



**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	-	-	-	-	-	-	-

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 hunt 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 MFD2401					
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
COURSE CODE MFD2402					
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
COURSE CODE MFD2403					
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
COURSE CODE MFD24P01					
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
COURSE CODE MFD24P02					
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
COURSE CODE MFD24P03					
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

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

COURSE CONTENT AND LECTURE SCHEDULE						
Module No	Topic	Knowledge level	No. of Periods	Content Delivery methods	Student engagement	Participatory learning/exp eriential learning/ problem based learning
Unit- I						
1	Definition of forecasting - types of forecasting, Process of research, colour research fashion research, customer profile research	CLO1	2	Lecture talk &PPT	Group discussion	Participatory learning
2	Source of fashion forecasting information – forecasting agencies and their role in forecasting. Seasons and their impact on fashion	CLO2	4	Chalk &talk	Book review	Participatory learning
3	Compiling fashion forecasting information - forecasting agencies – forecasting magazines – websites – information in the forecasting publications.	CLO3	4	Lecture talk &PPT	Brainstorming	Experimental learning
4	Fashion forecasting in Indian Scenario.	CLO4	1	Lecture talk & Disc	Peer learning	Problem based learning
Unit- II						
5	Fashion forecasting packages and magazines specialist fashion forecasting companies	CLO1	3	Lecture talk & Disc	presentation	Problem based learning
6	The role of forecaster in aiding fashion designers, developers and retailers	CLO2	3	Lecture talk & PPT	Group discussion	Participatory learning
7	Process of forecasting- decision making process	CLO3	3	Lecture talk & Seminar	Book review	Experimental learning
8	When to start forecasting for the selling season.	CLO4	3	Lecture talk & PPT	Brainstorming	Problem based learning
Unit-III						

9	Design logic of apparel products	CLO1	3	Lecture talk & Discussion	Diagram poster preparation	Participatory learning
10	Classification of textile products, components, Aesthetics and Comfort of textile products	CLO2	3	Lecture talk & PPT	Brainstorming	Experimental learning
11	Anthropometry, sizing, body scanning and fit analysis	CLO3	3	Lecture talk & Seminar	Book review	Problem based learning
12	Specification, Properties, and Technology of constituent fibres, yarns, fabrics and apparels.	CLO4	3	Lecture talk & PPT	Group discussion	Participatory learning
Unit- IV						
13	Building of the first design ideas, planning to costing, line building, from spec to samples, production selling according to the seasons.	CLO1	3	Lecture talk & Discussion	Book review	Experimental learning
14	Developing New product: Idea generation, idea screening, Concept testing	CLO2	3	Lecture talk & PPT	Group discussion	Participatory learning
15	Business Analysis, the product development Process, group product development	CLO3	3	Lecture talk & Seminar	Brainstorming	Participatory learning
	Research, Test marketing, commercialization.	CLO4	3	Lecture talk & PPT	Peer learning	Problem based learning
Unit-V						
16	Evaluation of Portfolio of products or projects	CLO1	2	Lecture talk & Discussion	Peer learning	Experimental learning
17	Introduction and purpose of economic analysis	CLO2	2	Lecture talk & PPT	Presentation	Problem based learning
18	Market potential – market demand	CLO3	1	Lecture talk & Seminar	Book review	Participatory learning
19	Estimating sales – estimating cost and profit	CLO4	2	Lecture talk & PPT	Group discussion	Participatory learning
20	Marketing analysis - advertising and media planning, fashion shows and other events.	CLO4	2	Lecture talk & PPT	Brainstorming	Experimental learning
21	Industry tour and project. surveys and organizing of exhibitions.	CLO4	2	Lecture talk & PPT	quiz	Participatory learning

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

COURSE CONTENT AND LECTURE SCHEDULE						
Module No	Topic	Knowledge level	No. of Periods	Content Delivery methods	Student engagement	Participatory learning/experiential learning/problem based learning
Unit- I						
1	Need for international Trade – features – advantages – problems of foreign trade	CLO1	3	Lecture talk & PPT	presentation	Participatory learning
2	International trade documents - regulatory frame work – foreign trade documents – regulatory & commercial documents	CLO2	4	Lecture talk & Seminar	Group discussion	Experimental learning
3	Letter of credit – contract terms and export documents. GRI standards in the apparel industry- Impact and certification.	CLO3	4	Lecture talk & PPT	Brainstorming	Problem based learning
4	WTO - globalization – EXIM policy – regional trade agreements – current trends in international trade	CLO1	4	Lecture talk & PPT	presentation	Participatory learning
5	Export order execution: steps in export procedure, risks involved in documentation procedure, customs clearance	CLO2	4	Lecture talk & PPT	Group discussion	Participatory learning
6	Export risk management, export barriers- tariff and non-tariff barriers.	CLO3	4	Lecture talk & Seminar	Book review	Experimental learning

