

DEPARTMENT OF FABRIC AND APPAREL SCIENCE
2-Year MSc Curriculum under NEP
COURSEWORK TRACK

DSC				DSE				SBC				Dissertation/Academic Project/Entrepreneurship
Paper Title (4 Credits each)	Credit Distribution			Paper Title (4 Credits each)	Credit Distribution			Paper Title (2 Credits each)	Credit Distribution			
	Th	Tu	Pr		Th	Tu	Pr		Th	Tu	Pr	
SEMESTER I												NIL
Pick All 3				Pick Any 2								
DSC FAS 101: Textile Finishing	2	0	2	DSE FAS 101: Textiles for Home and Hospitality	3	0	1	Pick Any 1 from the list of odd semester courses listed in the table below				
DSC FAS 102: History of Textiles	3	0	1	DSE FAS 102: Garment Manufacturing Technology	3	0	1					
DSC FAS 103: Fashion Merchandising and Retailing	3	1	0	DSE FAS 103: Fashion Communication	2	0	2					
SEMESTER II												NIL
Pick All 3				Pick Any 2								
DSC FAS 201: Dyeing and Printing-I	3	0	1	DSE HSC 201: Advanced Research Methods in Home Science	3	0	1	Pick Any 1 from the list of even semester courses listed in the table below				
DSC FAS 202: History of Costumes	3	1	0	DSE FAS 201: Sustainability in Fashion	3	0	1					
DSC FAS 203: Advanced Pattern Making and Garment Construction-I	2	0	2	DSE FAS 202: Textile Conservation and Restoration	2	0	2					

SEMESTER III											
Pick All 2				Pick Any 3							
DSC FAS 301: Advanced Textile Science	3	1	0	DSE HSC 301: Statistics and Data Management	3	0	1	Pick Any 1 from the list of odd semester courses listed in the table below	NIL		
DSC FAS 302: Advanced Pattern Making and Garment Construction -II	2	0	2	DSE FAS 301: Textile Design Development	2	0	2				
				DSE FAS 302: Global Couture	3	1	0				
				DSE FAS 303: Fashion Marketing	3	0	1				
SEMESTER IV											
Pick All 2				Pick Any 3							
DSC FAS 401: Indian Handcrafted Textiles	3	0	1	DSE FAS 401: Commercial Fabrics	3	1	0	Pick Any 1 from the list of even semester courses listed in the table below	NIL		
DSC FAS 402: Dyeing and Printing-II	2	0	2	DSE FAS 402: Women’s Wear: Concept to Creation	1	0	3				
				DSE FAS 403: Technical Textiles	3	1	0				
				DSE FAS 404: Psychology of Fashion	3	1	0				

List of Skill Based Courses:

ODD SEMESTER	EVEN SEMESTER
SBC FAS 01: Fashion Illustration: Techniques and Application	SBC FAS 02: Advanced Computer Aided Design
SBC FAS 03: Surface Design Techniques	SBC FAS 04: Fashion Styling
SBC FAS 05: Community Outreach in Textile and Apparel Sector	SBC FAS 06: Internship
SBC FAS 07: Internship	

SEMESTER I

DISCIPLINE SPECIFIC CORE COURSE
DSC FAS 101: TEXTILE FINISHING

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSC FAS 101: Textile Finishing	4	2	0	2		Nil

Learning Objectives

- To gain knowledge of the chemistry, mechanism and application process of various textile finishes.
- To create awareness and understanding of the future trends in textile finishing.

Learning Outcomes

Students will be able to:

- Explain the chemistry and mechanism of action of application of various finishes.
- Describe the methods of application of finishes on different textile substrates.
- Illustrate the preparatory and special/functional finishes for various fabrics.
- Recognise and explain new advancements in the area of textile finishing.

THEORY
(Credits 2; Hours 30)

UNIT I: Fundamentals and Preparatory Processes in Textile Finishing. 10 Hours

In this unit, students will learn the foundational principles of textile finishing and the preparatory finishes for cellulosic, protein, and man-made fibres.

- Classification of textile finishes
- Methods of application – practices and suitability for various fibre types (cellulosic, protein, synthetic)
- Cellulosic- singeing, desizing, scouring, bleaching
- Protein- degumming, scouring, bleaching, carbonising
- Man-made- scouring, bleaching, heat-setting

UNIT II: Aesthetic, Functional and Innovative Finishes**20 Hours**

This unit explores the detailed chemistry, application methods, and evaluation techniques of aesthetic and functional finishes. Additionally, students will learn about cutting-edge innovations transforming textile finishing.

