



**PSGR
Krishnammal College for Women**



DEPARTMENT OF COSTUME AND APPAREL DESIGN

PROGRAMME: M.Sc. FASHION AND APPAREL DESIGN

CHOICE BASED CREDIT SYSTEM (CBCS)&

LEARNING OUTCOMES- BASED CURRICULAR FRAMEWORK (LOCF)

(SEMESTER –I)

M.Sc. FASHION AND APPAREL DESIGN

2024-2026 Batch



PROGRAMME LEARNING OUTCOMES (PLO's)

After completion of the programme, the student will be able to

- **PLO1:** Understand diverse cultural influences and market demands of apparel industry
- **PLO2:** Create innovative functional and aesthetic apparels including accessories.
- **PLO3:** Design apparels with advance digital tools and technologies
- **PLO4:** Research and analyze textile and fashion trends
- **PLO5:** Apply knowledge and skill in the fashion field and entrepreneur.

PROGRAMME SPECIFIC OUTCOME (PSO's)

The students at the time of graduation

- **PSO1:** Graduates can function independently with their innovative and creative skills
- **PSO2:** Graduates will be able to meet the current Industries requirements
- **PSO3:** Graduates Can Undertake the research /projects sectors to new product development



**M.Sc. FASHION AND APPAREL DESIGN (2024-2026 BATCH & ONWARDS)
CHOICE BASED CREDIT SYSTEM (CBCS)&LEARNING OUTCOMES- BASED
CURRICULAR FRAMEWORK (LOCF)
(SEMESTER –I)**

Programme and Branch M.Sc. FAD											
Syllabus& Scheme of Examination 2024-2026 Batch & Onwards											
SEMESTER	Course Code	Title of the course	Course type	Instruction hours/week	Contact hours	Tutorial hours	Duration of Examination	Examination Marks			Credits
								CA	ESE	TOTAL	
I											
	MFD2401	Fashion Forecasting and Product Development	CC	4	58	2	3	25	75	100	4
	MFD2402	International Trade and Documentation	CC	4	58	2	3	25	75	100	4
	MFD2403	Apparel Production Planning and Control	CC	4	58	2	3	25	75	100	4
	MFD24P01	Creative Draping Lab	CC	6	90	-	4	25	75	100	3
	MFD24P02	Virtual Design Lab	CC	6	90	-	3	25	75	100	3
	MFD24P03	New Product Design Development – Functional Clothing Lab	CC	6	90	-	3	25	75	100	3
I-III	17MONL1	Online Course 1 #	ACC	-	-	-	-	-	-	-	Completion Certificate

CC-All Core Courses

ACC- Online course #

CA – Continuous Assessment

ESE - End Semester Examination Gr-Grade

QUESTION PAPER PATTERN 24-26Batch

Question Paper Pattern and distribution of marks PG- Core and Allied- (First 3 Units)

CA Question from eac hunit comprising of

One question with a weightage of 2Marks	2 x 3 = 6
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	5 x 3 =15
One question with a weightage of 8 Marks (Internal Choice at the same CLO level)	8x3=24
Total	45 Marks

End Semester Examination–Question Paper Pattern and Distribution of Marks

PG-Core and Allied courses:

ESE Question Paper Pattern: 5x15=75Marks

Question from each unit comprising of

One question with a weightage of 2 Marks	2 x 5=10
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	5 x 5 =25
One question with a weightage of 8 Marks (Internal Choice at the same CLO level)	8 x 5 =40
Total	75 Marks

Continuous Internal Assessment Pattern

Theory

I Year UG / PG (23 Batch)

CIA Test	:	5 marks (Conducted for 45 marks after 50 days)
Model Exam	:	7 marks (Conducted for 75 marks after 85 days (Each Unit 15 Marks)
Seminar/Assignment/Quiz	:	5 marks
Class Participation	:	5 marks
Attendance	:	3 marks
Total		25 Marks

Practical

Lab Performance	:	7marks
Regularity	:	5marks
Model Exam	:	10marks
Attendance	:	3marks
Total	:	25 marks

ESE Practical Pattern

The End Semester Examination will be conducted for a maximum of 75 marks with a maximum 15 marks for the record and other submissions if any.

Attendance component in CA

91-100% attendance : 3 Marks

81-90% attendance : 2 Marks

75-80% attendance : 1 Marks

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD2401	FASHION FORECASTING AND PRODUCT DEVELOPMENT	Theory	58	2	-	4

Preamble

This course explores the intricacies of fashion forecasting and design logics in apparel production and Market analysis

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Acquire knowledge on types, sources, processes and services of fashion forecasting	K1
CLO2	Explain the forecaster's and forecasting services role and decision making processes	K2
CLO3	Develop plans to engineer apparel products	K5
CLO4	Develop new products and evaluation of suitability function	K6
CLO5	Evaluate the economics underlying apparel products and projects	K6

Mapping with Programme Learning outcomes.

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	S	S	S	S
CLO3	M	S	S	S	S
CLO4	S	S	S	S	S
CLO5	S	M	M	S	S

S – Strong; M – Medium

Syllabus .

Unit I

11 Hours

Definition of forecasting - types of forecasting –process of research, colour research fashion research, customer profile research. Source of fashion forecasting information –forecasting agencies and their role in forecasting. Seasons and their impact on fashion. Compiling fashion forecasting information - forecasting agencies – forecasting magazines – websites – information in the forecasting publications. Fashion forecasting in Indian Scenario.

Unit II**12 Hours**

Fashion forecasting packages and magazines, specialist fashion forecasting companies – the role of forecaster in aiding fashion designers, developers and retailers- process of forecasting- decision making process-when to start forecasting for the selling season.

Unit III**12 Hours**

Design logic of apparel products - Classification of textile products, components, aesthetics and comfort of textile products, anthropometry, sizing, body scanning and fit analysis. Material, specification, properties and technology of constituent fibres, yarns, fabrics and apparels.

Unit IV**12 Hours**

Building of the first design ideas, planning to costing, line building, from spec to samples, production selling according to the seasons. Developing new product - Idea generation, idea screening, concept testing, business analysis, the product development process, group product development, research, test marketing, commercialization.

Unit V**11 Hours**

Evaluation of portfolio of products or projects –introduction and purpose of economic analysis – market potential – market demand – estimating sales –estimating cost and profit. Marketing analysis - advertising and media planning, fashion shows and other events, Industry tour and project. surveys and organizing of exhibitions.

Text Books:

S.NO	Name of the Authors	Title of the book	Publishers	Year and Edition
1.	Harold Carr & John Pomeroy	Fashion Design and Product development	Wiley India (P) Ltd	2009, 1 st edition
2.	Michael R. Solomen, Nancy J.Rabit	Consumer Behavior in Fashion	Pearson Education Inc.	2008, 2nd edition
3.	Kitty G. Dickerson	Inside the Fashion Business	Pentice hall	2002, 7th edition

Reference Books:

S.NO	Name of the Authors	Title of the book	Publishers	Year and Edition
1.	Evelyn Brannon L, Lorynn Divita	Fashion Forecasting	Bloomsbury Academic	2015, 4th edition
2.	Gini Stephens Frings	Fashion from Concept to Consumer	Pearson Education Inc.	2007, 9th Edition
3.	Peter Mc Claud	Past and Present Trends Fashion Technology	Abhishek Publications	2013

E-Journals:

- Journal of Textile and Apparel, Technology and Management
- Journal of Textile Engineering and Fashion Technology
- Fashion and Textiles
- Journal of Fashion Technology & Textile Engineering
- Textile World
- Trends in Textile Engineering & Fashion Technology
- The Textile Association

Name of the course	Fashion Forecasting and Product Development (Paper– I)
Name of the Faculty	Dr. Tryphena R
Participatory learning	40%
Experimental learning	30%
Problem based learning	30%

Pedagogy .

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer.

Dr.R.Radhika

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD2402	INTERNATIONAL TRADE AND DOCUMENT	Theory	58	2	-	4

Preamble

This course helps to gain insights into the multifaceted landscape of international trade, export procedures and promotional councils, and the intricate web of global commerce.

Course Learning Outcomes.

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand international trade theories and concepts	K1
CLO2	Explain the regulatory requirements, including customs procedures and import/export restrictions, that impact international trade	K2
CLO3	Demonstrate proficiency in preparing and processing essential trade documents.	K3
CLO4	Understand the role of promotional councils and financial institutions in facilitating international trade transactions.	K3
CLO5	Evaluate the significance of regional trade agreements and their effects on participating countries.	K6

Mapping with Programme Learning outcomes.

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	M	S	S
CLO2	S	M	M	S	S
CLO3	S	S	M	S	S
CLO4	S	S	M	S	S
CLO5	S	M	M	S	S

S – Strong; M – Medium

Syllabus .

Unit I

11 Hours

Need for international trade–features–advantages–problems of foreign trade.

International trade documents - regulatory frame work – foreign trade documents – regulatory and commercial documents –letter of credit–contract terms and export documents-GRI standards in the apparel industry-Impact and certification.

Unit II**12 Hours**

WTO - globalization – EXIM policy – regional trade agreements – current trends in international trade. Export order execution - steps in export procedure, risks involved in documentation procedure, customs clearance. Export risk management, export barriers-tariff and non tariff barriers.

Unit III**11 Hours**

Export procedures-getting established as an exporter-entering in to export contract-execution-post shipment procedures –export promotion measures –incentive and facilities to exporters. Import procedures - import process – customs clearance for imports –role of custom and exercise in international trade.

Unit IV**12 Hours**

Multi fiber agreement and bilateral textile agreements signed by India with importing quota countries. Government of India's export entitlement policy on garment exports. Export firm nature of export firm, setting up of an export firm, export licensing, registration formalities –registrations with RBI, EPC, DGFT, commodity boards, income tax and customs authorities.

Unit V**12 Hours**

Role of export promotional councils, commodity boards, ECGC, role of commercial banks, establishment & significance of SEZ & EPZ, availing concessions and incentives under various export promotion schemes, duty drawback, subsidies. Trade blocs: Effects of trade blocs on world trade, major trade blocs– EU, ASEAN and NAFTA

Text Books :

S.NO	Name of the Authors	Title of the book	Publishers	Year and Edition
1.	Aseem Kumar	Export and import management	Excel Books	2007, 1 st edition
2.	Francis Cherunilam	International Trade and Export Management	Himalaya publishing house	2008, 21 st revised edition
3.	Bala Gopal	Export Management	Himalayan Publications	2016 1 st edition

Reference Books:

S.NO	Name of the Authors	Title of the book	Publishers	Year and Edition
1.	Darlie O. Koshy	Garment Exports	Prentice 'Hall	2006
2.	Sudhir Kochhar	Export Import Procedures and Documentation,	Gullybaba Publishing House	2012
3.	Agarwal Raj	Indian Foreign Trade	Excel Books	2002, 1 st Edition

E – Journals :

- Fashion and Textiles
- The Textile Association
- Trends in Textile Engineering & Fashion Technology
- Textile World

Name of the course	International Trade and Documentation
Name of the Faculty	Dr. S. Thamarai Selvi
Participatory learning	30%
Experimental learning	30%
Problem based learning	40%

Pedagogy .

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar, demonstration.

Course Designer.

Dr.R.Radhika

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD2403	APPAREL PRODUCTION PLANNING AND CONTROL	Theory	58	2	-	4

Preamble

This course provides a holistic understanding of apparel manufacturing, emphasizing efficiency, quality, and emerging advancements

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the basic techniques of production control in apparel industry.	K2
CLO2	Describe the pre-production functions and product development process.	K2
CLO3	Identify the production systems for apparel industry based on style and quantity of merchandise.	K3
CLO4	Determine the capacity planning and line balancing techniques to achieve balanced production.	K4
CLO5	Prepare the flow process grids and scheduling charts for production control and explain the cut order planning and control forms for apparel industry.	K5

Mapping with Programme Learning outcomes.

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	S	S	S	S
CLO3	S	M	S	M	S
CLO4	S	M	S	S	S
CLO5	S	S	S	M	S

S – Strong; M – Medium

Syllabus

Unit I

12 Hours

Apparel Manufacturing Industry-Nature and Scope. Major functions of apparel manufacturing Engineering and Management functions. Material flow in apparel industry. Introduction to core concepts of apparel production, evolution of apparel production processes mass production concepts and standardization of sizing. Various production systems practiced in India and their application for different apparel products, emerging trends in apparel production processes.

Unit II

12 Hours

Production Planning and control-objectives, levels, functions and strategies. Production control-objectives, importance and functions. Role of production planning and control department in apparel industry. Productivity-concept, measuring productivity and characteristics. 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-Pre and post production.

Unit III

12 Hours

Spreading, cutting and sewing-Apparel production processes - Introduction to garment cutting, marker planning, efficiency of marker, methods of marker planning, and spreading of the fabric to form a lay, spreading requirements, methods of spreading, objectives of cutting, and methods of cutting. Automation in spreading, cutting and sewing. Robotics for 3D sewing operations. Stitches and classification, seam and seam classification, seam and seam stitch defect analysis.

Unit IV

11 Hours

Finishing, quality checking and packing-apparel finishing importance of garment pressing and finishing, types of garments, pressing of garments and specialty garment finishes. Quality checking - inspection, interactive bar coding, needle detection. Packaging and warehousing - types of packing and packing materials, quality specification, merchandise packing and shipping packing, intra transport, warehousing. Computerized storage systems, automation in material handling

Unit V

11 Hours

Capacity planning and innovative trends-Determination of machinery requirements for a new factory, calculation of labour requirements, application of line balancing techniques, balance control. Advanced tools and equipment in industrial engineering. Innovative trends and challenges in apparel production - IT applications in capturing motion economy and time measurement, lowering energy consumption and minimizing environmental impact

Text Books:

S.No	Name of the Authors	Title of the book	Publishers	Year and Edition
1.	Chuter A J	Introduction to Clothing Production Management	Blackwell Publishing	1995, 2 nd edition
2.	K. Sukumar & G.S.Sivakumar	Apparel Quality Control for Garment /Apparel Technology	S.S.M.I.T.T, Students Co - operative Stores Ltd	2007
3.	Seema Kapoor	Apparel Manufacturing Technology	Sonali Publications	2012, 1 st edition

Reference Books:

S.N O	Name of the Authors	Title of the book	Publishers	Year and Edition
1.	K. Shridhara Bhat	Production and operations management	Himalaya publishing house	2011, 1 st edition
2.	K. Sukumar & G. S. Sivakumar	Garment Technology	S.S.M.Institute of Textile Technology & Polytechnic College	2008, 1 st edition
3.	Gordana Colovic	Management of Technology System in Garment Industry	Woodhead Publishing	2010, 1st edition
4.	I. R. Mutusamy & V. Ilango	Technology of fabric manufacture -	S.S.M.I.T.T, Students co - operatives stores ltd	2007

E-Journals

- Autex Research Journal
- Fashion and Textiles
- Industrial Textile
- Journal of Engineered Fibers and Fabrics

- Journal of Fashion Technology & Textile Engineering
- Journal of Textile and Apparel, Technology and Management
- Textile World
- Trends in Textile Engineering & Fashion Technology
- Journal of Textile Engineering and Fashion Technology

Name of the course	Apparel Production Planning and Control
Name of the Faculty	Dr.Tryphena R
Participatory learning	40%
Experimental learning	27%
Problem based learning	33%

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment,quiz, peer learning, seminar.