Unit- III						
7	Export procedures - getting established as an exporter	CLO1	2	Lecture talk & Discussion	Group discussion	Problem based learning
8	Entering into export contract – execution - post shipment procedures	CLO2	3	Lecture talk & PPT	Book review	Experimental learning
9	Export promotion measures – incentive and facilities to exporters.	CLO3	3	Lecture talk & Seminar	Brainstorming	Problem based learning
10	Import procedures - import process – customs clearance for imports – role of custom and exercise in international trade	CLO4	3	Lecture talk & PPT	Peer learning	Problem based learning
Unit- IV						
11	Multi fiber agreement and bilateral textile agreements signed by India with importing quota countries	CLO1	3	Lecture talk & Discussion	Group discussion	Participatory learning
12	Govt. of India's export entitlement policy on garment exports	CLO2	3	Lecture talk & PPT	Book review	Experimental learning
13	Export firm: nature of export firm, setting up of an export firm, export licensing, registration formalities	CLO3	3	Lecture talk & Seminar	Brainstorming	Participatory learning
14	Registrations with RBI, EPC, DGFT, commodity boards, income tax and customs authorities.	CLO4	3	Lecture talk & PPT	presentation	Experimental learning
Unit- V						
15	Role of export promotional councils, commodity boards, ECGC, role of commercial banks	CLO1	4	Lecture talk & Discussion	Group discussion	Problem based learning

16	Establishment & significance of SEZ & EPZ, availing concessions and incentives under various export promotion schemes, duty drawback, subsidies	CLO2	4	Lecture talk & PPT	Diagram poster preparation	Experimental learning
17	Trade blocs: Effects of trade blocs on world trade, major trade blocs – EU, ASEAN and NAFTA	CLO3	4	Lecture talk & Seminar	Flow chart making	Participatory learning

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

COURSE CONTENT AND LECTURE SCHEDULE						
Module No	Topic	Knowledge level	No. of Periods	Content Delivery methods	Student engagement	Participatory learning/experiential learning/ problem based learning
Unit- I						
1	Apparel Manufacturing Industry-Nature and Scope. Major functions of apparel manufacturing - Engineering and Management functions	CLO1	2	Lecture talk & PPT	Group discussion	Participatory learning
2	Material flow in apparel industry. Introduction to core concepts of apparel production	CLO2	3	Lecture talk & SEMINAR	Book review	Participatory learning
3	Evolution of apparel production processes mass production concepts and standardization of sizing	CLO3	3	Lecture talk & PPT	Brainstorming	Experimental learning
4	Various production systems practiced in India and their application for different apparel products	CLO4	2	Lecture talk & Disc	Book review	Problem based learning
5	Emerging trends in apparel production processes		2	Lecture talk & PPT	presentation	Experimental learning
Unit- II						
6	Production Planning and control - objectives, levels, functions and strategies.	CLO1	2	Lecture talk & Disc	Book review	Problem based learning

7	Production control-objectives, importance and functions. Role of production planning and control department in apparel industry	CLO2	3	Lecture talk & PPT	Diagram poster preparation	Participatory learning
8	Productivity –concept, measuring productivity and characteristics. Pre-production functions – product acceptance, steps from prototype to production model, order requirements	CLO3	3	Lecture talk & SEM	Flow chart making	Participatory learning
9	Work study - Definition, purpose, techniques of work study. Procedure of work study- Pre and post production.	CLO4	4	Lecture talk& PPT	Book review	Experimental learning
Unit- III						
10	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	CLO1	3	Lecture talk& Discussion	Group discussion	Participatory learning
11	Spreading Requirements, Methods of Spreading, Objectives of Cutting, and Methods of Cutting. Automation in spreading, cutting and sewing. Robotics for 3D sewing operations	CLO2	3	Lecture talk & PPT	Book review	Problem based learning
12	Stitches and classification, seam and seam classification, seam and seam stitch defect analysis.	CLO3	3	Lecture talk & Seminar	Brainstorming	Participatory learning
13	Seam and seam stitch defect analysis.	CLO4	3	Lecture talk & PPT	Group discussion	Experimental learning

