



**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 –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 /			45	-	-	100	-		
	MFD2405	Computer Integrated Manufacturing in Apparel Industry	CC	3	43	2	3	25	75	100	3
	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/ MFD24E03	1. Global Marketing and Sourcing Strategies/ 2. Sports and Smart Textiles /	DSE	3	43	2	3	25	75	100	3

		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 – decatizing 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 composite materials 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

Contents and Presentation Schedule

Unit-I				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Technical textiles -introduction, definition and scope, applications	CLO1	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Growth and development-future of technical textiles	CLO2	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Global technical textiles market, Indian technical textiles market. National technical textiles mission and its role in promoting technical textiles. Fabric structure for technical textiles	CLO2	2	Lecture – Chalk and Talk, PPT	Experiential Learning
Fabric structure for technical textiles – woven and non - woven. Electrospinning and 3d weaving and textile applications	CLO3	3	Lecture – Chalk and Talk, PPT	Problem based Learning
Upcoming techniques and fiber, yarn and fabric formation. Centre of Excellence for Technical Textiles	CLO4	3	Lecture – Chalk and Talk, PPT	Participatory Learning

Centre of Excellence for Technical Textiles	CLO4	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Unit-II				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Industrial and Package Textiles - Industrial textiles - introduction, definition, types – decatizing cloth, bolting cloth, absorbent glass mat battery separators, cigarette filter.	CLO1	4	Lecture – Chalk and Talk, PPT	Participatory Learning
Indu-tech products - coated abrasives conveyor belts, drive belt, ropes & cordages, printed circuit boards, computer printer ribbon, paper making fabrics - filtration products.	CLO2	4	Lecture – Chalk and Talk, PPT	Experiential Learning
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	CLO3	4	Lecture – Chalk and Talk, PPT	Participatory Learning
Textile reinforced composite materials and their applications	CLO4	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Unit-III				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Geo and Filtration Textiles - Geo Textiles-Introduction, fiber used types, functions and properties	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Characteristics and applications in its field structure and performance, non-polymeric fibres, highperformance synthetic fibers, newer fibers	CLO2	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Geo synthesis, essential properties of geotextiles, natural fiber, geotextiles for soil strengthening. friction resistance of geotextiles and standards for geotextiles.	CLO3	4	Lecture – Chalk and Talk, PPT	Experiential Learning
Filtration textiles- introduction, nano-technical fibres, filters for air pollutants, pollutant capture mechanism, dust collection, fabric construction, solid liquid separation	CLO4	4	Lecture – Chalk and Talk, PPT	Problem based Learning
Unit-IV				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Protective Textiles, Indu Tech & Agro Textiles -Introduction, fibers used	CLO1	3	Lecture – Chalk and	

types, functions and properties, characteristics and applications			Talk, PPT	Participatory Learning
Fire protective clothing, heat-resistant garments, waterproof materials, ballistic resistant vests, biological and chemical vests, military protective clothing Smart polymers used in protective clothing	CLO2	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Indutech- introduction, fibers used types, functions and properties, characteristics and applications in its field	CLO3	3	Lecture – Chalk and Talk, PPT	Problem based Learning
Agro textiles- definition, types, applications - greenhouse cover, capillary mats, fishing nets, nets for plants, rootless plants and protecting grassy areas, sun-screens, wind-shields and anti-bird nets	CLO4	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Protective Textiles, Indu Tech & Agro Textiles -Introduction, fibers use types, functions and properties, characteristics and applications	CLO5	3	Lecture – Chalk and Talk, PPT	Experiential Learning

Unit-V

Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Medical Textiles, Sports Textiles, Smart and Intelligent. Textiles –Medical Textile – Introduction– features -classifications and applications -,	CLO1	4	Lecture – Chalk and Talk, PPT	Participatory Learning
Sports Textiles: Introduction, fibers used, types, functions and properties, characteristics and applications of sports tech.	CLO2	4	Lecture – Chalk and Talk, PPT	Problem based Learning
Smart and intelligent textiles – classification - activesmart, passive smart and very smart textiles, phase change materials, shape memory polymers	CLO3	4	Lecture – Chalk and Talk, PPT	Participatory Learning
Chromic and conductive materials and its applications in various wearable technology	CLO4	3	Lecture – Chalk and Talk, PPT	Experiential Learning