Course Designer

Dr.R.Radhika

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD24P01	CREATIVE DRAPING LAB	Practical		-	90	3

Preamble

This course analyse and understand the fabric structures, to translate draping concepts and various draping techniques into silhouettes forms.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Apply intermediate draping techniques to create complex garment components.	K2
CLO2	Demonstrate proficiency in basic draping methods	K3
CLO3	Analyze and experiment with asymmetrical draping techniques.	K3
CLO4	Integrate unconventional materials and found objects into draping projects.	K5
CLO5	Reorganize draping with other design elements, with various design embellishments and surface embellishments.	K6

Mapping with Programme Learning outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	M	M	S	M	S
CLO2	M	S	S	S	S
CLO3	S	M	S	S	S
CLO4	S	S	S	S	S
CLO5	S	S	S	M	S

S – Strong; M – Medium

Syllabus .

1. Effect of fabric on forms for skirts - Type of fabric -Wovens, knits, Non wovens, non-textile- leather, paper, fusion of materials **6 Hours**
2. Weight of fabric - light weight, medium weight and heavy weight. **6 Hours**
3. Effect of fabric on forms for skirts - Types of silhouettes - bell and balloon, circle and triangle. **10 Hours**
4. Intermediate draping - Skirts- Kilt and pegged, Dirndl, yoke with flare and flounces. **18 Hours**
5. Intermediate draping - Blouses –Bustier, peasant with in corporation of collar and sleeve by draping technique. **13 Hours**
6. Intermediate draping - Blouses –Gibson girl with in corporation of collar and sleeve by draping technique. **10 Hours**
7. Intermediate draping - Pants -Harem, hakama and wide leg pants. **9 Hours**
8. Advanced draping - Asymmetrical and biased drapes. Gowns - Shift and empire **18 Hours**

Text Books :

S.No	Name of the Authors	Title of the book	Publishers	Year and Edition
1.	Kamal Khurana	Draping and Pattern Making	Sonali Publications	2012,5 th edition
2.	Manmeet Sodhia	Advanced Drafting and Draping	Kalyani Publishers	2014 edition
3.	Draping For Apparel Design	Armstrong	Bloomsbury Publishing India Private Limited; 3rd edition	2013,3rd edition

Reference Books

S.No	Name of the Authors	Title of the book	Publishers	Year and Edition
1.	Hisako Sato	Drape Drape2: Now in English	Laurence King Publishing	2012, 2 nd edition
2.	Karolyn Kiisel	Draping the complete course	Laurence King Publishing.	2020, 2 nd edition
3.	Connie Amaden-Crawford,	Art of fashion draping	Fairchild Books	2004,3 rd edition

E Journals:

- Fashion Studies
- Trends in Textile Engineering & Fashion Technology
- Textile World

Name of the course	Creative Draping Lab
Name of the Faculty	Dr.Tryphena R
Participatory learning	20%
Experimental learning	60 %
Problem based learning	20%

Pedagogy .

Lecture by chalk and talk, power point presentation, e-content, group discussion, peer learning, demonstration.

Course Designer.

Dr.R.Radhika

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD24P02	VIRTUAL DESIGN LAB	Practical	-	-	90	3

Preamble

To develop the knowledge on creativity and technology converge to create digital experiences in the dynamic domain of virtual design for apparel industry.

Course Learning Outcomes

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

CLO NUMBER	CLO Statement	CLO LEVEL
CLO1	Identify with practical application in fabric woven design using both draft view and 3D representation techniques.	K1
CLO2	Apply design principles and techniques to develop original silhouette concepts and innovation into the design process.	K3
CLO3	Experiment the efficiency and productivity of fabric lay operations using performance metrics.	K3
CLO4	Analyse the efficiency and effectiveness of tech pack creation processes, identifying opportunities, optimizing and reducing time-to-market.	K4
CLO5	Generate the impact of accurate and well-organized spec sheets on overall product development timelines, manufacturing efficiency, and product quality.	K5

Mapping with Programme Learning outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	M	S	S	S
CLO2	S	M	S	S	S
CLO3	S	M	S	S	S
CLO4	S	M	S	S	S
CLO5	S	M	S	S	S

S – Strong; M – Medium

Syllabus

1. Fabric woven design using draft view and 2D representation. **5 Hours**
2. Motif's development -Symmetrical/Asymmetrical, Balanced/Unbalanced repeat (arrangements) 3/4 drop, 1/2 drop H/V, 1/3 drop H/V - 5 designs. **10 Hours**
3. Label designing and Logo designing for apparel based on theme. **5 Hours**
4. Design and development silhouettes for Kids- Party Wear. **10 Hours**
5. Design and development silhouettes for Women/Men - Official Wear. **10 Hours**
6. Design and patterns development for Kids and Women / Men with marker plan **20 Hours**
7. Create a tech pack for kids wear, Women's wear /Men's wear -
Pattern making, Grading and Marker planning. **20 Hours**
- 8 Create spec sheet for Kids /Women /Men wear - Ethnic wear. **10 Hours**

Reference Book

S.NO	Name of the Authors	Title of the book	Publishers	Year and Edition
1.	The Secretary, Central Board of Secondary Education, Shiksha Kendra, 2, Community Centre	Modern Heavy Neck Designs on Transparent Sheets	Fashion & Arts Communications	2007, 1 st edition
2.	Elisabetta Kuky Drudi	Figure Drawing for Fashion Design	Pepin Press Design Books	2002, 2 nd edition

3.	Meenakshi Narang	Fashion Technology Hand Book	Asia Pacific business Press Inc	2003,1st, edition
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E – Journals

- Art and Design Review
- Fashion and Textiles
- Textile World
- The Textile Association
- Trends in Textile Engineering & Fashion Technology

Name of the course	Virtual Design Lab
Name of the Faculty	Mrs. M.Malini Devi
Participatory learning	20%
Experimental learning	70 %
Problem based learning	10%

Pedagogy.

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar, demonstration.

Course Designer

Dr.R.Radhika

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD24P03	NEW PRODUCT DESIGN DEVELOPMENT – FUNCTIONAL CLOTHING LAB	Practical	-	-	90	3

Preamble

This course explores the details of design development and product marketing across various industries and shaping the future of functional and specialized apparel sectors

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Describe the design principles and development processes	K2
CLO2	Interpret specialized fabrics, features, and construction techniques suitable for work environments.	K3
CLO3	Discriminate product development process for raw material to finish the product.	K4
CLO4	Create innovative designs for functional wear that blend functionality, comfort, and professionalism	K5
CLO5	Asses the adaptive features and user-centered design principles for specialized apparel.	K6

Mapping with Programme outcomes.

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	M	S	S	S
CLO3	S	S	S	S	S
CLO4	S	M	S	S	S
CLO5	S	S	S	S	S

S – Strong; M – Medium

Syllabus

1. Design development – Industrial corporate wear **5 Hours**
2. Prototype development and marketing – Industrial corporate wear **5 Hours**
3. Design development – Protective/medical work wear **10 Hours**
4. Prototype development and marketing – Protective/medical work wear **10 Hours**
5. Design development – Military uniform **10 Hours**
6. Prototype development and marketing – Military uniform **10 Hours**
7. Design development – Sportswear and Prototype development and marketing - Sportswear **20 Hours**
8. Design development – Clothing for special needs and Prototype development and marketing – clothing for special needs **20 Hours**

Design development includes:	• Theme/ Topic selection • Purpose/ use of design • Research/ Review of literature • Flat sketch development • Selection of fabric, colours, trims and accessories
Product development and marketing includes:	• Proto type/ model development • Preparation of mood board and client board • Preparation of look book/ promotional design • Development of business plan • Pricing and Marketing strategy

Text Books:

S.NO	Name of the Authors	Title of the book	Publishers	Year and Edition
1	M.G. Mahaderan	Dictionary of Textiles	Abhishek Publications	2012, 1 ST edition
2	Singh	Fabric Studies	Kalyani Publishing	2009
3	Dr. Neelima	Fashion and Textile Design	Sonali Publications	2009 1 ST edition

Reference Books:

S.NO	Name of the Authors	Title of the book	Publishers	Year and Edition
1.	Manmeet Sodhia	Design Studies	Kalyani Publishing	2015 1 ST edition
2.	Usha Kulshrestha & Radha Kashyap	Clothing Behavior	Pointer Publishers	2007
3.	Kamal Khurana	Fabrics for fashion and textile design	Sonali publications	2012 1 ST edition

E – Journals:

- Autex Research Journal
- Fashion and Textiles
- International Journal of Textile Science
- Journal of Fashion Technology and Textile Engineering
- Journal of Textile and Apparel, Technology and Management
- Journal of Textile Engineering and Fashion Technology
- Textile World
- Textiles
- Technical Textile

Name of the course	New Product Design Development Functional Clothing Lab
Name of the Faculty	Dr. Tryphena R
Participatory learning	20%
Experimental learning	70 %
Problem based learning	10%

Pedagogy .

Lecture by chalk and talk, power point presentation, e-content, group discussion, peer learning, demonstration

Course Designer .

Dr.R.Radhika



DEPARTMENT OF COSTUME AND APPAREL DESIGN

PROGRAMME: M.Sc. FASHION AND APPAREL DESIGN

CHOICE BASED CREDIT SYSTEM (CBCS)&

LEARNING OUTCOMES- BASED CURRICULAR FRAMEWORK (LOCF)

(SEMESTER –II)

M.Sc. FASHION AND APPAREL DESIGN

2024-2026 Batch

PROGRAMME LEARNING OUTCOMES (PLO's)

After completion of the programme, the student will be able to

- **PLO1:** Understand diverse cultural influences and market demands of apparel industry
- **PLO2:** Create innovative functional and aesthetic apparels and accessories.
- **PLO3:** Design apparels with advance digital tools and technologies
- **PLO4:** Research and analyze textile and fashion trends
- **PLO5:** Apply knowledge and skill in the fashion field and promote entrepreneurship.

PROGRAMME SPECIFIC OUTCOMES (PSO's)

The students at the time of graduation

- **PSO1:** Graduates can function independently with their innovative and creative skills
- **PSO2:** Graduates will be able to meet the current requirements of apparel Industries
- **PSO3:** Graduates can undertake research /projects for new product development

M.Sc. FASHION AND APPAREL DESIGN
CHOICE BASED CREDIT SYSTEM (CBCS)&
LEARNING OUTCOMES- BASED CURRICULAR FRAMEWORK (LOCF)
SYLLABUS & SCHEME OF EXAMINATION
BATCH 2024-2026 ONWARDS, SEMESTER –II

Programme and Branch: M.Sc. Fashion and Apparel Design

SEM	Course Code	Title of the Course	Course type	Instruction hours/week	Contact hours	Tutorial Hours	Duration of Examination	Examination Marks			Credits
								CA	ESE	TOTAL	
II	MFD2404	Technical Textiles and its application	CC	5	73	2	3	25	75	100	4
II/ III	MFD24CE /	Sustainable Product Development /	CC	3	45	-	-	100	-	100	3
	MFD2405	Computer Integrated Manufacturing in Apparel Industry			43	2	3	25	75		
	MFD2306	Apparel Manufacturing Machinery	CC	5	73	2	3	25	75	100	4
	MFD24P04	Woven Design and Development lab	CC	5	75	-	3	25	75	100	3
	MFD24P05	Accessories for Fashion Ensemble	CC	5	75	-	3	25	75	100	3
	MFD24E01/ MFD24E02/	1. Global Marketing and Sourcing Strategies/	DSE	3	43	2	3	25	75	100	3

	MFD24E03	2. Sports and Smart Textiles / 3. Sustainable Apparel Design and Development									
	MFD24A1	IDC Fashion Retail Management	GC	4	60	-	3	-	100	100	4
I-III	17MONL1	Online Course 1	ACC	-	-	-	-	-	-	-	completion certificate

CC-All Core Courses

GC-IDC Interdisciplinary Course

DSE-Discipline specific elective

CA – Continuous Assessment **ESE** - End Semester Examination

Gr-Grade **ACC**- Online Course 1

Job Oriented Course:

Students can opt for Job-Oriented Courses (JOC) offered by various departments at our college, focusing on skill development and industry-relevant training to enhance career opportunities.

Note: Coursera courses will be scheduled on a rotational basis between II and III semesters.

(if not offered in II semester, students will take up theory paper and complete course era course in III semester)

Coursera Course: Sustainable Product Development/ MFD24CE

Sl.no	Course title	Link to the course	Duration (Hours approx)
1	Design thinking for innovation	https://www.coursera.org/programs/psgr-faculty-learning-program-1luew/learn/uva-darden-design-thinking-innovation?source=search	7
2	Creative Design, Prototyping, and Testing	https://www.coursera.org/programs/psgr-faculty-learning-program-1luew/learn/creative-design-prototyping-testing?fromClip=sfc_page_course_link~rCnE8	11
3	Sustainable Textile Manufacturing	https://www.coursera.org/programs/psgr-faculty-learning-program-1luew/learn/sustainable-textile-manufacturing?source=search	13
4	Foundations of Project Management	https://www.coursera.org/programs/psgr-faculty-learning-program-1luew/learn/project-management-foundations?source=search	17

QUESTION PAPER PATTERN 24-26Batch

Question Paper Pattern and distribution of marks PG- Core and Allied- (First 3 Units)

CA Question from each unit comprising of

One question with a weightage of 2Marks	2 x 3 = 6
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	5 x 3 =15
One question with a weightage of 8 Marks (Internal Choice at the same CLO level)	8x3=24
Total	45 Marks

End Semester Examination–Question Paper Pattern and Distribution of Marks

PG-Core and Allied courses:

ESE Question Paper Pattern: 5x15=75Marks

Question from each unit comprising of

One question with a weightage of 2 Marks	2 x 5=10
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	5 x 5 =25
One question with a weightage of 8 Marks (Internal Choice at the same CLO level)	8 x 5 =40
Total	75 Marks

Continuous Internal Assessment Pattern

Theory

I Year UG / PG (23 Batch)

CIA Test	:	5 marks (Conducted for 45 marks after 50 days)
Model Exam	:	7 marks (Conducted for 75 marks after 85 days (Each Unit 15 Marks))
Seminar/Assignment/Quiz:		5 marks
Class Participation	:	5 marks
Attendance	:	3 marks
Total		25 Marks

Practical

Lab Performance	:	7marks
Regularity	:	5marks
Model Exam	:	10marks
Attendance	:	3marks
Total	:	25 marks

ESE Practical Pattern

The End Semester Examination will be conducted for a maximum of 75 marks with a maximum 15 marks for the record and other submissions if any.