- Aesthetic finishes: Weighting, Softening and Stiffening finishes, Optical brightening agents and Special calendaring
- Functional finishes: Mercerisation, Chlorination, Water and Oil repellent finishes, Anti-shrink and stabilising finishes: Sanforisation, Crabbing, Decatizing, Crease resistant finishes, Antistatic finishes, Flame retardant finishes, Antimicrobial finishes, Moth proofing and UV resistant finishes
- Innovations in textile finishing: Microencapsulation, Nanotechnology in finishing, other recent developments and sustainable practices

PRACTICAL
(Credit 2; Hours 60)

UNIT I: Application of preparatory finishes on cellulosic fabrics

- Desizing of cotton fabric and its evaluation
- Scouring of cotton fabric and its evaluation.
- Bleaching of cotton fabric and its evaluation.

UNIT II: Application of finishes that alter Handle

- Application of softening agents on fabrics and their evaluation.
- Application of stiffening agents on fabrics and their evaluation.

UNIT III: Application of Functional finishes

- Mercerization of cotton fabric and its evaluation.
- Chlorination of wool and its evaluation.
- Application of flame retarding agents and their evaluation.
- Application of water repellent and oil repellent finishes and their evaluation.
- Application of anti-creasing finishes and evaluation of their efficacy.

Essential Readings

- Marsh, J.T. (1979) *An Introduction to Textile Finishing*, Bombay: B.I. Publications.
- Rastogi, D. and Chopra, S. (Eds.) (2017) *Textile Science*, India: Orient Black Swan Publishing Limited.
- Rouette, H.K. (2001) *Encyclopedia of Textile Finishing*, Volumes 1 to 3, Berlin: Springer.
- Schindler, W.D. and Hauser, P.J. (2004) *Chemical Finishing of*

Textiles, The Textile Institute, England: Woodhead Publishing Ltd.

- Sekhri S. (2022) *Textbook of Fabric Science: Fundamentals to finishing, 4th ed.*, PHI Learning Pvt. Ltd. Delhi
- सेखड़ी सीमा(2022), *वस्त्र विज्ञान*, PHI Learning Pvt. Ltd. Delhi

Suggested Readings

- Trotman, E. R. (1984) *Dyeing and Chemical Technology of Fibers*, Sixth Edition, England: Charles Griffin and Company Ltd.
- Vigo, T. L. (1994) *Textile Processing and Properties, Preparation, Dyeing, Finishing and Performance*, Amsterdam: Elsevier Science B.V.

Note: Examination scheme and mode shall be as prescribed by the Examination branch, University of Delhi, from time to time

DISCIPLINE SPECIFIC CORE COURSE
DSC FAS 102: HISTORY OF TEXTILES

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Theory	Tutorial	Practical		
DSC FAS 102: History of Textiles	4	3	0	1		Nil

Learning Objectives

- To describe the diverse methods and processes involved in textile production.
- To examine the evolution of the rich history of textiles in ancient cultures.
- To analyse the historical development and cultural significance of textiles in Medieval and Early modern societies
- To analyze the transformative impact of industrialization and colonialism on global textile production, trade, and cultures, and evaluate their enduring legacies.

Learning Outcomes

The students would be able to:

- Recognise and explain various methods of textile production.
- Discuss the significance of textiles in ancient civilizations and their impact on modern society.
- Analyse the historical development and cultural significance of textiles in Medieval and Early modern societies
- Evaluate the impact of industrialization and colonialism on global textile production and trade

THEORY
(Credits 3; Hours 45)

UNIT I: Textile Techniques

10 Hours

This unit lays thrust on history, tools and techniques of textile production techniques in the world.

- Felt and bark cloth
- Weaving
- Tapestry

- Rug weaving
- Knitting
- Netting knotting and crochet
- Embroidery
- Lace
- Dyeing and printing

UNIT II: Ancient Civilizations

12 Hours

This unit highlights the significance of textiles in ancient civilizations, including their production, trade, cultural meaning, and impact on societal development.