Unit- IV						
14	Apparel Finishing Importance of Garment pressing and finishing, Types of Garments, pressing of Garments and Specialty Garment Finishes	CLO1	3	Lecture talk & Discussion	Group discussion	Participatory learning
15	Quality Checking: Inspection, Interactive bar coding, needle detection. Packaging and warehousing	CLO2	3	Lecture talk & PPT	Book review	Experimental learning
16	Types of packing and packing materials, quality specification, merchandise packing and shipping packing	CLO3	3	Lecture talk & Seminar	Brainstorming	Participatory learning
17	Intra transport, warehousing, computerized storage systems. Automation in material handling	CLO4	2	Lecture talk & PPT	Group discussion	Problem based learning
Unit- V						
18	Determination of machinery requirements for a new factory, calculation of labour requirements, application of line balancing techniques Balance control	CLO1	4	Lecture talk & Discussion	Book review	Participatory learning
19	Advanced tools and equipment in industrial engineering. Innovative trends and challenges in apparel production	CLO2	3	Lecture talk & PPT	Group discussion	Experimental learning
20	IT applications in capturing motion economy and time measurement, lowering energy consumption and minimizing environmental impact	CLO3	4	Lecture talk & Seminar	Book review	Participatory learning

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

COURSE CONTENT AND LECTURE SCHEDULE						
Module No	Topic	Knowledge level	No. of Periods	Content Delivery methods	Student engagement	Participatory learning/experiential learning/problem based learning
1	Effect of fabric on forms for skirts - Type of fabric: Wovens, knits, nonwovens, non textile	CLO2	6	Lecture, PPT, demonstration, Video	Hands on Practice	Experimental learning
2	Weight of fabric: light weight, medium weight and heavy weight.	CLO2	6	Lecture, PPT, demonstration,	Hands on Practice	Participatory learning
3	Effect of fabric on forms for skirts - Types of Silhouettes: bell & balloon	CLO3	5	Lecture, PPT, demonstration, Video	Brainstorming	Experimental learning
	Effect of fabric on forms for skirts - Types of Silhouettes: circle and triangle	CLO4	5	Lecture, PPT, demonstration,	Hands on Practice	Experimental learning
4	Intermediate Draping: Skirts- kilt	CLO4	6	Lecture, PPT, demonstration, Video	Group discussion	Participatory learning
	Intermediate Draping: Skirts- pegged.	CLO5	4	Lecture, PPT, demonstration,	Hands on Practice	Experimental learning

	Intermediate Draping: Skirts- dirndl	CLO4	4	Lecture Video	Group discussi on	Experimental learning
	Intermediate Draping: Skirts-yoke with flare and flounces.	CLO4	4	Lecture, PPT, demonstra tion,	Hands on Practice	Participatory learning
5	Intermediate Draping: Blouses – Bustier top	CLO4	6	Lecture. Video	Hands on Practice	Participatory learning
	Intermediate Draping: Blouses – Peasant with incorporation of collar and sleeve by draping technique.	CLO4	7	Lecture, PPT, demonstra tion,	Group discussi on	Experimental learning
6	Intermediate Draping: Blouses – Gibson Girl with incorporation of collar and sleeve by draping technique.	CLO4	10	Lecture. Video	Hands on Practice	Problem based learning
7	Intermediate Draping: Pants – Harempants.	CLO4	3	Lecture, PPT, demonstra tion,	Brainsto rming	Experimental learning
	Intermediate Draping: Pants - Hakama pants.	CLO4	3	Lecture , Video	Group discussi on	Experimental learning
	Intermediate Draping: Pants - wide leg pants.	CLO4	3	Lecture, PPT, demonstra tion,	Hands on Practice	Problem based learning
8	Advanced Draping: Asymmetrical drapes	CLO5	6	Lecture, Video	Hands on Practice	Experimental learning
	Advanced Draping: Biased drapes	CLO5	4	Lecture, PPT, demonstra tion,	Group discussi on	Experimental learning
	Advanced Draping: Gowns -Shift	CLO5	4	Lecture, Video	Brainsto rming	Problem based learning
	Advanced Draping: Gowns - Empire	CLO5	4	Lecture, PPT, demonstra tion,	Hands on Practice	Experimental learning