Attendance component in CA

91-100% attendance: 3 Marks

81-90% attendance : 2 Marks

75-80% attendance : 1 Marks

MAPPING OF PLOS WITH CLOS

COURSE	PROGRAMME LEARNING OUTCOMES				
	PLO1	PL02	PL03	PLO4	PLO5
	COURSE CODE MFD2404				
CLO1	S	S	M	S	S
CLO2	S	S	S	S	S
CLO3	M	S	S	S	S
CLO4	M	M	M	S	S
CLO5	S	S	S	S	S
	COURSE CODE MFD2405				
CLO1	S	S	S	S	S
CLO2	S	M	S	S	S
CLO3	S	S	S	S	S
CLO4	M	M	M	M	M
CLO5	S	S	S	S	M
	COURSE CODE MFD2306				
CLO1	S	S	S	S	S
CLO2	S	M	S	S	S
CLO3	S	S	S	S	S
CLO4	M	M	M	M	M
CLO5	S	S	S	S	M
	COURSE CODE MFD24P04				
CLO1	M	S	S	S	S
CLO2	M	S	S	S	S
CLO3	S	S	S	S	S
CLO4	S	S	S	S	S
CLO5	S	S	S	S	S
	COURSE CODE MFD24P05				
CLO1	S	S	S	S	S
CLO2	S	S	S	M	S
CLO3	S	M	S	S	S
CLO4	S	S	M	S	S
CLO5	S	S	S	S	S
	COURSE CODE MFD24E01				
CLO1	S	S	S	S	S
CLO2	S	M	S	M	S
CLO3	S	S	M	S	M
CLO4	S	S	S	S	S
CLO5	S	M	S	S	S

COURSE	PROGRAMME LEARNING OUTCOMES				
	PLO1	PL02	PL03	PLO4	PLO5
	COURSE CODE MFD24E02				
CLO1	M	M	S	S	S
CLO2	M	M	S	S	S
CLO3	M	S	S	S	S
CLO4	M	S	S	S	S
CLO5	S	S	S	S	S
	COURSE CODE MFD24E03				
CLO1	S	S	M	S	S
CLO2	S	S	S	S	S
CLO3	M	S	S	S	S
CLO4	M	M	M	S	S
CLO5	S	S	S	S	S
	COURSE CODE MFD24A1				
CLO1	S	S	S	S	S
CLO2	S	M	S	S	S
CLO3	S	S	S	S	S
CLO4	M	M	M	M	M
CLO5	S	S	S	S	M

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD2404	SEMESTER – II TECHNICAL TEXTILES AND ITS APPLICATION	Theory	73	2	-	4

Preamble

This course introduces key concepts of fibers and materials used in technical textiles and its applications for diverse industries

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the basics of technical textiles, and their scope, in the relative fields	K1
CLO2	Analyze the properties and uses of technical textiles.	K2
CLO3	Explore the different types of technical textiles and their applications.	K4
CLO4	Assess the specific role of technical textiles in the industrial sector.	K4
CLO5	Explore recent advancements and innovations in technical textiles.	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	M	S	S
CLO2	S	S	S	S	S
CLO3	M	S	S	S	S
CLO4	M	M	M	S	S
CLO5	S	S	S	S	S

S- Strong; M-Medium

Syllabus

UNIT I

14 Hours

Technical textiles - Introduction, definition, scope, classifications, applications, growth and development - future of technical textiles, global technical textiles market, Indian technical textiles market. National technical textiles mission and its role in promoting technical textiles. Fabric structure for technical textiles – woven and non - woven. Electrospinning, 3d weaving and textile applications. Upcoming techniques - fiber, yarn and fabric formation. Centre of excellence for technical textiles.

UNIT II**15 Hours**

Industrial and package textiles - Industrial textiles - introduction, definition, types – decatising cloth, bolting cloth, absorbent glass mat battery separators, cigarette filter. Indu-tech products - coated abrasives conveyor belts, drive belt, ropes and cordages, printed circuit boards, computer printer ribbon, paper making fabrics - filtration products. Package textiles - polyolefin woven sacks, flexible intermediate bulk containers (FIBC), tarpaulins, leno bags, lamination, jute hessian and sacks, soft luggage products, teabags, carpet backing cloth. Textile reinforced compositematerials and their applications.

UNIT III**14 Hours**

Geo and filtration textiles - Geo textiles - Introduction, fibers used, types, functions, properties, characteristics and applications in its field, structure and performance, non-polymeric fibres, high performance synthetic fibers, newer fibers. Geosynthesis - essential properties of geo- textiles, geo-textiles for soil strengthening, standards for geo-textiles. Filtration textiles- introduction, nano-technical fibres, filters for air pollutants, pollutant capture mechanism, dust collection, fabric construction, solid liquid separation.

UNIT IV**15 Hours**

Protective textiles, Indu tech and agro textiles - Introduction, fibers used, types, functions, properties, characteristics and applications – fire protective clothing, heat-resistant garments, waterproof materials, ballistic resistant vests, biological and chemical vests, military protective clothing. Smart polymers used in protective clothing. Indutech - introduction, fibers used types, functions, properties, characteristics and applications in its field. Agro textiles- definition, types, applications - greenhouse cover, capillary mats, fishing nets, nets for plants, root-less plants and protecting grassy areas, sun-screens, wind-shields and anti-bird nets.

UNIT V**15 Hours**

Medical textiles, sports textiles, smart and intelligent textiles – Medical textile – Introduction – features - classifications and applications - Sports textiles - Introduction, fibers used, types, functions, properties, characteristics and applications of sports tech. Smart and intelligent textiles – classification - active smart, passive smart and very smart textiles, phase change materials, shape memory polymers, chromic and conductive materials and its applications in various wearable technology.

TEXT BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	Gopalakrishnan D & P. Vinayagamurthi	Technical Textiles	Daya Publishing House	2020
2.	Dr. S. Periyasamy Dr. G. Thilagavathi	. Industrial Textiles	Wood head Publishing India	2020
3.	Robert M Koerner	Designing with Geosynthetics	Prentice hall Inc	2012
4.	Gopalakrishnan. D & Karthick .T	Home Textiles	Daya Publishing House	2020

REFERENCE BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	K.P. Chellamani, Debasis Chattopadhyay	Yarns and technical textiles	The South India Textile Research Association	1999
2.	Anita Tyagi	Textiles for Apparel and Home Furnishings,	Sonali Publications	2011
3.	D. Jothi	Textile web Processing	S.S.M.I.T.T, Students Co-operative Stores Ltd	2011

E – Journals

- Autex Research Journal
- International Journal of Textile Science
- Journal of Engineered Fibers and Fabrics
- Journal of Fashion Technology & Textile Engineering
- Journal of Textile and Apparel, Technology and Management
- Technical Textile
- Textile World
- Textiles
- Journal of Textile Engineering and Fashion Technology

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr.M. Malini Devi & Dr.R.Tryphena

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD2405	SEMESTER - II COMPUTER INTEGRATED MANUFACTURING IN APPAREL INDUSTRY	Theory	43	2	-	3

Preamble

This course offers a comprehensive exploration of design software for woven, knitted, and printed textiles in computer-aided fashion design systems and the usage of CAD and CAM systems in apparel industries.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Define the basics of computer-integrated manufacture in apparel sector.	K1
CLO2	Explain the concept of CIM and its importance in apparel manufacture.	K2
CLO3	Explore applications of new technologies in apparel production.	K3
CLO4	Describe CAD and CAM systems in apparel design and pattern making.	K5
CLO5	Assess automation in apparel manufacturing and management systems.	K6

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	M	S	S	S
CLO3	S	S	S	S	S
CLO4	M	M	M	M	M
CLO5	S	S	S	S	M

S- Strong; M-Medium

Syllabus

UNIT I

9 Hours

Introduction to the operation of design software for woven, knitted and printed textiles.
Computer aided fashion design system - Tools, manipulating techniques. Knowledge based system -
Introduction to image processing and imaging system - Fabric and sewing defect identification using
image processing - Artificial neural networks.

UNIT II**9 Hours**

3D body scanning- digitizing- grading and lay planning system - Introduction to graphic interface of the software-tools and functions used for pattern making, grading and marker planning.

UNIT III**8 Hours**

Preparation of virtual dummies, texture mapping, 2D and 3D draping, 3D modeling, E-fit analysis, animation, prototyping – virtual and rapid. Made to measure systems. Application of Artificial Intelligence - Augmented reality and virtual reality.

UNIT IV**9 Hours**

Applications of computer integration in fabric cutting, spreading and labeling machines. Computer aided special purpose sewing machine with control panels – pre-programmed options. Computer controlled embroidery machines. Digitalized colour communication – ZED. computerized color matching system.

UNIT V**8 Hours**

Application of electronically transfer documents - EDI - selection of line - control system - data base management system. Automatic material handling, storage, tracing and retrieval system. Applications of e-commerce and management information system -MIS in apparel industry, supply chain planning.

TEXT BOOKS

:

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	Henry Webber	Computer – Integrated Manufacturing	NY Research Press	2020
2.	Alison Beazley & Terry Bond	Computer aided pattern design and product development	Wiley-Blackwell	2009
3.	Jinlian Hu	Computer Technology for Textile and Apparel	Woodhead Publishising	2011

REFERENCE BOOKS

:

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	S.Sugumar& P Muthu kumarasamy	A computerized system for marker making in garment industry	The South India Textile Research Association	2009
2.	Kevin Tallon	Digital fashion illustration	Batsford publications	2008

3.	Tracy Diane and Tom Cassidy	Colour forecasting	Blackwell publishing	2005
4.	V. Ramesh Babu	Industrial Engineering in Apparel Production	WPI Publishing	2012
5.	N.Vasugi raja	Computer applications in apparel industry	Pranav Publication	2011

E -Journals

- Fashion and Textiles
- Industrial Textiles
- Journal of Fashion Technology & Textile Engineering
- Textile World
- Textiles
- Journal of Textile Engineering and Fashion Technology

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr. R.Tryphena & Dr.M.Malini Devi

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD2306	SEMESTER – II APPAREL MANUFACTURING MACHINERY	Theory	73	2	-	4

Preamble

This course provides insights into the fundamentals of machinery used in the apparel industries

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand fabric spreading methods, machines, and marker planning techniques.	K1
CLO2	Explain the functions and maintenance of cutting machines.	K2
CL	Describe the basic concepts of sewing machine and common defects and remedies.	K3
CLO4	Analyze the fundamental concepts of special sewing machines and their maintenance.	K4
CLO5	Discuss the latest developments in apparel production.	K6

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	M	S	S	S
CLO3	S	S	S	S	S
CLO4	M	M	M	M	M
CLO5	S	S	S	S	M

S- Strong; M-Medium

Syllabus

UNIT I

14 Hours

Spreading machines - Types of fabrics – one way – two-way fabrics – their effect on spreading. Methods of fabric spreading, spreading equipments – computerized spreaders. Marker planning, marker efficiency, factors affecting marker efficiency. Marker duplicating methods – computer aided marker making.

UNIT II

15 Hours

Cutting machines - Introduction to cutting machines. Types and functions of cutting machines – straight knife, round knife, band knife cutting machines. Notches, drills, die cutting machines, computerized cutting machines. Maintenance of cutting machines. Common defects in cutting and their remedies, latest

developments.

UNIT III

15 Hours

Sewing machine - basic parts of sewing machine – primary and auxiliary parts and their functions. Bobbin case/bobbin hook, throat plate – take up devices – tensioners –feed dog – pressure foot. Types of needles – parts of needles and their function. Adjustments of stand height – pedal –needle bar – stitch length selection – feed timing– needle and bobbin thread tension –stitch cycle timing diagram. Common defects and remedies. Special attachments in sewing machines – guides, folders, stackers, trimmers, ziggers.

UNIT IV

15 Hours

Multithread sewing machines - over lock machines - types of over lock machines. Parts and their functions. Threading diagram for over lock machines. Stitch cycle diagram for over lock machines – adjustment of needle height, feed dog height, angle, differential feed ratio and position of upper and lower knives, loopers. Flat lock machines – types, parts and their functions. Threading diagram of flat lock machines – stitch cycle diagram. Adjustment of parts – needle height, feed dog height, differential feed ratio, loopers. Maintenance of flat lock machines, defects and remedies.

UNIT V

14 Hours

Special purpose sewing machines – Introduction to different special purpose sewing machines. Basic working of feed of arm, button hole sewing, button sewing, bar tack, blind stitch machines. Embroidery sewing machines. Sewing machine maintenance – maintenance schedule for various machines, maintenance audit. Latest developments in apparel manufacturing machineries.

TEXT BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	Rathinamoorthy R	Apparel Machinery and Equipment	Woodhead Publishing	2015
2.	R. M. Jones	The Apparel Industry	Wiley-Blackwell	2006
3.	CARR & LATHAM'S	Technolgy of Clothing Manufacture	Wiley-Blackwell	2008

REFERENCE BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	K. Sukumar, G.S. Sivakumar	Clothing Machinery Equipments	S.S.M. Institute of Textile Technology & Polytechnic College	2008
2.	Seema Kapoor	Apparel manufacturing technology	Sonali publications	2009
3.	Gardana colovic	Management of Technology Systems in Garment Industry	Woodhead Publishing Limited	2010
4	V. Ramesh babu	Industrial engineering in apparel production	WPI Publishing	2012

E -Journals

- Fashion and Textiles
- Industrial Textiles
- International Journal of Textile Science
- Journal of Fashion Technology & Textile Engineering
- Journal of Textile Engineering and Fashion Technology
- Journal of Textile and Apparel, Technology and Management
- Textile World

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Ms.A.Jasira banu & Dr.M.Malini Devi

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD24P04	SEMESTER – II WOVEN DESIGN DEVELOPMENT LAB	Practical	-	-	75	3

Preamble

This course explores the fundamental construction principles of developing textile materials using different types of basic weaves.

Course Learning Outcome

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the structure and specifications of various weaves	K1
CLO2	Clarify accurate drafts and peg plans for each weave type	K2
CLO3	Assess the difference between various weave structures and its applications	K3
CLO4	Analyze skills to create a variety of weave designs by the use with different materials and techniques.	K4
CLO5	Develop the creative and technical skills to create new product development which incorporates multiple weave techniques.	K5

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	M	S	S	S	S
CLO2	M	S	S	S	S
CLO3	S	S	S	S	S
CLO4	S	S	S	S	S
CLO5	S	S	S	S	S

S- Strong; M-Medium

Syllabus

Prepare the following weaves, including design, drafting, peg plan, and specifications for each type of weave.

- | | |
|---------------------------|---------|
| 1. Plain weave | 8 Hours |
| 2. Twill weave | 8 Hours |
| 3. Satin and Sateen weave | 8 Hours |

4. Herringbone weave 8 Hours
5. Basket weave 8 Hours
6. Honey comb weave 8 Hours
7. Huck-a-back weave 8 Hours
8. Tassels (any 3 varieties) 8 Hours
9. Deign and Product development: 11 Hours
 - Design and develop a wall hanging that incorporates different weaves, colors and textures.
 - Creation of products, Photoshoot, Compose the above details as design sheets

REFERENCE BOOKS :

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	Zena Thorpe	Handweaving and Cloth Design	Dover Publications	2004
2.	Iderman, Sharon	<i>Mastering Weave Structures</i>	Interweave Press	2004
3.	Janet Phillips	<i>Exploring Woven Fabrics</i>	School of Textile Design	2008
4.	Sam Wild	The Way of the Weaver: Patterns and Practice	Loom works Publishing	2020

E – Journals:

- Textile Research Journal
- Textiles and Clothing Sustainability
- International Journal of Clothing Science and Technology
- Coloration Technology

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, peer learning and demonstration.