- Egyptian textiles and their role in ancient Egyptian society
- The significance of textiles in ancient Mesopotamia
- The development of silk production in ancient China
- Indian textiles in ancient India: the Indus Valley Civilization and beyond
- Textiles in ancient Greece and Rome: trade, fashion, and symbolism

UNIT III: Medieval and Early Modern Periods

12 Hours

This unit thrusts on the historical development and cultural significance of textiles in Medieval and Early Modern societies, including their production, trade, and impact on global economies and cultures.

- The impact of the Silk Road on global textile trade
- Medieval European textiles: wool, linen, and luxury fabrics
- The rise of cotton production in India and its global implications
- African textiles: traditional techniques and trade networks
- Indian block printing and textile trade during the Mughal Empire

UNIT IV: Industrialization and Colonialism

11 Hours

This unit delves into impact of industrialisation and colonialism on textiles around the world

- The Industrial Revolution and the mechanization of textile production
- The impact of colonialism on traditional textile industries in India and other colonies
- The development of synthetic dyes and their global adoption
- The rise of cotton imperialism: the global cotton trade and its consequences
- Indian textile industry during the British colonial era: decline and revival

PRACTICAL

(Credits 1; Hours 30)

Project on Regional and Cultural Studies

1. Indian sari: history, design, and cultural significance
2. Japanese kimono: history, design, and cultural significance
3. African American quilting: history, symbolism, and cultural heritage
4. Chinese embroidery: techniques, motifs, and cultural significance
5. Indian embroidery traditions: Phulkari, Kantha, and more
6. French - Toiles de Jouy
7. English Chintz
8. Indonesian Resist dyes textiles
9. Tribal Textiles
10. Carpets of middle and far East
11. Indian textile industry in the 21st century: challenges, opportunities, and innovations

Essential Readings

- Forbes, R. J. (1969). *Studies in Ancient Technologies*, vol IV, Textiles, Leiden
- Gale, C., & Dhamija, J. (2010). *The textile book: A comprehensive guide to textiles from around the world*. Thames & Hudson, London.
- Gillow, J., & Sentance, B. (2008). *World textiles: A visual guide to traditional techniques*. Thames & Hudson, London.
- Harris, J. (Ed.). (2010). *5,000 years of Textiles (Rev. ed.)*. The British Museum Press. London.
- Kuhn, D. (2012). *Chinese Silk: A Cultural History*, Yale University Press
- Wilson, K. (2001). *World textiles: A concise history*. Thames & Hudson, London.
- Wood, F. (2004). *The Silk Road: Two Thousand Years in the Heart of Asia*. University of California Press

Suggested Readings

- Adams, L. S. (2016). *Art: A brief history*. Pearson Education. New York, NY.
- Gardner, H. (2016). *Gardner's art through the ages: A global history*. Cengage Learning. Boston, MA
- Ginsburg, M. (Ed.). (2004). *The illustrated history of textiles*. Studio Editions, London.
- Gombrich, E. H. (1995). *The story of art*. Phaidon Press. London, England
- Lewis, E. (1953) *Romance Of Textile*, The McMillan Company, New York. (Classic- Out of Print)
- Schacter, R. (2013). *The world atlas of street art and graffiti*. Yale University Press.
- Seiler-Baldinger, A. (1994). *Textiles: A classification of techniques*. Calico Museum of Textiles, India.

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DISCIPLINE SPECIFIC CORE COURSE
DSC FAS 103: FASHION MERCHANDISING AND RETAILING

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSC FAS 103: Fashion Merchandising and Retailing	4	3	1	0		Nil

Learning Objectives

- To give an overview of the retail environment of India
- To analyze the characteristics of various kinds of retail formats in India
- To understand the importance of retail location
- To elaborate on the merchandise management planning process in the retail industry
- To equip students with details of customer relationship management and buying practices
- To provide insight into store layouts and interiors as well as space management

Learning Outcomes

The students would be able to:

- Identify store types in the Indian retail industry
- Plan and control assortment and model stock plans for staple and fashion merchandise categories
- Select retail location and site for a specific retail store
- Create store layouts and plan elements of visual merchandising mix

THEORY
(Credits 3; Hours 45)

UNIT I: Introduction to Fashion Retailing

13 hours

This unit introduces various types of retail formats and salient features of the retail industry of India

- Retail Environment, Trends & Indian Retail Industry
- Functions of a Retailer
- Types of retailers with reference to Retail mix: Department stores, full-line

discount stores, category specialists, hypermarkets, factory outlets, specialty stores, extreme value retailers

