross laid and random laid web.

Unit – II

Bonding methods – mechanical, thermal, chemical/ adhesive, melt blown and spun lace techniques.

Finishing of bonded fabrics. Fusing –methods of fusing. Braiding – methods of braiding. Netting – methods, lacing.

Unit - III

Technical Textiles – Introduction, definition, scopes and importance and uses. Application of Agro Tech, Build Tech, Cloth Tech, Home Tech, Indu Tech, Medical Tech, Sports Tech, Pack Tech, Mobile Tech, Protect Tech, Geo Tech.

Unit – IV

Medical Tech, Build Tech, Sports Tech, Protective Tech – Introduction, Fibers used, general properties and end uses. Recent developments for industry application.

Unit – V

Smart and Intelligent textiles, Smart – Active smart, passive smart and ultra smart, Intelligent – PCM, SMP, Chromic and conductive materials

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

Reference:

1. A. R. Horrocks and S. C. Anand, Hand book of Technical textiles, Wood head publishing ltd, England, 2000.
2. Dr.S.GraceAnnapoorani , Technical Textiles and its Application , LASER Park Publishing House, India, 2017.
3. R Senthil Kumar, Textiles for Industrial Applications, CRC Press, 2013.

Reference Books

1. Kothari, V., Textile Fibers: Developments and Innovations, New Delhi: IAFL Publications,2000.
- 2.SabitAdanur, Handbook of Industrial Textiles, Wellington Sears CRC Press ,1995
- 3.Dr.S.GraceAnnapoorani, Agro Textiles and its Application, Wood head publishing ltd, India, 2018.

Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]

- 1.http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_ug.php/130
- 2.[https://www.textile Learner.blogspot.com](https://www.textileLearner.blogspot.com)
- 3.<https://textilelearner.blogspot.com/2020/03/nfc-embedded-smart-textiles.html>
- 4.<https://www.technical-textiles.net>
- 5.<https://www.sciencedirect.com/topics/materials-science/smart-textiles>