Course Designer

Dr. Indumathi & Ms. A. Jasira Banu

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD24P05	SEMESTER – II ACCESSORIES FOR FASHION ENSEMBLE	Practical	-	-	75	3

Preamble

This course helps to explore the art of designing and crafting a variety of fashion accessories, culminating in a presentation of the styled creations.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the fundamental principles of accessory designing	K1
CLO2	Identify the suitability of textile/materials for accessory development	K2
CLO3	Apply creative thinking to repurpose and upcycle materials for accessory creations.	K3
CLO4	Develop patterns and accessories to compliment clothing ensembles	K4
CLO5	Compile the different aspects of design and product development into design sheets	K5

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	S	S	M	S
CLO3	S	M	S	S	S
CLO4	S	S	M	S	S
CLO5	S	S	S	S	S

S- Strong; M-Medium

Syllabus

Design and develop the following items with own ideas, materials and creativity

- | | |
|-------------------------------|----------|
| 1. Scarf or stole | 7 Hours |
| 2. Tie or muffler (neck band) | 7 Hours |
| 3. Hat or cap | 10 Hours |

4. Gloves or mittens 10 Hours
5. Belt or suspenders 7 Hours
6. Tote bag or clutch 7 Hours
7. Pouch or wallet 7 Hours
8. Design creation - Any one of the above products or accessory to be developed from recycled/biodegradable/sustainable materials 10 Hours
 - Selection of theme and research
 - Mood board
 - Colour board
 - Flat and illustration board
9. Design sheet development – The selected theme/ designs to be used as basis for design composition 10 Hours
 - Product development
 - Photoshoot
 - Composition as design sheets

Instruction to students

- Material selection should include recycled/biodegradable/sustainable materials for selected items
- Design development for each experiment should have five illustrations as flats one selected design to be developed as technical pattern and final product
- Design sheets should be in digital format
- Incorporation of techniques like crochet, knitting, tatting, macrame, tie and dye, batik and others in accessory development.

REFERENCE BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	Patrick John Ireland	New encyclopedia of fashion details	Om book international	2008
2.	Anmol Roy	Fashion Designing of Clothes and Ornaments	Sonali Publications	2011
3.	Aldred F. Basker	Ornamentation and textile design	Abhishek Publications	2009
4.	Jay Diamond & Ellen Dimaond	Fashion apparel, accessories, & home furnishings	Dorlinkindersley (India) pvt ltd	2006
5.	Bina Abling & Phyllis Tortora	The Fairchild Encyclopedia of accessories,	Om Book Service	2003
6.	ChandiniKakar	Encyclopedia of fashion accessories	Indica Publishers	2005
7.	Kamal Khurana	Merchandising of Fashion Products	Sonali Publications	2012
8.	Anita Tyagi	Ornamentation and Textile Design	Sonali Publications	2011
9.	ChandiniKakar	Best out of Waste (Garments)	Indica Publishers	2005

E – Journals

- Elevate Your Look- The Power of Accessories in Fashion
- The Ultimate Accessory Guide
- Sustainable Style Eco-Friendly Accessories for Modern Fashion
- Luxury on a Budget- Affordable Accessories That Look Expensive

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, peer learning and demonstration

Course Designer

Ms.A.Yamuna devi & Ms.Jasira Banu

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD24E01	SEMESTER – II GLOBAL MARKETING AND SOURCING STRATEGIES	Theory	43	2	-	3

Preamble

This course covers the concept of global market dynamics, and sourcing strategy.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand global marketing concepts and influencing factors.	K1
CLO2	Analyze global competition and sustainable goals.	K4
CLO3	Explore global, positioning, and strategies.	K4
CLO4	Evaluate sourcing strategies and procurement processes.	K4
CLO5	Create solutions for global marketing and sourcing challenges.	K6

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	M	S	M	S
CLO3	S	S	M	S	M
CLO4	S	S	S	S	S
CLO5	S	M	S	S	S

S- Strong; M-Medium

Syllabus

UNIT I

9 Hours

Introduction to global marketing – Drivers towards globalization – Factors influencing global marketing – Economic, social and cultural. Limitations to global marketing. Global competitive analysis – competitive environment, country specific advantages, firm specific advantages. Environmental, social and governance – ESG, Sustainable development goals – SDG.

UNIT II**9 Hours**

Global customers – Global segmentation and positioning- market segments, global product positioning, positioning a new brand, positioning a global brand. Global product and services – Global product lines, services, service quality, globalization of services. Distribution strategies, advertising, promotion. Organizing for global marketing – Organizational structure, management systems, people and organizational culture.

UNIT III**9 Hours**

Sourcing goals and objectives. Principles of sourcing strategy. Plan for the procurement of materials as per garment design requirements – out sourcing- source selection – contracts and incentives, supplier strategies- procure materials from national and international suppliers related to fabrics, trims and accessories. Supervise and evaluate performance of subordinates. Maintain records about procurement of materials. Sourcing data and reports.

UNIT IV**8 Hours**

Sourcing requirements – maintain health, safety and security in the sourcing department. Comply with industry, regulatory and organizational requirements, sourcing design elements. Risks and rewards of multiple sourcing. Capacity constraints and pricing in sourcing markets. LIC selection and incentives for innovation – Yard stick contracts. Case studies in sourcing.

UNIT V**8 Hours**

Growth of markets – Evolution of global markets from local to international trade- Characteristics of developed markets- Emerging markets and their impact on global trade. Developed and under developed countries -Issue of trade cycles. Rise of under developed and developing countries. The role of global partnerships and trade agreements. Global marketing case studies- Innovations in global supply chains- The role of artificial intelligence and big data in predicting market trends.

Text books

:

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	Warren J Keegan	Global Marketing Management	Prentice Hall of India	2017

Reference books

:

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	Mike Easey	Fashion Marketing	Blackwell Publishing oxford	2009
2.	Manmeet Sodhia, Pooja Chatley	Fashion Marketing And Merchandising	Kalyani Publishers	2003
3.	Pingali Vengopal	Marketing Management	Response Books	2010
4.	Sheshadri M.S	Apparel Marketing & Merchandising	M S Publications	2002

E – Journals :

- Industrial Textiles
- Journal of Fashion Technology & Textile Engineering
- Journal of Textile and Apparel, Technology and Management
- Textiles
- The Textile Association
- Journal of Textile Engineering and Fashion Technology

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr.R.Tryphena & Ms.A.Yamuna Devi

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD24E02	SEMESTER – II SPORTS AND SMART TEXTILES	Theory	43	2	-	3

Preamble

This course provides an knowledge of sports textiles and smart textiles and their role in performance apparel.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the fundamental concepts, for sports and smart textiles.	K1
CLO2	Analyze high-performance materials and functional properties relevant to sports and smart textiles.	K2
CLO3	Evaluate the garment development process and the integration of smart technologies in textiles.	K3
CLO4	Assess innovations and applications of advanced materials and technologies in diverse textile areas.	K4
CLO5	Develop sustainable and innovative solutions considering future trends and market opportunities.	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	M	M	S	S	S
CLO2	M	M	S	S	S
CLO3	M	S	S	S	S
CLO4	M	S	S	S	S
CLO5	S	S	S	S	S

S- Strong; M-Medium

Syllabus

UNIT I

9 Hours

Introduction to Sports Textiles -Overview of sports textiles- Definition, scope, importance, and trends. key materials used in performance sportswear, including polyester, nylon, spandex, and aramid fibers. Functional requirements such as moisture management, thermal regulation, and durability. Environmental considerations and biomimicry in sports textile development.

UNIT II

8 Hours

Materials and Functional Properties for Sports Textiles -High-performance materials with properties like moisture-wicking, UV protection, and antimicrobial finishes. Textile structures, including woven, knitted, and non-woven fabrics, and their role in sportswear. Introduction to advanced technologies like seamless knitting and bonded fabrics. Applications of functional textiles in activewear, swimwear, and sports equipment.

UNIT III

9 Hours

Fundamentals of Smart Textiles -Introduction to smart textiles- Definition, classification -active, passive, and ultra-smart textiles, and evolution. Key components such as sensors, actuators, and conductive yarns. Functional requirements of smart textiles, including health monitoring, energy harvesting, and responsive functions. Emphasis on biomimicry and environmental considerations in smart textile applications.

UNIT IV

9 Hours

Applications and Innovations in Smart Textiles -Advanced materials and technologies for smart textiles, focusing on wearable devices, responsive fabrics, and e-textiles. Innovations in smart textiles for healthcare, fitness, and extreme environments. Specialized applications in automotive textiles, adaptive fabrics, and self-healing materials. Sustainability and emerging trends in smart textile development.

UNIT V

8 Hours

Future trends and market opportunities -Emerging innovations-AI-powered smart fabrics, 3D printing, and adaptive clothing. Sustainable practices- Recycling and energy-efficient processes. Trends like slow fashion, and consumer preferences. Market prospects- Commercialization in fashion, healthcare, sports, and defense. Role of regulatory bodies in promoting sustainability and innovation.

TEXT BOOK

:

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1	J. Smith, L. Jones	Sports Textiles: Innovation in Design and Materials	Wiley & Sons	2022
2	A. Kumar, R. Gupta	Textiles for Performance: The Future of Sports Apparel	Springer	2020
3	M. Patel, S. Walker	Advanced Sportswear: Fabrics and Technology	CRC Press	2021
4	Susan M. Watkins, Lucy E. Dunne	Functional Clothing Design: From Sportswear to Space Suits	Bloomsbury	2017
5	Xiaoming Tao	Handbook of Smart Textiles	Springer	2015

6	T Dias	Electronic Textiles-Smart Fabrics and Wearable Technology	Elsevier	2015
7	R. Chapman	Smart Textiles for Protection	Woodhead Publishing	2013
8	V. Koncar	Smart Textiles and Their Applications	Woodhead Publishing	2016

REFERENCE BOOK :

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1	R. Lee, P. Thompson	Smart Textiles for Sports and Wellness	Taylor & Francis	2020
2	A. Taylor, B. Harris	Textile Materials for Active Sportswear	McGraw-Hill Education	2022
3	J. Carter, M. Davis	High-Performance Sports Fabrics	John Wiley & Sons	2019
4	P. Turner, R. Brooks	Sports Textiles: From Concept to Market	Palgrave Macmillan	2021
5	L. Van Langenhove	Smart Textiles for Medicine and Healthcare: Materials, Systems and Applications	Woodhead Publishing	2007
6	Mc Cann J. and Bryson D	Smart Clothes and Wearable Technology	Wood Head Publishing Series in Textiles, UK	2010
7	Vladan Koncar	Smart Textiles: Wearable Nanotechnology"	Elsevier	2016

E – Journals :

- International Journal of Clothing Science and Technology
- Journal of Sports Science and Medicine
- Smart Materials and Structures
- Journal of Functional Textiles
- Wearable Technologies
- Advanced Functional Materials

Name of the course	Innovations in sports and smart textiles
Name of the Faculty	Dr.R.Tryphena & Ms.A.Yamuna Devi
Participatory learning	70%
Experimental learning	20%
Problem based learning	10%

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr. R. Radhika & Dr.S.Thamarai

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD24E03	SEMESTER – II SUSTAINABLE APPAREL DESIGN AND DEVELOPMENT	Theory	43	2	-	3

Preamble

This course covers the fundamental concepts and practices shaping eco-friendly and socially responsible approaches in the textile and fashion industries

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the concepts of sustainability in textiles and clothing.	K1
CLO2	Analyze sustainable practices in textile production and waste management.	K4
CLO3	Explore ecofriendly-processing and natural finishing methods in textiles.	K4
CLO4	Evaluate sustainable strategies in fashion design and production.	K4
CLO5	Apply sustainable fashion concepts and practices in supply chains and consumption.	K6

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	M	S	S
CLO2	S	S	S	S	S
CLO3	M	S	S	S	S
CLO4	M	M	M	S	S
CLO5	S	S	S	S	S

S- Strong; M-Medium

Syllabus

UNIT I

10 Hours

Introduction -The basic concepts of sustainable development, difference between chemical and green process in manufacturing, rules recommendations for using chemicals, raw materials and waste management for sustainable textiles and clothing. Definition of sustainability – need for sustainability. Factors influencing sustainability. Impact of ecology, economy, and culture on sustainability. Product life cycle, product design sustainability using low – impact materials, recyclable material content. Sustainable fibers – organic cotton, recycled polyester, alternative sustainable fibers.

UNIT II**8 Hours**

Sustainable textile production - Sustainable factors in yarn and fabric manufacturing, waste management in spinning and fabric manufacturing, key environmental drivers in the textile industry-legislation, eco labels - Environmental management system - EMS, retailers, green consumers, pressure groups, controlled colouration.

UNIT III**8 Hours**

Sustainability in textile processing - Natural colorants and recent development. Bio-processing of textiles - bio desizing, bio scouring, bio bleaching, bio polishing, bio stoning, enzymatic degumming and enzymatic retting. Developments in natural finishing.

UNIT IV**8 Hours**

Sustainable fashion design process - Production of sustainable fashion- The phases of fashion design and production, fashion designers role, sustainable strategies in design houses, zero waste design practice, textile recycling – Second hand clothing, redesigning. Fast fashion vs slow fashion, new normal, sustainable fashion supply chain, fashion logistic, sustainable clothing care.

UNIT V**9 Hours**

Sustainable fashion trends – new fashion ethic and aesthetics, reversing fashion consumption, locally made and globally relevant, mega demand -negative demand, sharing and servicing. Role of National and International regulating organizations in sustainability – Worldwide responsible accredited production (WRAP), mandatory requirements – benefits to company, labor and society, eco mark.

TEXT BOOK

:

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	M. Parthiban, M. R. Sri krishnan P. Kandhavativu	Sustainability in Fashion and Apparels: Challenges and Solutions	Woodhead publications	2018

REFERENCE BOOK

:

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	Leslie Davi	sustainability and social change in fashion	Bloomsburg	2019

E -Journals

- Fashion and Textiles
- Fashion Studies
- Industrial Textiles
- International Journal of Textile Science
- Textiles
- Journal of Fashion Technology & Textile Engineering
- Journal of Textile and Apparel, Technology and Management
- Journal of Textile Engineering and Fashion Technology
- Trends in Textile Engineering & Fashion Technology

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr. R. Radhika & Dr.Indumathi

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD24A1	SEMESTER–II FASHION RETAIL MANAGEMENT	Theory	60	-	-	4

Preamble

This course covers retail market management, with a focus on merchandise, product, brand management, and retail planning.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand retailing concepts and organizational structure.	K1
CLO2	Analyze market segmentation and customer positioning.	K4
CLO3	Evaluate merchandise management and supplier selection.	K4
CLO4	Explore retail location, space management, and latest trends in retailing.	K4
CLO5	Apply pricing and promotion strategies in retail.	K6

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	M	S	S	S
CLO3	S	S	S	S	S
CLO4	M	M	M	M	M
CLO5	S	S	S	S	M

S- Strong; M-Medium

Syllabus

UNIT I

12 Hours

Retail organization - Introduction, definition, characteristics and functions of retailing, retailers, retailing channels, retail strategy. Structure of retail organization, retail units, merchandise mix, customer interaction, organized retailing, and retail formats, geographical markets, retailing in rural India, vertical marketing system, challenges in retail business.

UNIT II

12 Hours

Retail market segmentation - segmentation- definition and benefits - segmenting, targeting and positioning. Criteria for segmentation, types of markets, dimensions for segmentation, types of

segmentation. Market targeting, customer profile, survey of buyer's intentions. Application of augmented reality and virtual reality in fashion retailing

UNIT III

12 Hours

Merchandise management - product management, brand management and retailing, merchandise management, model stock plan, constraining factors, types of suppliers and selection criteria, category management, merchandise management planning in retail segment. RFID for inventory management.