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

COURSE CONTENT AND LECTURE SCHEDULE						
Module No	Topic	Knowledge level	No. of Periods	Content Delivery methods	Student engagement	Participatory learning/experiential learning/problem based learning
1	Fabric woven design using draft view and 2D representation.	CLO4	5	Lecture, PPT, demonstration, Video	Hands on Practice	Experimental learning
2	Motifs development - Symmetrical/Asymmetrical, Balanced/Unbalanced repeat (arrangements) 3/4 drop.	CLO5	6	Lecture, PPT, demonstration, Video	Group discussion	Experimental learning
	1/2 drop H/V, 1/3 drop H/V - 5 designs.	CLO5	4	Lecture, PPT, demonstration, Video	Hands on Practice	Experimental learning
3	Label designing and Logo designing for apparel based on theme.	CLO4	5	Lecture, PPT, demonstration, Video	Brainstorming	Problem based learning

4	Design and development silhouettes for Kid - Party Wear.	CLO5	10	Lecture, PPT, demonstration, Video	Hands on Practice	Experimental learning
5	Design and development silhouettes for Women/Men - Official Wear.	CLO4	5	Lecture, PPT, demonstration, Video	Hands on Practice	Participatory learning
	Design and development silhouettes for Men - Official Wear.	CLO5	5	Lecture, PPT, demonstration, Video	Hands on Practice	Experimental learning
6	Design and patterns development for Kids with marker plan	CLO5	10	Lecture, PPT, demonstration, Video	Group discussion	Participatory learning
	Design and patterns development for Women with marker plan	CLO4	5	Lecture, PPT, demonstration, Video	Hands on Practice	Experimental learning
	Design and patterns development for Men with marker plan	CLO5	5	Lecture, PPT, demonstration, Video	Brainstorming	Experimental learning
7	Create a tech pack for kid's wear - Pattern making, Grading and Marker planning.	CLO5	7	Lecture, PPT, demonstration, Video	Hands on Practice	Experimental learning
	Create a tech pack for Women's wear /Men's wear - Pattern making,	CLO4	7	Lecture, PPT, demonstration, Video	Hands on Practice	Participatory learning
	Grading and Marker planning.	CLO4	6	Lecture, PPT, demonstra	Hands on Practice	Experimental learning

				tion, Video		
8	Create spec sheet for Kid/Women /Men's wear - Ethnic wear.	CLO5	10	Lecture, PPT, demonstration, Video	Hands on Practice	Participatory learning

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:	<ul style="list-style-type: none"> • 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:	<ul style="list-style-type: none"> • 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

COURSE CONTENT AND LECTURE SCHEDULE

Module No	Topic	Knowledge level	No. of Periods	Content Delivery methods	Student engagement	Participatory learning/experiential learning/problem based learning
1	Design development – Industrial corporate wear	CLO4	5	Lecture, PPT, demonstration, Video	Teaching & hands on practical	Participatory learning
2	Prototype and marketing – Industrial corporate wear	CLO5	5	Lecture, PPT, demonstration, Video	Teaching & hands on practical	Experimental learning
3	Design development – Protective work wear	CLO4	5	Lecture, PPT, demonstration, Video	Teaching & hands on practical	Experimental learning
	Design development – medical work wear	CLO4	5	Lecture, PPT, demonstration,	Teaching & hands on	Experimental learning

				Video	practical	
4	Prototype and marketing – Protective work wear	CLO5	5	Lecture, PPT, demonstration	Teaching & hands on practical	Participatory learning
	Prototype and marketing – medical work wear	CLO5	5	Lecture, PPT, demonstration.	Teaching & hands on practical	Problem based learning
5	Design development – Military uniform	CLO4	10	Lecture, PPT, demonstration, Video	Teaching & hands on practical	Experimental learning
6	Prototype and marketing – Military uniform	CLO5	10	Lecture, PPT	Teaching & hands on practical	Experimental learning
7	Design development – Sportswear	CLO4	10	Lecture, demonstration	Teaching & hands on practical	Experimental learning
	Prototype development and marketing – Sportswear	CLO5	10	Lecture, PPT, demonstration, Video	Teaching & hands on practical	Experimental learning
8	Design development – Clothing for special needs	CLO4	10	Lecture, PPT, demonstration, Video	Teaching & hands on practical	Problem based learning
	Prototype development and marketing – Clothing for special needs	CLO5	10	Lecture, PPT, demonstration, Video	Teaching & hands on practical	Participatory learning

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