Name of the course	Technical textiles and its application
Name of the Faculty	Dr.M.Malini Devi
Participatory learning	50%
Experimental learning	40%
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.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 Publishing	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

Contents and Presentation Schedule

Unit-I				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Introduction to the operation of design software for woven, knitted and printed textiles.	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Computer aided fashion design system tools,manipulating techniques.	CLO2	3	Lecture – Chalk and Talk, PPT	Problem based Learning
Knowledge based system-introduction to imageprocessing and imaging system-fabric and sewing defect identification using image processing-artificialneural networks	CLO3	3	Lecture – Chalk and Talk, PPT	Experiential Learning
Unit-II				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
3D body scanning- digitizing- grading and lay planningsystem	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Introduction to graphic interface of the software-tools	CLO2	3	Lecture – Chalk and Talk, PPT	Participatory Learning

Functions used for pattern making, grading and marker planning.	CLO3	3	Lecture – Chalk and Talk, PPT	Problem based Learning
Unit-III				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Preparation of virtual dummies, texture mapping	CLO1	2	Lecture – Chalk and Talk, PPT	Participatory Learning
2D and 3D draping, 3D modeling, E-fit analysis, animation,	CLO2	2	Lecture – Chalk and Talk, PPT	Problem based Learning
Prototyping – virtual and rapid. Made to measure systems	CLO3	2	Lecture – Chalk and Talk, PPT	Experiential Learning
Application of Artificial Intelligence-Augmented Reality and Virtual Reality	CLO4	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Unit-IV				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Applications of computer integration in fabric cutting,spreading and labeling machines.	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Computer aided special purpose sewing machine with control panels	CLO2	2	Lecture – Chalk and Talk, PPT	Problem based Learning
pre-programmed options. Computer controlled embroidery machines	CLO3	2	Lecture – Chalk and Talk, PPT	Experiential Learning
Digitalized colour communication ZED computerized color matching system.	CLO4	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Unit-V				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Application of Electronically transfer documents (EDI)-selection of line-control system-data basemanagement system.	CLO1	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Automatic material handling, storage, tracing and retrieval system	CLO2	2	Lecture – Chalk and Talk, PPT	Problem based Learning
Applications of e-commerce and ManagementInformation System (MIS) in apparel industry, supplychain planning	CLO3	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Computerized color matching system	CLO4	2	Lecture – Chalk and Talk, PPT	Experiential Learning

Name of the course	Computer integrated manufacturing in apparel Industry
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	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	Technology 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	WPI Publishing	2012

		in apparel production	
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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

Contents and Presentation Schedule :

Unit-I				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Spreading machines-types of fabric packages. Types of fabrics – one way – two way fabrics – their effect on spreading.	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Methods of fabric spreading. Spreading equipments–computerized spreaders.	CLO2	3	Lecture – Chalk and Talk, PPT	Experimental Learning
Marker planning, marker efficiency, factors affecting marker efficiency.	CLO3	4	Lecture – Chalk and Talk, PPT	Problem Based Learning
Marker duplicating methods– computer aided marker making	CLO4	4	Lecture – Chalk and Talk, PPT	Participatory Learning
Unit-II				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Cutting machines-Introduction to cutting machines.Notches, drills, die cutting machines	CLO1	4	Lecture – Chalk and Talk, PPT	Participatory Learning
Types and functions of cutting machines – straight knife, round knife, band knife cutting machines	CLO2	4	Lecture – Chalk and Talk, PPT	Experimental Learning
Computerized cutting machines. Maintenance of cutting machines	CLO3	4	Lecture – Chalk and Talk, PPT	Problem Based Learning
Common defects in cutting and their remedies, latestdevelopments	CLO4	3	Lecture – Chalk and Talk, PPT	Problem Based Learning
Unit-III				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods

Sewing machine - basic parts of sewing machine – primary and auxiliary parts and their functions.	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Bobbin case/bobbin hook, throat plate – takeup devices – tensioners – feed dog – pressure foot	CLO2	4	Lecture – Chalk and Talk, PPT	Experimental Learning
Types of needles – parts of needles and their function. Needle finishes. Adjustments of stand height – pedal – needle bar – stitch length selection – feed timing – needle and bobbin thread tension – stitch cycle timing diagram	CLO3	4	Lecture – Chalk and Talk, PPT	Problem Based Learning
Common defects and remedies. Special attachments in sewing machines	CLO4	4	Lecture – Chalk and Talk, PPT	Problem Based Learning

Unit-IV

Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Multithread sewing machines - over lock machines - types of over lock machines. Parts and their functions	CLO1	4	Lecture – Chalk and Talk, PPT	Participatory Learning
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.	CLO2	4	Lecture – Chalk and Talk, PPT	Experimental Learning
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.	CLO3	4	Lecture – Chalk and Talk, PPT	Problem Based Learning
Maintenance of flat lock machines, defects and remedies	CLO4	3	Lecture – Chalk and Talk, PPT	Participatory Learning

Unit-V

Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Special purpose sewing machines – introduction to different special purpose sewing machines.	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Basic working of feed of Arm, button hole sewing, button sewing, bar tack, blind stitch machines	CLO2	3	Lecture – Chalk and Talk, PPT	Experimental Learning
Embroidery sewing machines.	CLO3	3	Lecture – Chalk and	Participatory Learning

			Talk, PPT	
Sewing machine maintenance – maintenance schedule for various machines, maintenance audit	CLO4	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Latest developments in apparel manufacturing machineries.	CLO5	2	Lecture – Chalk and Talk, PPT	Experimental Learning

Name of the course	Apparel manufacturing Machinery
Name of the Faculty	Ms.A.Jasira Banu
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

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	Mastering Weave Structures	Interweave Press	2004
3.	Janet Phillips	Exploring Woven Fabrics	School of Textile Design	2008
4.	Sam Wild	The Way of the Weaver: Patterns and Practice	Loomworks Publishing	2020

E – Journals:

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

Contents and Presentation Schedule

Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Plain weave	CLO2	8	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Twill weave	CLO3	8	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Satin and Sateen weave	CLO2	8	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Herringbone weave	CLO4	8	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning

Basket weave	CLO3	8	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Honey comb weave	CLO3	8	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Huck-a-back weave	CLO4	8	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Tassels (any 3 varieties)	CLO4	8	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Deign and Product development <ul style="list-style-type: none"> • Design and develop a wall hanging that incorporates different weaves, colors and texture. • Creation of products, Photoshoot, Compose the above details as design sheets 	CLO5	11	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning

Name of the course	Woven design development lab
Name of the Faculty	Dr.Indumathi
Experimental learning	100%

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 Diamoond	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

Contents and Presentation Schedule

Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Scarf or stole	CLO2	7	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Tie or muffler (neck band)	CLO3	7	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Hat or cap	CLO4	10	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Gloves or mittens	CLO4	10	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Belt or suspenders	CLO5	7	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Tote bag or clutch	CLO4	7	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Pouch or wallet	CLO4	7	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Design creation <ul style="list-style-type: none">• Mood board• Colour board• Flat and illustration board	CLO4	10	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning
Design sheet development <ul style="list-style-type: none">• Product development• Photoshoot Composition as portfolio sheets	CLO4	10	Lecture chalk and talk, PPT, demonstration, Video	Experimental Learning

Name of the course	Accessories for fashion ensemble
Name of the Faculty	Ms.A.Yamuna Devi
Experimental learning	100%