UNIT IV

12 Hours

Retail location and space management - location decision - importance, levels and determining factors, types of location, types of consumer goods and location decision, site selection analysis, atmospherics, store space management, retail selling tools, colour planning, physical materials in store designing, atmospherics in the context of internet retailing. Online retailing, E - commerce

UNIT V

12 Hours

Retail pricing and promotion strategy - influences on retail pricing strategy, development in retail prices, retail pricing objectives, retail pricing approaches and strategies, consumer responsiveness to prices, role of price elasticity and sensitivity, profitability, promotion mix selection, advertising, media selection, sales promotion, personal selling and publicity.

TEXT BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	Barry Berman	Retail Management	Pearson Education	2017
2.	Philip Kotler	Marketing Management	Pearson Education	2017
3.	V.S. Ramasamy & S. Nama kumari	Marketing Management	Pearson Education	2010

E – Journals

- Journal of Textile and Apparel, Technology and Management
- Journal of Textile Engineering and
- Fashion Technology
- The Textile Association
- Trends in Textile Engineering and Fashion Technology

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr.R.Radhika & Dr.M.Malini Devi



**PSGR
Krishnammal College for Women**



DEPARTMENT OF COSTUME AND APPAREL DESIGN

PROGRAMME:M.Sc. FASHIONANDAPPARELDESIGN

**CHOICEBASEDCREDITSYSTEM(CBCS)&
LEARNINGOUTCOMES-BASEDCURRICULARFRAMEWORK(LOCF)
(SEMESTER –III)**

**M.Sc.FASHIONANDAPPARELDESIGN
2023-2025 Batch**

PROGRAMME LEARNING OUTCOMES (PLO's)

After completion of the programme, the student will be able to

- **PLO1:** Understand diverse cultural influences and market demands of apparel industry
- **PLO2:** Create innovative functional and aesthetic apparels including accessories.
- **PLO3:** Design apparels with advanced digital tools and technologies
- **PLO4:** Research and analyze textile and fashion trends
- **PLO5:** Apply knowledge and skill in the fashion field and entrepreneur.

PROGRAMME SPECIFIC OUTCOMES (PSO's)

The students at the time of graduation

- **PSO1:** Graduates can function independently with their innovative and creative skills
- **PSO2:** Graduates will be able to meet the current Industries requirements
- **PSO3:** Graduates Can Undertake the research/projects sector to new product development



**M.Sc.FASHIONANDAPPARELDESIGN(2023-2025BATCH
&ONWARDS)
CHOICEBASEDCREDITSYSTEM(CBCS)&LEARNINGOUTCOMES-BASED
CURRICULAR FRAMEWORK (LOCF)
(SEMESTER –III)**

Programme and Branch M.Sc.FAD											
Syllabus & Scheme of Examination 2023-2025 Batch&Onwards											
SEMESTER	Course Code	Title of theCourse	Course type	Instructio n	Contact hours	Tutorial Hours	Duration of Examination	Examination Marks			Credits
III								CA	ESE	TOTAL	
	MFD2405	Computer Integrated Manufacturing In Apparel Industry	CC	3	43	2	3	25	75	100	3
	MFD2307	Textile and Apparel Testing	CC	4	58	2	3	25	75	100	4
	MFD2308	Apparel Quality Standards and Specification	CC	4	58	2	3	25	75	100	4
	MFD23P06	3D Apparel Design and Modelling Lab	CC	5	75	-	3	25	75	100	4
	MFD23P07	Textile and Apparel Testing Lab	CC	6	90	-	3	25	75	100	4
	MFD23E04/ MFD23E05/ MFD23E06	ElectiveII Nano Textiles/ Protective Textiles- Health Care Application/ Compliance Standards in Apparel Industry	DSE	3	43	2	3	25	75	100	3
	MFD23S1	Special Course Research Methodology and Statistics	GE	3	43	2	3	-	100	100	2

	MFD24COM	Comprehensive Exam (Self-study)	GC	-			-	-	100	100	Gr
I-III	17MONL1	Online Course1 #	ACC	-	-	-	-	-	-	-	Completion Certificate
	MNM22CS2	Cyber Security	AECC	2	30	-	-	100	-	100	Gr
	MFD23IST	Internship	DSE	21 days Internship Training in Apparel Industry						100	Gr

DSE-Coursera **CC**-All core courses **DSE**-Elective in SEM III&IV Project

GE-IDC&Research Methodology **GC**-Comprehensive examination

ACC-Online course# **DSE**-Filed work/Institutional Training

CA – Continuous Assessment **ESE**-End Semester Examination **Gr**-Grade

QUESTION PAPER PATTERN 23-25 Batch

Question Paper Pattern and distribution of marks PG-Core and Allied-(First 3 Units)

CA Question from each unit comprising of

One question with a weightage of 2 Marks	2 x 3 = 6
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	5 x 3 = 15
One question with a weightage of 8 Marks (Internal Choice at the same CLO level)	8 x 3 = 24
Total:	45 Marks

End Semester Examination – Question Paper Pattern and Distribution of Marks PG-Core and Allied courses:

ESE Question Paper Pattern: 5x15=75 Marks

Question from each unit comprising of

One question with a weightage of 2 Marks	2 x 5 = 10
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	5 x 5 = 25
One question with a weightage of 8 Marks (Internal Choice at the same CLO level)	8 x 5 = 40
Total:	75 marks

Open book exam for II PG, CIA, Test Pattern: 4 (4 out of 6) x 15 Marks = 60 Marks

Open book examination to be provided for any one course. Question/problem to be solved by applying concepts. Questions with direct book answer to be avoided.

Continuous Internal Assessment Pattern Theory

I Year UG / PG (23 Batch)

CIA Test	:	5 marks (conducted for 45 marks after 50 days)
Model Exam	:	7 marks (Conducted for 75 marks after 85 days)
(Each Unit 15 Marks))		
Seminar/Assignment/Quiz	:	5 marks
Class Participation	:	5 marks
Attendance	:	3 marks
Total	:	25 Marks

Practical

Lab Performance	:	7 marks
Regularity	:	5 marks
Model Exam	:	10 marks
Attendance	:	3 marks
Total	:	25 marks

ESE Practical Pattern

The End Semester Examination will be conducted for a maximum of 75 marks with a maximum 15 marks for the record and other submissions if any.

MAPPING OF PLOS WITH CLOS

COURSE	PROGRAMME LEARNING OUTCOMES				
	PLO1	PL02	PL03	PLO4	PLO5
COURSE CODE MFD2404					
CLO1	S	S	M	S	S
CLO2	S	S	S	S	S
CLO3	M	S	S	S	S
CLO4	M	M	M	S	S
CLO5	S	S	S	S	S
COURSE CODE MFD2307					
CLO1	M	M	S	S	S
CLO2	M	M	S	S	S
CLO3	M	M	S	S	S
CLO4	M	M	S	S	S
CLO5	M	M	S	S	S
COURSE CODE MFD2308					
CLO1	S	S	S	S	S
CLO2	M	M	S	M	S
CLO3	S	S	S	S	S
CLO4	S	S	M	S	M
CLO5	S	S	S	S	S
COURSE CODE MFD23P06					
CLO1	S	S	S	M	S
CLO2	S	M	M	S	S
CLO3	S	S	S	S	S
CLO4	S	S	S	S	S
CLO5	S	S	S	S	S
COURSE CODE MFD23P07					
CLO1	M	M	S	S	S
CLO2	M	M	S	S	S
CLO3	M	M	S	S	S
CLO4	M	M	S	S	S
CLO5	M	M	S	S	S
COURSE CODE MFD23E04					
CLO1	S	S	S	S	S
CLO2	S	M	S	M	S
CLO3	S	S	S	S	S
CLO4	S	S	M	S	S
CLO5	S	S	S	S	S
COURSE CODE MFD23E05					
CLO1	S	S	S	S	S
CLO2	S	M	S	S	S

CLO3	S	S	S	S	S
CLO4	S	S	M	S	S
CLO5	S	S	S	S	S

	COURSECODE MFD23E06				
CLO1	S	M	S	M	M
CLO2	S	M	S	M	M
CLO3	S	M	M	M	M
CLO4	S	M	M	M	M
CLO5	S	M	M	M	M
	COURSECODE MFD23S1				
CLO1	S	S	S	S	S
CLO2	S	S	M	S	M
CLO3	S	S	S	S	S
CLO4	S	M	S	S	S
CLO5	S	S	S	S	S

COURSE CODE	COURSE NAME	Category	L	T	P	Credit
MFD2405	SEMESTER - II COMPUTER INTEGRATED MANUFACTURING IN APPAREL INDUSTRY	Theory	43	2	-	3

Preamble

This course offers a comprehensive exploration of design software for woven, knitted, and printed textiles in computer-aided fashion design systems and the usage of CAD and CAM systems in apparel industries.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Define the basics of computer-integrated manufacture in apparel sector.	K1
CLO2	Explain the concept of CIM and its importance in apparel manufacture.	K2
CLO3	Explore applications of new technologies in apparel production.	K3
CLO4	Describe CAD and CAM systems in apparel design and pattern making.	K5
CLO5	Assess automation in apparel manufacturing and management systems.	K6

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	M	S	S	S
CLO3	S	S	S	S	S
CLO4	M	M	M	M	M
CLO5	S	S	S	S	M

S- Strong; M-Medium

Syllabus

UNIT I

9 Hours

Introduction to the operation of design software for woven, knitted and printed textiles.
Computer aided fashion design system - Tools, manipulating techniques. Knowledge based system - Introduction to image processing and imaging system - Fabric and sewing defect identification using image processing - Artificial neural networks.

UNIT II

9 Hours

3D body scanning- digitizing- grading and lay planning system - Introduction to graphic interface of the software-tools and functions used for pattern making, grading and marker planning.

UNIT III**8 Hours**

Preparation of virtual dummies, texture mapping, 2D and 3D draping, 3D modeling, E-fit analysis, animation, prototyping – virtual and rapid. Made to measure systems. Application of Artificial Intelligence - Augmented reality and virtual reality.

UNIT IV**9 Hours**

Applications of computer integration in fabric cutting, spreading and labeling machines. Computer aided special purpose sewing machine with control panels – pre-programmed options. Computer controlled embroidery machines. Digitalized colour communication – ZED. computerized color matching system.

UNIT V**8 Hours**

Application of electronically transfer documents - EDI - selection of line - control system - data base management system. Automatic material handling, storage, tracing and retrieval system. Applications of e-commerce and management information system -MIS in apparel industry, supply chain planning.

TEXT BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	Henry Webber	Computer – Integrated Manufacturing	NY Research Press	2020
2.	Alison Beazley & Terry Bond	Computer aided pattern design and product development	Wiley-Blackwell	2009
3.	Jinlian Hu	Computer Technology for Textile and Apparel	Woodhead Publishising	2011

REFERENCE BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year of Publication
1.	S.Sugumar& P Muthu kumarasamy	A computerized system for marker making in garment industry	The South India Textile Research Association	2009
2.	Kevin Tallon	Digital fashion illustration	Batsford publications	2008
3.	Tracy Diane and Tom Cassidy	Colour forecasting	Blackwell publishing	2005
4.	V. Ramesh Babu	Industrial Engineering in Apparel Production	WPI Publishing	2012

5.	N.Vasugi raja	Computer applications in apparel industry	Pranav Publication	2011
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E -Journals

- Fashion and Textiles
- Industrial Textiles
- Journal of Fashion Technology & Textile Engineering
- Textile World
- Textiles
- Journal of Textile Engineering and Fashion Technology

Nameofthecourse	Computer integrated manufacturing in apparelIndustry
Name of the Faculty	Dr.R.Tryphena
Participatory learning	70%
Experimental learning	20%
Problem based learning	10%

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr. R.Tryphena & Dr.M.Malini Devi

COURSE CODE	COURSENAME	Category	L	T	P	Credit
MFD2307	TEXTILEANDAPPAREL TESTING	Theory	58	2	-	4

Preamble

This course helps to explore the methodologies, standards, and technologies employed in textile and apparel testing

Course Learning Outcomes

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

CLO NUMBER	CLO STATEMENT	CLO LEVEL
CLO1	Explain the importance and types of textile testing	K2
CLO2	Demonstrate different methods, standards, principles and working of instruments used	K3
CLO3	Examine advanced instrumentation and computerized testing systems	K4
CLO4	Evaluate yarn and fabric properties	K6
CLO5	Evaluate and analyse the effects of various parameters affecting test results	K6

Mapping with Programme Learning Outcome

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	M	M	S	S	S
CLO2	M	M	S	S	S
CLO3	M	M	S	S	S
CLO4	M	M	S	S	S
CLO5	M	M	S	S	S

S-Strong; M-Medium

Unit-I

11 Hours

Textile testing – definition – objectives, types – destructive and non-destructive. Selection of samples for testing: fiber - zoning, core sampling, random draw and cut square methods, yarn – random sampling and fabric sampling. Standard atmosphere for testing - measurement of moisture regain -conditioning oven & shirley moisture meter. Preparation of samples for testing: conditioning and pre-conditioning. Sources of textile testing standards: ISO, BIS, BSI, AATCC, ASTM, ANSI.

Unit-II**11 Hours**

Conventional testing methods - cotton fiber length - baer sorter, fineness – sheffield micronaire, maturity - caustic soda swelling, strength - pressley bundle strength tester and stelometer. Determination of trash and lint in cotton - shirley trash analyser. Computerized testing methods - HVI, AFIS, cotton scope, MDTA4

Unit-III**12 Hours**

Yarn numbering systems - direct and indirect, conversion of count from one system to another, instruments for count determination – wrap reel and balance, quadrant balance, beesley balance. Yarn strength testing - Single yarn strength tester – UT J, UT R, leastrength tester. Yarn twist - definition, direction of twist, twist multiplier, measurement of yarn twist. Yarn evenness - classification of variation, methods of measuring evenness, Uster evenness tester- UT 6. Yarn faults - classification-Uster classimat. Yarn hairiness.

Unit-IV**12 Hours**

Physical parameters: length, width, count (EPIxPPI), crimp, weight (GSM), cover factor, thickness, air and water permeability, fabric dimensional stability to domestic washing and drying. Mechanical parameters – tensile strength, tearing strength, bursting strength, peel bond strength. Handle and comfort parameters – fabric abrasion, pilling, drape, stiffness, crease resistance /crease recovery, sensory testing, thermo-physiological testing, thermal comfort, FTT – fabric touch tester.

Unit-V**12 Hours**

Fabric flammability testing -vertical and inclined plane. Colour fastness - laundering, dry cleaning, crocking, perspiration, sunlight and hot pressing and tests for natural dyes. Seam testing - seam strength, seam slippage. Accessories testing- zipper, buttons, sewing thread. Testing of linings, interlinings, and fusible interlinings

Text Books:

S.NO	Name of the Authors	Title of the book	Publishers	Year and Edition
1	Raul Jewel	Textile Testing 5	APH Publishing Corporation	2005, 1st Edition,
2	Booth J E	Principles Of Textile Testing	CBS Publishers and Distributors Pvt Ltd	1996, 3 rd Edition
3	P. Angappan, R. Gopalakrishnan	Textile Testing 5	S.S.M. Institute of Textile Technology	1997

ReferenceBooks:

S.NO	Name of the Authors	Titleofthebook	Publishers	Year and Edition
1	Ahmad	Advanced Textile Testing Techniques	TaylorandFrancis BooksLimited U.K.	2017,1stEdition
2	JinilianHu	FabricTesting	Wood Publishing head	2008,1stEdition, Kindle Edition
3	Amutha	Practical Guide to Textile Testing	WPIPublishing	2016,1st edition
4	ElliotBGroverand Hamby D S	Handbook of Textile Testing and Quality Control	WileyIndiaPvtLtd	2011,1st Edition
5	Gopalakrishnan D, Vinayagamurthi P, Kandhavativu P	Textile Testing	Daya Publishing House	20211st edition
6	ArindamBasu	Textile Testing Fibre, Yarn & Fabric	The South India Textile Research Association	2006,2 nd revised edition

E-Contents:

- 1 <https://nptel.ac.in/courses/116/102/116102029/#>
- 2 <https://nptel.ac.in/courses/116/102/116102049/>
- 3 <https://www.iso.org/committee/48148.html>

Nameofthecourse	TextileandApparel Testing
NameoftheFaculty	Dr.S.ThamaraiSelvi
Participatorylearning	40%
Experimentalllearning	40%
Problembased learning	20%

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

CourseDesigner

Dr.R.Radhika

COURSE CODE	COURSENAME	Category	L	T	P	Credit
MFD2308	APPARELQUALITYSTANDARDS AND SPECIFICATION	Theory	58	2	-	4

Preamble

This course is designed to provide a comprehensive understanding of the quality standards and specifications that are essential in the apparel industry.

Course Learning Outcomes

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

CLO NUMBER	CLO STATEMENT	CLO LEVEL
CLO1	Describe the importance of quality standards and specifications in the apparel industry.	K 1
CLO2	Identify and describe the various quality standards and specifications used in apparel production.	K 2
CLO3	Discover, interpret and apply quality standards and specifications to ensure product quality.	K 3
CLO4	Examine the knowledge of quality control processes and techniques used in the apparel industry.	K 4
CLO5	Develop skills in measuring and evaluating apparel products against quality standards and specifications.	K 5

Mapping with Programme Learning Outcome

CLO LEVEL	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	S	S	S	S	S
CLO 2	M	M	S	M	S
CLO 3	S	S	S	S	S
CLO 4	S	S	M	S	M
CLO 5	S	S	S	S	S

S-Strong; M-Medium

Syllabus

Unit I

11 Hours

Introduction to quality standards, importance, benefits, levels and sources of quality standards. ISO Standards for the Apparel Industry - ISO 9000 & ISO 14000 standards, OEKO Tex 100 standard, Made in Green, STEP, GOTS standards, GRI's sector standards -blue signstandards, ANSI standards, Textile Exchange standards, Cradle to Cradle certified standards.

Unit II

12 Hours

Standards in garment construction, seams, seam finishes, darts, dart equivalents, underlining, interfacing, interlinings, linings, inseam pockets, applied pockets, slashed pockets, bindings, facings, inset bands, rib-stretch Bands, Collars, Sleeves, sleeve finishes- cuffs and plackets, Waistline edge treatments – waistbands, waistline facings, edge casings, internal waistline treatments, button and decorative snap closures, buttonholes, zippered closures, hems and hems treatments. Finishing of placketopening of upper and lower garment.

Unit III

12 Hours

Quality Standards - Definition of a standard, benefits of standards, levels of standards, need for uniform standards, standards for different levels, quality standard and price relationship, national, company, industry, international, standardizing bodies, AATCC, ASTM, ANSI, ISO, BSI, BIS. Quality control inspection and quality control of finished garments. Quality implementation system SA8000 Standard, 5S, TQM, Lean manufacturing and Six Sigma lean manufacturing.

Unit IV

11 Hours

Specifications -Importance of specification sheet and its role in maintaining quality, process of spec sheet development, concept of tolerances - maximum, minimum, zero tolerance. Fabric inspection, classification of fabric defects, independent product quality certification.

Unit V

12 Hours

Garment defects - cutting defects, sewing defects, assembly defects, pressing, finishing and packaging defects. Inspection procedures - raw materials, in process, and final inspection. Quality control in final inspection –AQL: Levels 1.5, 2.5, 4.0, 6.5. Cost of Quality and customer return.

TextBooks :

S.NO	Name of the Authors	Titleofthebook	Publishers	Year and Edition
1	SaraJ.Kadolph	QualityAssurancefor Textiles and Apparel	Fairchild Publications	2007,2 nd edition
2	G.PremaandJ. Hayavadana	Apparel Quality AssuranceandQuality Control Handbook	Woodhead Publishing	2016,2 nd edition
3	RajkishoreNayak andRajivPadhye	GarmentManufacturing Technology	Woodhead Publishing	2015,edition

ReferenceBooks:

S.No	NameoftheAuthors	TitleoftheBook	Publishers	Year and Edition
1.	PradipMehta&S.K.Bhar dwaj	ManagingQualityinApparel Industry	New Age Publishers	2011, edition
2.	StanleyBernard Brahams	The Fundamentals of Quality AssuranceintheTextileIndustry	CRS Press	2016
3.	JanaceBubonia-Clarke	ApparelQuality:AGuideto Evaluating Sewn Products	Fairchild Books	2015
4.	A. Chakraborty	ApparelQualityControl	PHI Learning Private Limited	2011,1 st Edition
5.	PradipV.Mehta	QualityManagementinthe Apparel Industry	CRS Press	2012, 1 st Edition

E Journals:

- JournalofTextileandApparel,Technologyand Management
- InternationalJournalofTextileScience
- JournalofTextileEngineeringand FashionTechnology

Name of the course	Apparel Quality Standards and Specification
Name of the Faculty	Dr.R.Radhika
Participatory learning	30%
Experimental learning	50%
Problem based learning	20%

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr.R.Radhika

COURSE CODE	COURSENAME	Category	L	T	P	Credit
MFD23P06	3D APPAREL DESIGN AND MODELLING LAB	Practical	-	-	75	4

Preamble

This course helps to develop and gain about knowledge in the use and application of 3D fashion design software.

Course Learning Outcomes

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

CLO Number	CLO STATEMENT	Knowledge Level
CLO1	Recognizedesigns for 3D modelling	K1
CLO2	Illustrateandcreatefabricsfordesigndevelopment	K2
CLO3	Assesspatternand garmentforvirtual fitting	K3
CLO4	Experimenton colourwaysand 3D modelling	K4
CLO5	Createsimulationforthedevelopeddesigns	K5

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	M	S
CLO2	S	M	M	S	S
CLO3	S	S	S	S	S
CLO4	S	S	S	S	S
CLO5	S	S	S	S	S

S-Strong;M-Medium

Syllabus

- | | |
|---|----------------|
| 1. Toolsandfunctions of2D and3D software. | 5 Hours |
| 2. Designandpatterndevelopmentofkidswear (3Designs) | 6 Hours |
| 3. Fabricvisualization –creationofdigitizedfabricsforkidswear | 6 Hours |
| 4. Assembling of pattern on 3D models and virtual fitting, Colour ways, simulation of kids wear (3 Designs) | 12Hours |
| 5. Designandpatterndevelopmentofwomen'sfashionwear(3Designs) | 9 Hours |
| 6. Fabricvisualization-creationofdigitizedfabricsforwomen'swear | 6 Hours |

7. Assembling of pattern on 3D models and virtual fitting, Colour ways, simulation of women's fashion wear (3 Designs) **7Hours**
8. Design and pattern development of men's formal wear (3 Designs) **9 Hours**
9. Fabric visualization – creation of digitized fabrics for men's formal wear **6 Hours**
10. Assembling of pattern on 3D models and virtual fitting, Colour ways, simulation of men's formal wear (3 Designs) **9Hours**

TextBooks:

S.NO	Name of the Authors	Title of the book	Publishers	Year and Edition
1	Sayem Abu Sa	Digital Fashion Innovations	Taylor & Francis Group	2023, 1 st edition
2	Alison Beazley	Computer Aided Pattern Design and Product Development	Wiley-Blackwell; 1st edition	2008, 1 st edition
3	Jinlian Hu	Computer Technology for Textiles and Apparel	Woodhead Publishing; 1st edition	2011, 1 st edition

ReferenceBooks:

S.No	Name of the Authors	Title of the Book	Publishers	Year and Edition
1	Natalie Bray	Dress Fitting 2nd Edition	John Wiley & Sons; New edition of 2 Revised edition	1987, 5 th Edition
2	Kathryn Mckelvey	Kathryn Mckelvey	Wiley; 2nd edition	2011, 2 nd Edition
3	Alexandra Suhner Isenberg	Technical Drawing For Fashion Design Garment Source Book Volume 2	Pepin Press	2011, Pap/Cd edition 1

E-Contents :

1 <https://www.youtube.com/watch?v=QHvpX7H2tgg2..https://www.youtube.com/watch?v=OtEziA52iBs>

3. <https://www.youtube.com/watch?v=1YKcgzmulzU>

4. <https://geminicad.com/products/creative-studio/>

Name of the course	3D Apparel Design and Modelling Lab
Name of the Faculty	Dr.R.Radhika,A.YamunaDevi
Participatory learning	20%
Experimental learning	70%
Problem based learning	10%

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, peer learning, demonstration.

Course Designer

Dr.R.Radhika

COURSE CODE	COURSENAME	Category	L	T	P	Credit
MFD23P07	TEXTILEANDAPPAREL TESTING LAB	Practical	-	-	90	4

Preamble

This course helps to develop and gain knowledge about the physical testing of textiles and apparels as per the standards used in Apparel industry.

Course Learning Outcomes

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

CLO Number	CLO STATEMENT	Knowledge Level
CLO1	Understand the physical parameters of fibers, yarns and fabrics.	K2
CLO2	Identify the mechanical properties of woven and knitted fabrics	K3
CLO3	Experiment with the comfort properties of woven and knitted fabrics	K3
CLO4	Distinguish the suitability of fibers, yarns and fabrics for various end application	K4
CLO5	Examine the physical properties of apparels	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	M	M	S	S	S
CLO2	M	M	S	S	S
CLO3	M	M	S	S	S
CLO4	M	M	S	S	S
CLO5	M	M	S	S	S

S-Strong; M-Medium

Syllabus

Testing and Evaluation of:

I Fibre and Yarn

15 Hours

1. Fibre length, moisture regain
2. Estimation of linear density of yarn (Natural and synthetic)
3. Least strength, single/ply yarn twist, crimp length

II Fabric

4. Woven and Knitted - EPI, PPI, WPI, CPI, Thickness, GSM
5. Estimation of blend ratio of fabric

12 Hours
7 Hours

6. FabricStiffness,CreaseRecovery,Drape 10 Hours
7. Tensile strength and elongation, Tear strength, Bursting strength, Abrasion Resistance, Pilling 15Hours
8. Fabricabsorbencytests-Drop,wicking,sprayandsinkingtests 10 Hours
9. Colourfastnesstosunlight,washing,wetanddry crocking,pressingPerspiration – Acidic and alkaline 10Hours

IIIAppareltesting

11 Hours

10. Apparel dimensional stability,Spirality,Skewing and measurement,Peelbond strength

***Necessarypracticegiventhroughtheindustryandresearchcentersvisit.**

Textbooks:

S.NO	NameoftheAuthors	Titleofthebook	Publishers	Year and Edition
1	ElliotBrownGrover,Da me Scott Hamby	Handbook of TextileTesting and Quality control	TextileBook Publishers, New York	2007,1 st edition
2	Booth J.E.,	Principles of TextilesTesting	CBSPublishers and Distributors, New Delhi	1996,3 rd edition
3	Saville,B.P	PhysicalTesting of Textiles	Wood head publishingLtd., England	2004,1 st edition

ReferenceBooks:

S.No.	Author	TitleoftheBook	Publishers	Year and Edition
1	Wang Lijing	Performance Testing of Textiles, Methods, TechnologyandApplications	Woodhead Publishing, ElsevierLtd. New Delhi	2016,1 st edition
2	JewelRaul	Textile Testing	APH Publishing Corporation New Delhi	1994, edition
3	Jinlian HU	FabricTesting	WoodHead Publishing, Cambridge, England	2008,1 st edition
4	RuthEGlockand Grace I Kunz	ApparelManufacturing	Prenticehall, New Jersey	2005, 3 rd edition

E-Contents:

1. <https://www.youtube.com/playlist?list=PLCC58838EBECB7149>
2. <https://www.youtube.com/channel/UCXw7428MTvquxKUZEOr4EAA/videos?view=0&sort=dd&flow=grid>
3. <https://www.youtube.com/channel/UCGqWXJgzpXyyu283QbdYiFQ/videos>

Nameofthecourse	TextileandApparelTesting Lab
NameoftheFaculty	Dr.S.ThamaraiSelvi
Participatorylearning	20%
Experimentalllearning	70%
Problembased learning	10%

Pedagogy

Lecture by chalk and talk,power point presentation,e-content,groupdiscussion,peer learning, demonstration.

Course Designer

Dr.R.Radhika

COURSE CODE	COURSENAME	Category	L	T	P	Credit
MFD23E04	NANOTEXTILES	Theory	43	2	-	3

Preamble

This course helps to explore the fundamental concepts of nanotechnology, development of nano textiles in apparel sectors

Course Learning Outcomes

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

CLO NUMBER	CLO STATEMENT	CLO LEVEL
CLO1	Explain the fundamental concepts of nanotechnology	K1
CLO2	Indicate the properties and applications of nanofibers by different process and methods	K2
CLO3	Discover the nano particles and preparation of nano-sized materials with functional finishing	K3
CLO4	Analyse the functionality of Nanotextiles	K4
CLO5	Explain the methods of characterization of nanoparticles	K5

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	M	S	M	S
CLO3	S	S	S	S	S
CLO4	S	S	M	S	S
CLO5	S	S	S	S	S

S-Strong; M-Medium

Syllabus

Unit-I

8 Hours

Introduction to nanotechnology - concept of nanoscale and historical background of nanotechnology, fundamental concepts of nano technology - bottom-up approaches, top down approaches, scope of nanotechnology in textile and apparel manufacturing

Unit-II**9 Hours**

Synthesis and properties of nano fibers - electro spinning of nano fibres. Continuous yarns from electro spun nano fibres. properties of nano fibers, electro spraying and electro spinning by the capillary method, electro spraying and electro spinning by the charge injection method, controlling fiber orientation, applications of nano fibres viz, tissue engineering, filter media.

Unit-III**9 Hours**

Nano particles - Preparation of nano-sized materials - vapour phase reaction-commercially nano-particles- metals and metal oxides nano-particles- polymer and polymer nano-composites- Clay nano-particles, carbon nano particles-polymer nano-whiskers. Nano-particles in functional textile finishing- Wrinkleresistance-stainresistance-waterrepellency- anti-static performance- anti-bacterial effect-ultra violet protection.

Unit-IV**8 Hours**

Nano textiles and apparel - development of nano textiles and apparel using - nano-tex, nano-care, nano-dry, nano-touch, for home furnishing, technical textiles, smart and medical apparels. Polymer functionality and nano coating development of nano technologies for coating and structuring of textiles.