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

Contents and Presentation Schedule

Unit-I				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Introduction to Global Marketing – Drivers towards Globalization -.	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Factors influencing global marketing – economic, social and cultural. Limitations to Global Marketing	CLO2	2	Lecture – Chalk and Talk, PPT	Experimental Learning
Global competitive analysis - competitive environment, country specific advantages, firm specific advantages.	CLO3	2	Lecture – Chalk and Talk, PPT	Problem Based Learning
Environmental, Social and Governance(ESG), Sustainable Development Goals (SDG).	CLO4	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Unit-II				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Global customers- Global segmentation and positioning- market segments	CLO1	2	Lecture – Chalk and Talk, PPT	Participatory Learning
global product positioning, positioning a new brand, positioning a global brand	CLO2	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Global Product and Services - global product lines, services, service quality, globalization of services	CLO3	2	Lecture – Chalk and Talk, PPT	Problem Based Learning
Distribution strategies, advertising, promotion. Organizing for Global Marketing - Organizational structure, management systems, people and organizational culture	CLO4	3	Lecture – Chalk and Talk, PPT	Problem Based Learning

Unit-III				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Sourcing goals and objectives. Principles of sourcing strategy. Plan for the procurement of materials as per garment design requirements	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
International sourcing- Source selection - contracts and incentives, supplier strategies- Procure materials from national and international suppliers related to fabrics, trims and accessories	CLO2	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Supervise and evaluate performance of subordinates Maintain records about procurement of materials. Sourcing data and reports	CLO3	3	Lecture – Chalk and Talk, PPT	Experimental Learning
Unit-IV				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Sourcing requirements - Maintain health, safety and security in the sourcing department	CLO1	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Comply with industry, regulatory and organizational requirements. Sourcing design elements	CLO2	2	Lecture – Chalk and Talk, PPT	Experimental Learning
Risks and rewards of multiple sourcing. Capacity constraints and pricing in sourcing markets.	CLO3	2	Lecture – Chalk and Talk, PPT	Participatory Learning
LIC selection and incentives for innovation – Yard stick contracts. Case studies in sourcing	CLO4	2	Lecture – Chalk and Talk, PPT	Problem Based Learning
Unit-V				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Growth of markets – Evolution of global markets from local to international trade- Characteristics of developed markets- Emerging markets and their impact on global trade	CLO1	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Developed and under developed countries -Issue of trade cycles. Rise of under developed and developing countries	CLO2	2	Lecture – Chalk and Talk, PPT	Experimental Learning
The role of global partnerships and trade agreements.	CLO3	2	Lecture – Chalk and Talk, PPT	Participatory Learning

Global marketing case studies- Innovations in global supply chains- The role of artificial intelligence and big data in predicting market trends.	CLO5	2	Lecture – Chalk and Talk, PPT	Problem Based Learning
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Name of the course	Global marketing and Sourcing strategies
Name of the Faculty	Dr.R.Tryphena
Participatory learning	45%
Experimental learning	45%
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 & 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

Contents and Presentation Schedule

Unit-I				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Introduction to Sports Textiles -Overview of sports textiles.	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Definition, scope, importance, and trends. key materials used in performance sportswear, including polyester, nylon, spandex, and aramid fibers.	CLO2	2	Lecture – Chalk and Talk, PPT	Experimental Learning
Functional requirements such as moisture management, thermal regulation, and durability. Environmental considerations and biomimicry in sports textile development.	CLO3	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Environmental considerations and biomimicry in sports textile development	CLO4	2	Lecture – Chalk and Talk, PPT	Problem Based Learning
Unit-II				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Materials and Functional Properties for Sports Textiles -High-performance materials with properties like moisture-wicking, UV protection, and antimicrobial finishes.	CLO2	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Textile structures, including woven, knitted, and non-woven fabrics, and their role in sportswear.	CLO3	2	Lecture – Chalk and Talk, PPT	Experimental Learning
Introduction to advanced technologies like seamless knitting and bonded fabrics.	CLO4	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Applications of functional textiles in activewear, swimwear, and sports equipment.	CLO5	2	Lecture – Chalk and Talk, PPT	Problem Based Learning
Unit-III				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Fundamentals of Smart Textiles -Introduction to smart textiles.	CLO3	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Definition, classification -active, passive, and ultra-smart textiles, and evolution.	CLO4	2	Lecture – Chalk and Talk, PPT	Experimental Learning
Key components such as sensors, actuators, and conductive yarns. Functional requirements of smart textiles, including health monitoring, energy harvesting, and responsive functions.	CLO5	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Emphasis on biomimicry and environmental considerations in smart textile applications	CLO5	2	Lecture – Chalk and Talk, PPT	Problem Based Learning