Unit-V**9 Hours**

Characterization of nanoparticles - X-ray diffraction, transmission electron microscopy and spectroscopy; Scanning electron microscopy (SEM) Transmission electron microscopy (TEM) Energy-dispersive x-ray spectroscopy (EDS), Small-Angle X-Ray Scattering (SAXS), The Cone calorimeter(CC), The mass loss calorimeter(MLC)

TextBooks:

S.No	Name of the Authors	Title of the book	Publishers	Year and Edition
1	Mai Y-W	Polymer Nano composites	Wood head publishing	2006, 1 st edition
2	Guazhong Cao	Nanostructure and nanomaterials	Imperial College Press, USA	2006, 2 nd edition
3	Seeram Ramakrishna	An introduction to electro spinning and Nano fibers	World Scientific Publishing Co,	2005 1 st edition

ReferenceBooks:

S.No	NameoftheAuthors	Titleofthebook	Publishers	Year and Edition
1	BrownPJandStevensK	Nano fibres and Nanotechnology in Textiles	Woodhead Pub. Ltd	2007, 1 st edition
2	CRCTaylor&Francis, Boca Raton	NanotubesandNanofibres	YuryGogots	2006,1 st edition
3	Mick Wilson, Kamali Kannangara, Geoff Smith,MichelleSimons and Burkhard Raguse	Nanotechnology-Basic Scienceand Emerging Technologies	OverseasPress, New Delhi	2005, edition
4	Ramakrishna.S Fujihara.K Teo,W.E.,Lim, T.C.,Ma,Z	Electrospinningand Nanofibers	WorldScientific Printers, Singapore	2005,1 st edition

E-Journal:

- Textile World
- InternationalJournalofTextileScience
- JournalofFashionTechnology&TextileEngineering
- JournalofTextileEngineering

Nameofthecourse	NanoTextiles
NameoftheFaculty	-
Participatorylearning	70%
Experimentalllearning	20%
Problembased learning	10%

Pedagogy

Lecturebychalkandtalk,powerpointpresentation,e-content,groupdiscussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr.R.Radhika

COURSE CODE	COURSENAME	Category	L	T	P	Credit
MFD23E05	PROTECTIVETEXTILES-HEALTH CARE APPLICATION	Theory	43	2	-	3

Preamble

To impart knowledge in the development of healthcare textiles for front line personnel

Course Learning Outcomes

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

CLO NUMBER	CLO STATEMENT	CLO LEVEL
CLO1	Understand the different segments of Healthcare and medical textiles	K1
CLO2	Gain knowledge on health care and medical textile devices	K2
CLO3	Understand the Design criteria for healthcare products	K3
CLO4	Fabrication of Healthcare medical textiles	K4
CLO5	Understand the Quality and Standards for Healthcare Protective textiles	K5

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	M	S	S	S
CLO3	S	S	S	S	S
CLO4	S	S	M	S	S
CLO5	S	S	S	S	S

Strong; M-Medium

Syllabus

Unit I:

8 Hours

Introduction to Health care medical textiles-different segments of medical textiles and the products of each segments. Different segments of medical textiles -Healthcare medical textiles, Hygiene medical textiles, Implantable medical textiles, Non implantable medical textiles and Extra corporeal devices.

Unit II:**9 Hours**

Introduction to healthcare and medical textile devices- various health care and medical textile device, different types of polymers Alginate, Chitosan, Silk, PLA, PGA, Carboxymethyl cellulose, Cellulose acetate, Polyurethane, Polyester, Polypropylene used in medical applications. Chemical and physical properties of each polymer with respect to the specific product.

Unit III:**9 Hours**

Design criteria and fabrication of health care medical textile products- Technologies for Health care Textiles and Product Development- Knitting, Braiding, 3D weaving, nonwoven techniques, spacer fabric, composites, Hydrogel, Rapid prototyping, Electro spinning.

Unit IV:**9 Hours**

Healthcare medical textiles Introduction- Importance of textile materials in the development of health care products and the technologies used for the development of these products for - surgical gowns, drapes, coverall, face masks, antibacterial textiles. Manufacturers, sterilization process, advantages and disadvantages of the technologies with respect to disposal and non-disposal nature of each products- future directions.

Unit V**8 Hours**

Healthcare Medical textiles-Standards - National and International standards, quality norms as per BIS and CDSCO. Certification process involved in medical textiles.

Text Books:

S.No	Name of the Authors	Title of the book	Publishers	Year and Edition
1	V.K.Kothari (Ed)	Technical Textiles	IAFL Publications. New Delhi	2008, 1st ed
2	Sabit Adanur (Ed)	Wellington Sears Handbook of Industrial Textiles	Technomic Publishing Company, Inc, Pennsylvania	1995, 1st Edition
3	Richard A. Scott (Ed)	Textiles for Protection	Woodhead Publishing Limited, Cambridge	2005, 1st Edition

ReferenceBooks:

S.No	Author	TitleoftheBook	publishers	Year and Edition
1	SubhashAnand	MedicalTextiles	Woodhead Publishing Ltd	2005 Nil edition
2	JF Kennedy, SC Anand, M Miraftab, SRajendran	Medical Textiles- Proceedings of the fourth international conference on healthandmedical textiles	CRC Press	20072 nd edition
3	S.C. Anand, M Miraftab,Kennedy	Medical Textiles and Biomaterials for Healthcare	Woodhead Publishing Ltd	2005,1stEdition
4	RichardA.Scott(Ed)	Handbook of Technical Textiles	Woodhead Publishing Limited, Cambridge	2005,1stEdition

E-Contents

- <https://youtu.be/zTdPS0fCCvs?si=4Pp0oURbSmpt5MeF>
- <https://youtu.be/OKSTt7TPr1A?si=J0uE5A6xhGxi9tZG>
- https://youtu.be/vh04FIc6OPk?si=rGXZt_tn830RNfvW

Nameofthecourse	ProtectiveTextiles-HealthCare Application
NameoftheFaculty	Mrs.JasiraBanu
Participatorylearning	70%
Experimentalllearning	20%
Problembased learning	10%

Pedagogy

Lecturebychalkandtalk,powerpointpresentation,e-content,groupdiscussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr.R.Radhika

COURSE CODE	COURSENAME	Category	L	T	P	Credit
MFD23E06	COMPLIANCE STANDARDS IN APPAREL INDUSTRY	Theory	43	2	-	3

Preamble

This course provides gain about knowledge in the concept and need for compliance in apparel industry, technical compliance, ethical trading and international compliance.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the knowledge and concept need for compliance in Apparel industry.	K2
CLO2	Develop knowledge on health and safety compliance followed in Apparel industry	K3
CLO3	Interpret on environmental compliance to be adhered by Apparel industry.	K3
CLO4	Examine the technical compliance norms followed in Apparel industry.	K4
CLO5	Create compliance norms followed by various international sourcing companies.	K5

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	M	S	M	M
CLO2	S	M	S	M	M
CLO3	S	M	M	M	M
CLO4	S	M	M	M	M
CLO5	S	M	M	M	M

S-Strong; M-Medium

Syllabus

Unit I

9 Hours

Compliance-introduction-scope and need for different compliances Social, health and safety, environmental, technical, international compliance - concept, need, benefits for industry, workers and society. Social accountability and Corporate Social responsibility - scope and need. Social Compliance in supply chain management.

Unit II

9 Hours

Social compliance - conventions on gender and caste discrimination, forced labour, child labour, and minimum age convention. SA 8000 – elements, Worldwide Responsible Apparel Production (WRAP). Ethical Trading Initiative (ETI). Corporate Social Responsibility (CSR) compensation – norms applicable in India, code of conduct, minimum wages Act, remuneration, Trade Union Acts.

Unit III

8 Hours

Environmental compliance – environmental laws and regulations, the regulations related to handling, recycling, and disposal of hazardous materials. Requirements of pollution control board, ISO 14000 – elements and certification. Eco standards, Eco labels, REACH, OEKO TEX, GOTS. Certification requirements for apparel industry

Unit IV

8 Hours

Technical compliance - elements and requirements of ISO 9000, Meeting vendor compliance – WALMART, JCPENNY. Needle policy, maintenance of safety data of materials in stain removal, poly bags, children wear requirements.

Unit V

9 Hours

Ethical trading and international compliance - Ethical Trading Initiative (ETI). Basic code of labour practice. Worldwide Responsible Apparel Production (WRAP) purposes, WRAP Principle, certification process, SA8000. National and international regulating organizations – OSHA, WRAP, GOTS, OEKO TEX. HIGG-HIGG concept.

TextBooks

S.No	Name of the Authors	Title of the book	Publishers	Year and Edition
1	Rathinamoorthy	Apparel Machinery and Equipment	Woodhead Publishing	2018 Standard Edition
2	Seema Kapoor	Apparel Manufacturing Technology	Sonali Publications	2016
3	Richard M. Jones	The Apparel Industry	Wiley-Blackwell John Wiley & Sons L;	2006, 1 st edition

Reference Books

S.No.	Author	Title of the Book	Publishers	Year and Edition
1	Das, S, Li & Fung	Products safety and restricted substances in apparel	Woodhead Publishing	2016, 1 st edition
2	Christie, R	Environmental aspects of textile dyeing	Heriot-Watt University Woodhead Publishing Series in Textiles	2006, 1 st edition
3	Rajesh Chhabara	Social Accountability	Ava Softech Pvt. Ltd	2005

E-Contents:

- <http://www.labour.nic.in>
- <http://www.unicef.org>
- <http://www.indianchild.com>
- <http://www.paycheck.in>
- <http://www.sa-intl.org>

Name of the course	Compliance Standards in Apparel Industry
Name of the Faculty	-
Participatory learning	70%
Experimental learning	20%
Problem based learning	10%

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr.R.Radhika

COURSE CODE	COURSENAME	Category	L	T	P	Credit
MFD23S1	RESEARCH METHODOLOGY AND STATISTICS	Theory	43	2	-	2

Preamble

This course is designed to provide the foundational knowledge and skills necessary to conduct research in various fields and also focus on how to design research studies, analyze data, and interpret results effectively.

Course Learning Outcomes

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

CLO NUMBER	CLO STATEMENT	CLO LEVEL
CLO1	Understand the fundamental principles of research methodology and its importance in academic and professional settings.	K1
CLO2	Conduct a literature review to identify relevant theories, concepts, and previous research related to a research topic.	K2
CLO3	Identify and apply appropriate research methods and techniques for data collection, analysis, and interpretation.	K3
CLO4	Develop a research proposal that includes a clear research question, objectives, methodology, and timeline.	K4
CLO5	Design and implement a research study using appropriate methodologies and tools.	K5

Mapping with Programme Learning Outcomes

CLO LEVEL	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	S	S	S	S	S
CLO 2	S	S	M	S	M
CLO 3	S	S	S	S	S
CLO 4	S	M	S	S	S
CLO 5	S	S	S	S	S

S-Strong; M-Medium

Syllabus

Unit-I

8 Hours

Research -Definition, Meaning, Objectives,types of research, significance of research and defining research process. Research Problem - Sources, identification ,selection and statement, review of related literature.

Unit-II

9 Hours

Research design - Meaning, types of research designs, basic principles of experimental designs. Developing a research plan related to the textile industry. Sampling - sampling census and sample survey, steps in sampling design, criteria for selecting a sampling procedure, characteristics of a good sample design, different types of sample designs.

Unit-III

8 Hours

Methods of data collection - Observation, questionnaire and interview. Data processing and analysis - collection, classification –tabulation,graphical, representation and data analysis. Interpretation of data and report Writing.

Unit-IV

9 Hours

Measures of central tendency-Testing of Hypothesis -Parametric tests-Non Parametric test-descriptive measures –mean,median mode and its applications dispersion – standard deviation, correlation, coefficient of co-relation and its interpretation, rank co-relation, regression equation and prediction . Application of students test for small samples for single mean , difference in means- test for equality of variance. Non – parametric test, Application of Chi-square test, ANOVA test.

Unit-V

9 Hours

Research Ethics and Responsible Conduct in Research: Brief history and analytical basic of research ethics, responsible conduct in research (Honesty in science: Integrity, Authorship, Conflicts of Interest, privacy and Confidentiality, Informed Consent, Risk/Benefit Assessment), The legal regulation of research ethics, in India (From UGC, MHRD and other governing agencies), Regulatory requirements relevant to international research

TEXTBOOKS :

S.NO	Name of the Authors	Title of the book	Publishers	Year and Edition
1	Mark N.K. Saunders, Philip Lewis, and Adrian Thornhill	Research Methods for Business Students	Pearson Education Limited	2019, 1 st edition
2	Nicholas Walliman	Research Methods: The Basics	Routledge	2017 2 nd edition
3	S P Gupta	An Introduction to Statistical Methods	Vikas Publishing House	2009
4	G.C. Ramamurthy	Research Methodology	Kindle Edition, Dreamtech Press.	2011, 1 st edition

REFERENCEBOOKS:

S.No	NameoftheAuthors	TitleoftheBook	Publishers	Yearand Edition
1.	RanjitKumar	ResearchMethodology:AStep-by-Step Guide for Beginners	SAGE Publications Ltd	2020, 1 st edition
2.	JohnW.CreswellandJ. David Creswell	Research Design: Qualitative, Quantitative,andMixedMethods Approaches	SAGE Publications, Inc	2017, 2 nd edition
3.	NeilJ.Salkind	StatisticsforPeopleWho(Think They) Hate Statistics	SAGE Publications, Inc	2016, 1 st edition
4.	GeoffreyR.Marczyk, David DeMatteo, and David Festinger	EssentialsofResearchDesignand Methodology	JohnWiley&Son s	2017
5.	VSKarpagavalli,Dr.C. P. Shirley, Dr. S. Shirley &Mrs. R Golden Nancy	ResearchMethodology	Jec Publication	2023, 1 st edition

E-Contents:

- <https://youtu.be/1vf8ZvADxfY?si=1eVoMT1jGCvOPD9->
- https://youtu.be/rloOsJxluBk?si=Sia_lRc4PzdHawXN
- <https://youtu.be/YOppeXzFkBs?si=pDLbIHUfe3TxJ368>
- <https://youtu.be/I10q6fjPxJ0?si=Ce5ZG6XHzCpyRDSW>

Nameofthecourse	ResearchMethodology and Statistics
NameoftheFaculty	Dr.T.R Indumathi
Participatorylearning	50%
Experimentallearning	20%
Problembased learning	30%

Pedagogy

Lecture by chalk and talk, powerpoint presentation, e-content, group discussion, assignment, quiz, peer learning, seminar.

Course Designer

Dr.R.Radhika



PSGR
Krishnammal College for Women



Affiliated to Bharathiar University \ Autonomous \ College of Excellence \ Accredited with A++ Grade \ Ranked 9th in NIRF

DEPARTMENT OF COSTUME AND APPAREL DESIGN

CHOICE BASED CREDIT SYSTEM (CBCS)&

LEARNING OUTCOMES- BASED CURRICULUM FRAMEWORK (LOCF)

M.Sc. FASHION AND APPAREL DESIGN

2024-2026 Batch

(SEMESTER –IV)



PROGRAMME LEARNING OUTCOMES (PLO's)

After completion of the programme, the student will be able to

- **PLO1:** Understand diverse cultural influences and market demands of apparel industry
- **PLO2:** Create innovative functional and aesthetic apparels including accessories.
- **PLO3:** Design apparels with advance digital tools and technologies
- **PLO4:** Research and analyze textile and fashion trends
- **PLO5:** Apply knowledge and skill in the field of fashion and entrepreneurship.

PROGRAMME SPECIFIC OUTCOMES (PSO's)

The students at the time of graduation

- **PSO1:** Graduates can function independently with their innovative and creative skills.
- **PSO2:** Graduates will be able to meet the current Industrial requirements.
- **PSO3:** Graduates Can Undertake the research /projects sectors to new product development.



M. Sc. FASHION AND APPAREL DESIGN
CHOICE BASED CREDIT SYSTEM (CBCS) &
LEARNING OUTCOMES - BASED CURRICULUM FRAMEWORK (LOCF)
SCHEME & SYLLABUS OF EXAMINATION
2024-2026 BATCH
SEMESTER IV

SEM	Course Code	Title of the Course	Course type	Instructionn Hours /week	Contact Hours	Tutorial Hours	Duration of Examination	Examination Marks			Credits
								CA	ESE	TOTAL	
IV	MFD2409	Home Textiles	CC	5	73	2	3	25	75	100	4
	MFD24P08	Home Textiles - Product Development Lab	CC	7	105	-	4	25	75	100	5
	MFD23PROJ	Project and Viva voce	DSE	18	-	-	-	25	75	100	12
	MFD2410	Indian Traditional Textiles Crafts	ACC	SS	-	-	3	25	75	100	5*
I-IV Sem									Total	2300	90

CC- core courses **ACC-**Additional credit course **CA** – Continuous Assessment

ESE - End Semester Examination **SS**-Self-study

*** Credits applicable to candidates who take up Advanced Level Course examination**

QUESTION PAPER PATTERN 24 - 25 Batch

Question Paper Pattern and distribution of marks PG- Core and Allied- (First 3 Units)

CA Question from each unit comprising of

One question with a weightage of 2 Marks	2 x 3 = 6
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	5 x 3 = 15
One question with a weightage of 8 Marks (Internal Choice at the same CLO level)	8 x 3 = 24
Total: 45 Marks	

End Semester Examination–Question Paper Pattern and Distribution of Marks PG-Core and Allied courses:

ESE Question Paper Pattern:

5x15=75Marks

Question from each unit comprising of

One question with a weightage of 2 Marks	2 x 5 = 10
One question with a weightage of 5 Marks (Internal Choice at the same CLO level)	5 x 5 = 25
One question with a weightage of 8 Marks (Internal Choice at the same CLO level)	8 x 5 = 40
Total: 75	

marks Open book exam for II PG, CIA, Test Pattern: 4 (4 out of 6) x 15 Marks = 60 Marks

Open book examination to be provided for any one course. Question/problems to be solved by applying concepts. Questions with direct book answer to be avoided.

Continuous Internal Assessment Pattern

Theory

I Year UG / PG (24 Batch)

CIA Test	:	5 marks (conducted for 45 marks after 50 days)
Model Exam	:	7 marks (Conducted for 75 marks after 85 days)

(Each Unit 15 Marks)

Seminar/Assignment/Quiz	:	5 marks
Class Participation	:	5 marks
Attendance	:	3 marks

Total : 25Marks

Practical

Lab Performance	:	7marks
Regularity	:	5marks
Model Exam	:	10marks
Attendance	:	3marks
Total	:	25 marks

Evaluation Pattern for the Project - UG & PG (Group Project / Individual) (Except M.A. History / English / M.Sc Biotechnology)

Continuous Internal Assessment (CA) : 25 Marks
End Semester Examination : 75 Marks

Total : 100 Marks

Continuous Internal Assessment (CA)

I Review - Selection of the field of study,
Topic & literature collection : 5 Marks

II Review - Research Design &
Data Collection : 10 Marks

III Review- Analysis & Conclusion,
Preparation of rough draft : 10 Marks

Total : 25 Marks

End Semester Examination

Evaluation of the project report : 25 Marks
Viva Voce : 50 Marks
Total : 75 Marks

ESE Practical Pattern

The End Semester Examination will be conducted for a maximum of 75 marks with a maximum 15 marks for the record and other submissions if any.

MAPPING OF PLOS WITH CLOS

COURSE	PROGRAMME LEARNING OUTCOMES				
	PLO1	PL02	PL03	PLO4	PLO5
COURSE CODE MFD2409					
CLO1	M	S	S	S	S
CLO2	S	S	S	S	S
CLO3	S	S	S	S	S
CLO4	S	M	S	M	S
CLO5	S	S	M	S	S
COURSE CODE MFD24P08					
CLO1	M	M	M	S	S
CLO2	S	M	M	S	S
CLO3	S	M	M	S	S
CLO4	S	S	S	S	S
CLO5	S	M	S	S	S

COURSE CODE	COURSE TITLE	CATEGORY	L	T	P	CREDIT
MFD2409	HOME TEXTILES	THEORY	73	2	-	4

Preamble

- This course provides a study of home textiles, and their performance in home decor and functional textiles.

Prerequisite

- Basic knowledge of textiles, fabric types, and finishing techniques.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Relate the fundamentals of home textiles.	K2
CLO2	Outline the types of raw materials and manufacturing processes used for home textiles.	K2
CLO3	Examine the criteria for selection of finishes in home textiles.	K3
CLO4	Analyze the design, materials, functionality, and maintenance requirement of home textiles.	K4
CLO5	Evaluate the performance of in accordance to regulatory standards for home textiles.	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	M	S	S	S	S
CLO2	S	S	S	S	S
CLO3	S	S	S	S	S
CLO4	S	M	S	M	S
CLO5	S	S	M	S	S

S- Strong; M-Medium

Syllabus

UNIT I

(15 Hours)

Home Textile-Introduction, definition and classification, home textile market scenario. fibers used in home textiles- Selection of sustainable fibers for home textiles- organic cotton, bamboo, recycled polyester. Fabrics for home textiles- woven, knitted and nonwoven, Special finishes used in home textiles- wrinkle-free,

soil release, UV protection, and odor control finishes

UNIT II

(14 Hours)

Introduction and definition of linens - Introduction, definition and types of bed linen, kitchen and table linen, bath linen-Made-ups. Selection and manufacturing of Linens and application and Care of Linens.

UNIT III

(14 Hours)

Windows and wall covering-Designs, types and materials used, manufacturing of draperies, curtains- Applications and uses. wall coverings- Introduction, definition, types and materials used, manufacturing of wall coverings-Application-Residential, commercial, and institutional uses-End use. Care and maintenance- cleaning techniques for various materials

UNIT IV

(14 Hour)

Floor Covering-Introduction, definition, types of carpets -Types of floor coverings- Carpets, rugs, mats, tiles, laminate flooring. Materials used- Wool, polypropylene, nylon, natural fibers coir, sisal. Manufacturing of carpets and rugs- tufting, weaving, knitting, needle-punching techniques. Use and care of floor coverings- Applications of residential, commercial, and industrial uses. Use and care-Vacuuming, deep cleaning, stain prevention. Innovations in floor coverings -noise-reducing and temperature-regulating carpet.

UNIT V

(16 Hours)

Finishes, special performance and evaluation used in home textiles finishes- Temperature- regulated beddings, antimicrobial, moisture management, flame- retardant, Water and oil repellent and soil repellent. Special performance- Special performance requirements in home textiles related to world market. Eco-friendly standards in home textiles. Importance of eco labelling in home textiles. Evaluation-regulatory test – flammability test for different home textiles.

TEXT BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year and edition
1	S Das	Performance of Home Textiles	Woodhead Publishing	2010 and 1st Edn
2	Subrata Das	Performance of Home Textiles	Woodhead	2018 and 2nd Edn
3	Karolia, Anjali	Traditional Indian Handcrafted Textiles: History, Techniques, Processes, and Designs (Vols. I & II)	Niyogi Books	2019 and 1st Edn

4	Sadhan C. Ray	Textiles for Home and Household Use	Woodhead Publishing	2015and 1st Edn
5	Home Textiles	Gopalakrishnan.D and T.Karthik	Astral	2020and 1st Edn

REFERENCE BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year and edition
1	Horrocks, A. Richard, and Anand, Subhash C.	Handbook of Technical Textiles	Woodhead Publishing	2016 and 2 nd Edn
2	Ricci, Maureen White-man	Home Textiles: A Complete Guide to Furnishing Fabrics and Design	Fairchild Books	2011and 1 st Edn
3	Kadolph, Sara J	Textiles	Pearson	2014 and 11 th Edn
4	Naik, Shailaja D	Folk Embroidery and Traditional Handloom Weaving	Indian Books & Periodicals	2012 and Original Edition
5.	R. Senthil Kumar	Textile Finishing: Recent Developments and Future Trends	Woodhead Publishing	2017 and Edition not explicitly stated

Related Online Contents

- <https://www.businesswireindia.com/welspun-secures-patent-for-new-line-of-augmented-reality-home-decor-50283.html>
- <https://textilelearner.blogspot.com/2014/08/fabrics-for-interior-home-textile.html>
- <https://ihmkolkata.blogspot.com/2013/05/wall-coverings.html>

Pedagogy

Lecture by chalk and talk, power point presentation, e-content, group discussion, assignment, quiz, peer learning, seminar

COURSE CODE	COURSE TITLE	Category	L	T	P	Credit
MFD24P08	HOME TEXTILES -PRODUCT DEVELOPMENT LAB	Practical	-	-	105	5

Preamble

- This course provides opportunities for designing and developing home textile products that blend functionality with aesthetic appeal.

Prerequisite

- Basic knowledge of textiles, sewing, and pattern making.

Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Define the essential principles of designing functional and aesthetic home textile products.	K2
CLO2	Identify the fabrics and raw materials for various home textiles.	K2
CLO3	Experiments with designing drafting and construction techniques for home textile products.	K3
CLO4	Design and develop home textiles products by integrating different techniques and finishes.	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	M	M	M	S	S
CLO2	S	M	M	S	S
CLO3	S	M	M	S	S
CLO4	S	S	S	S	S
CLO5	S	M	S	S	S

S- Strong; M-Medium

Syllabus

1. Designing and construction of nursing pillow/ nursing pads	9 Hours
2. Design and development of diaper bag/ hooded towel.	8 Hours
3. Designing and construction of baby bed / sleeping bag for babies	8 Hours
4. Design and development of baby accessories-gloves/ cap/ socks.	9 Hours
5. Designing and construction of cushion covers /chair pad	9 Hours
6. Designing and construction of kitchen apron / oven mitten	8 Hours
7. Designing and construction of made ups set for bed linen	8 Hours
8. Design and development of any 5 types of curtains incorporating different types of pleats	8 Hours
9. Designing and development of swags, cascades and accessories for curtains.	7 Hours
10. Designing and development of quilts multi-purpose mat	9 Hours
11. Designing and pattern development for bathrobe	10 Hours
12. Designing and development of bathrobe	12 Hours

Instruction to students

- The products can be made in quarter scale when the product size is huge
- Use of quarter scale is optional
- Actual size should be mentioned along with $\frac{1}{4}$ scale calculation in record sheets

TEXT BOOKS

S.NO	Name of the Authors	Title of the book	Publishers	Year and edition
1	Aldrich, Winifred	Metric Pattern Cutting for Children's Wear and Babywear	John Wiley & Sons	2009 and 4 th Edn
2	Stewart, Judith, Erwin, Margaret	Textiles and Sewing Guide	Dorling Kindersley	2004 and 1 st Edn
3	McCall, Beth	Home Furnishings Workbook	Goodheart-Willcox	2017 and 1 st Edn
4	Jessica B. Berenbaum	The Complete Book of Sewing for the Home	Creative Homeowner	2001 and 1 st Edn
5	Sue & Alan Smart	The Complete Guide to Sewing	Reader's Digest	2002 and Revised Edn
6	Katrin Cargill	Curtains and Blinds: Contemporary Solutions for Window Treatments	Collins & Brown	2005 and 1 st Edn

Online Reference

- <https://www.mypram.com/en/home-textiles/?p=1>
- <https://organicmanufacture.com/product-category/baby-room-products/baby-swing/>
- <https://vizaro.es/Baby-Bedding-Nursery-Home-Decor-Textiles>
- https://vizaro.es/epages/ec9fb728-b4bf-4cf2-b412-c14a5ff7c09d.sf/en_GB/?ObjectPath=/Shops/ec9fb728-b4bf-4cf2-b412-c14a5ff7c09d/Categories/Textiles_Hogar_Bebe/Textiles_Articulos

Course Designer

- 1.Dr. R. Divya
- 2.Dr.M.Malini Devi

S.NO	LEARNING METHODS	PERCENTAGE
1	Experimental learning	100%

COURSE CODE	COURSE TITLE	Category	L	T	P	Credit
MFD2410	INDIAN TRADITIONAL TEXTILES CRAFTS	Theory	-	-	-	5*

Preamble

- This course explores into Indian traditional textiles, their techniques, significance, and legal protections.

Prerequisite

- Familiarity with indian traditional textiles

Course Learning Outcomes

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

Syllabus

Unit-I

Introduction of Indian traditional textiles- historical significance, general characteristics of traditional textile crafts – centers of production and techniques, commercial significance and status of textile crafts, activities of the government for export promotion- design clusters, GI crafts, exhibitions, programs and developmental schemes

Unit-II

Embroidered textiles of India- Kutch Kathiawar, Sindhi, Phulkari, Kantha, Kasuti, Chamba rumal, Phool Patti ka Kaam, –History, fabrics and traditional motifs and patterns, embroidery techniques, product developed, application of traditional embroidery in the current context.

Unit-III

Introduction to Indian traditional printed textiles – historical significance, general characteristics, cultural identity-Techniques, colours, and motifs of traditional printed textiles-Ajrakh, Ikat, Batik, Bagh, Dabu, Kalamkari Leheriya. Development of traditional printing designs and motifs of traditional printing designs. Applications of current techniques in printing

Unit-IV

Traditional resist- dyed textiles from different regions of India-Regional of ikat styles–patola of Gujarat, bandhas of Odisha, pochampalli, and TeliaRumal of Andhra Pradesh ,tie-dyed textiles .Gujarat Bandhej and leheriya of Rajasthan.Influence of culture, trade, and rituals on resist-dyed textiles. Contemporary adaptations, innovations, and sustainable practices in resist-dyeing.

Unit-V

Copyright law and traditional craft business in India - Status of traditional handicrafts - Acts and statutes for artistic works- protection under geographical indications of goods - Design Act - Legal procedure to register for a copy right in the field of art and crafts -Registration of design - Steps in preparing a design application - ISO certification.

REFERENCE BOOKS

:

S.NO	Name of the Authors	Title of the book	Publishers	Year and edition
1	Anjali Karolia	Traditional Indian Handcrafted Textiles	Niyogi Books	2019 and 1st Edn
2	Rita Kapur Chishti, Rahul Jain, Martand Singh Rita Kapur Chishti, Rahul Jain	Handcrafted Indian Textiles	Tradition and Beyond Roli books,	2000 and 1st Edn
3	Asharani Mathur, Rupa	Woven Wonder The Tradition of Indian Textiles,	Woven Wonder	2002 and 1st Edn
4	Delphine Marie- Vivien	The Protection of Geographical Indications in India	Hardcover	2015 and 1st Edn
5	Helmut Neumann, Heidi Neumann, Rosemary Crill	Textiles of India	Prestel Publishing	2020 and 1st Edn

Online Reference

- https://gaatha.org/Craft-of-India/ajrak-gujarat-history-process/?utm_source=chatgpt.com
- https://dhar.nic.in/en/district-produce/bagh-print/?utm_source=chatgpt.com
- https://en.wikipedia.org/wiki/Kalamkari?utm_source=chatgpt.com

Pedagogy

Self-Study

Course Designer

1. Dr. R.Tryphena
2. Ms.A.Jasira Banu

S.NO	LEARNING METHODS	PERCENTAGE
1	Self learning	100%