Unit-IV				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Applications and Innovations in Smart Textiles.	CLO2	1	Lecture – Chalk and Talk, PPT	Participatory Learning
Advanced materials and technologies for smart textiles, focusing on wearable devices, responsive fabrics, and e-textiles	CLO3	2	Lecture – Chalk and Talk, PPT	Experimental Learning
Innovations in smart textiles for healthcare, fitness, and extreme environments.	CLO2	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Specialized applications in automotive textiles, adaptive fabrics, and self-healing materials. Sustainability and emerging trends in smart textile development.	CLO3	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Sustainability and emerging trends in smart textile development.	CLO4	2	Lecture – Chalk and Talk, PPT	Problem Based Learning
Unit-V				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Future trends and market opportunities -Emerging innovations-AI-powered smart fabrics, 3D printing, and adaptive clothing. Sustainable practices:	CLO3	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Recycling and energy-efficient processes. Trends like slow fashion, and consumer preferences.	CLO4	2	Lecture – Chalk and Talk, PPT	Experimental Learning
Market prospects- Commercialization in fashion, healthcare, sports, and defense.	CLO4	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Role of regulatory bodies in promoting sustainability and innovation	CLO5	2	Lecture – Chalk and Talk, PPT	Problem Based Learning

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. Kandhavadi	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

Contents and Presentation Schedule

Unit-I				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Introduction -The basic concepts of sustainable development; difference between chemical & green process in manufacturing, rules/ recommendations for using chemicals, raw materials & waste management for sustainable textiles & clothing.	CLO1	4	Lecture – Chalk and Talk, PPT	Participatory Learning
Definition of sustainability –need for sustainability.Factors influencing sustainability. Impact of ecology,economy, and culture on sustainability.	CLO2	3	Lecture – Chalk and Talk, PPT	Experimental Learning
Product Life Cycle. Product design sustainability using low – impact materials, recyclable material content. Sustainable fibres – organic cotton, recycled polyester, alternative sustainable fibers	CLO3	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Unit-II				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Sustainable Textile Production - Sustainable factors in yarn and fabric manufacturing	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Waste management in spinning and fabric manufacturing	CLO2	2	Lecture – Chalk and Talk, PPT	Experimental Learning
key environmental drivers in the textile industry-Legislation, Eco labels, Environmental Management System (EMS), retailers, green consumers, pressure groups, controlled coloration	CLO3	3	Lecture – Chalk and Talk, PPT	Problem Based Learning
Unit-III				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Sustainability in Textile Processing -Natural colorants and recent development..	CLO1	3	Lecture – Chalk and Talk, PPT	Participatory Learning
Bio-processing of textiles - bio desizing, bio scouring,bio bleaching, bio polishing, bio stoning, enzymaticdegumming and enzymatic retting	CLO2	3	Lecture – Chalk and Talk, PPT	Experimental Learning
Developments in natural finishing	CLO3	2	Lecture – Chalk and Talk, PPT	Problem Based Learning

Unit-IV				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Sustainable fashion design process - Production of sustainable fashion-	CLO1	2	Lecture – Chalk and Talk, PPT	Participatory Learning
The phases of fashion design and production, fashion designers role, sustainable strategies in design houses, zero waste design practice, textile recycling	CLO2	3	Lecture – Chalk and Talk, PPT	Experimental Learning
Second hand clothing, redesigning. Fast fashion vs slow fashion, new normal, sustainable fashion supply chain, fashion logistic, sustainable clothing care.	CLO3	3	Lecture – Chalk and Talk, PPT	Problem Based Learning
Unit-V				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Sustainable fashion trends – new fashion ethic and aesthetics	CLO1	2	Lecture – Chalk and Talk, PPT	Participatory Learning
Reversing fashion consumption, locally made and globally relevant, mega demand	CLO2	2	Lecture – Chalk and Talk, PPT	Problem Based Learning
Negative demand, sharing and servicing. Role of National and International regulating organizations in sustainability	CLO3	2	Lecture – Chalk and Talk, PPT	Experimental Learning
Worldwide responsible accredited production (WRAP), mandatory requirements – benefits to company, labor and society, eco mark.	CLO4	3	Lecture – Chalk and Talk, PPT	Participatory Learning

Name of the course	Sustainable apparel design and development
Name of the Faculty	Dr.M.Malini Devi & Ms.A.YamunaDevi
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.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

Contents and Presentation Schedule

Unit-I				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods

Definition, characteristics and functions of retailing, retailers, retailing channels, retail strategy	CLO1	4	Lecture –Chalk and Talk, PPT	Participatory Learning
Structure of retail organization, retail units, merchandise mix, customer interaction, organized retailing, and retail formats, geographical markets	CLO2	4	Lecture –Chalk and Talk, PPT	Problem Based Learning
Retailing in rural India, vertical marketing system, challenges in retail business	CLO3	4	Lecture –Chalk and Talk, PPT	Experimental Learning

Unit-II

Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Retail market segmentation - segmentation-definition and benefits.	CLO1	3	Lecture –Chalk and Talk, PPT	Participatory Learning
Segmenting, targeting and positioning. Criteria for segmentation	CLO2	3	Lecture –Chalk and Talk, PPT	Problem Based Learning
types of markets, dimensions for segmentation, types of segmentation.	CLO3	3	Lecture –Chalk and Talk, PPT	Experimental Learning
Market targeting, customer profile, survey of buyers Intentions. Application of augmented reality and virtual reality in fashion retailing	CLO4	3	Lecture –Chalk and Talk, PPT	Participatory Learning

Unit-III

Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Merchandise management - product management, brand management	CLO1	3	Lecture –Chalk and Talk, PPT	Participatory Learning
Retailing, merchandise management, model stock plan, constraining factors	CLO2	3	Lecture –Chalk and Talk, PPT	Problem Based Learning
Types of suppliers and selection criteria, category management, merchandise management planning in retail segments	CLO3	3	Lecture –Chalk and Talk, PPT	Experimental Learning

RFID for inventory management	CLO4	3	Lecture –Chalk and Talk, PPT	Participatory Learning
Unit-IV				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Retail location and space management – location decision-importance, levels and determining factors	CLO1	3	Lecture –Chalk and Talk, PPT	Participatory Learning
Types of location, types of consumer goods and location decision	CLO2	3	Lecture –Chalk and Talk, PPT	Problem Based Learning
Site selection analysis. Atmospheric, store space management, retail selling tools, colour planning, physical materials in store designing, atmospheric in the context of internet retailing	CLO3	4	Lecture –Chalk and Talk, PPT	Experimental Learning
Online retailing, E-Commerce	CLO4	2	Lecture –Chalk and Talk, PPT	Participatory Learning
Unit-V				
Topic	CLO/CO	No of Hours	Content Delivery Methods	Learning Methods
Retail pricing and promotion strategy - influences on retail pricing strategy, development in retail prices,	CLO1	3	Lecture –Chalk and Talk, PPT	Participatory Learning
Retail pricing objectives, retail pricing approaches and strategies, consumer responsiveness to prices, role of price elasticity and sensitivity	CLO2	4	Lecture –Chalk and Talk, PPT	Problem Based Learning
Profitability. Promotion mix selection, advertising, media selection	CLO3	3	Lecture –Chalk and Talk, PPT	Experimental Learning
sales promotion, personal selling and publicity.	CLO4	2	Lecture –Chalk and Talk, PPT	Participatory Learning
Fashion Retail Management				
Name of the Faculty	Dr.S.Thamarai selvi			
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.M.Malini Devi