- Non-store channels, Multi-channel retail/ Omni retail
- Ownership Models: Independent, Corporate chains, Franchisees
- Customer Relationship Management (CRM)- Importance, Process, Customer Data Analysis and CRM Programs

UNIT II: Retail Location

9 Hours

This unit highlights various kinds of retail location, criteria for site selection and trade area analysis while selecting location for a store

- Retail locations : Freestanding sites, Central Business Districts, Main Street, Inner city, Shopping Centers, Lifestyle Centers, Mixed-use, Outlet Centers, Festival/ Theme Centers, Airports, Pop-up Stores, Store within a store
- Site Selection Factors: Economic conditions, Strategic fit, Competition, Operating Costs, Number of stores in an area, Economies of Scale, Cannibalization
- Factors affecting Site evaluation: Traffic Flow, Parking, Store Visibility, Adjacent Retailers, Restrictions and costs
- Trade Area Analysis: Primary, Secondary, Tertiary

UNIT III: Merchandise Management Planning Process

12 Hours

- Merchandise Category: Definition, Category width, depth and level of support, Category types- staple, fashion and seasonal, Forecasting Sales
- Category Management: Category Manager, Category Captain, Category Life cycle
- Performance Metrics: Profit Margins, Sales-to-Stock Ratio, GMROI, Inventory Turnover.
- Editing of Assortment Plan and Model Stock plan
- Merchandise Flow & Control: Staple & Fashion Merchandise, Setting Inventory Product Availability levels and Inventory Management
- Allocating merchandise to stores
- ABC analysis and 80-20 rule

UNIT IV: Merchandise Pricing and Store Setting

11 Hours

- Considerations in setting price
- Initial Mark-up and maintained Mark-up
- Pricing strategies
- Store Layout and Space Planning
- Store Components and Atmospherics
- Signage and Feature Areas

TUTORIAL

(Credits 1; Hours 15)

Interactive discussions and store visits to acquire real-life experience of setting and operationalization of the fashion retail sector of India

1. Analysis of Store layouts
 Discussion- Identifying store formats and associated visual merchandising strategies
 Class Activity- Store visit to analyze store size, layout, fixtures, hotspots, windows, and atmospherics.
2. Multi-channel / Omni Channel retailing
 Discussion- Analysis of retail brands that operate across multiple channels
 Class Activity- Comparative analysis of two or more channels using secondary data or virtual store assessments.
3. ABC analysis of SKU mix
 Discussion - Applying the *80-20 rule* to rank and classify SKUs for assortment planning
 Class Activity- Reviewing research papers or conducting hypothetical data analysis for practical understanding.
4. Multi- attribute model for evaluating vendors
 Discussion – Developing evaluation criteria by assigning ratings and weights to vendor attributes based on their importance.
 Class Activity – Defining attribute as per brand type and generate cumulative score for vendor selection

Essential Readings

- Clark.J (2020) Fashion Merchandising: Principles and Practice, 2nd Edition, Red Globe Pr
- Levy, M, Weitz, B.A. and Pandit, A. (2008) Retailing Management, Delhi: Tata McGraw Hill Education Private Limited.
- Kunz Grace.I, (2009) Merchandising: Theory, Principles and Practice, 3rd Edition, Bloomsbury Publishing
- Diamond, J., Diamond, E. and Litt, S.D. (2006), Fashion Retailing- A Multi-Channel Approach, Bloomsbury Publishing Inc.

Suggested Readings

- Boardman.R, Strak.R.P, Henninger C.E (2020) Fashion Buying and Merchandising- The fashion buyer in a digital society, Routledge Publishing
- Pegler, M. (2006) Visual Merchandising and Display, New York: Fairchild Publications Inc.

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DISCIPLINE SPECIFIC ELECTIVE COURSE
DSE FAS 101: TEXTILES FOR HOME & HOSPITALITY

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSE FAS 101: Textiles For Home & Hospitality	4	3	0	1		Nil

Learning Objectives

- To introduce the entire spectrum of textile products used in homes as well various sectors of hospitality industry.
- To describe parameters for selection, use, care and disposal of all textile categories used in home and hospitality.
- To impart an understanding of the latest technological developments in terms of fibres and finishes for textiles used in home and hospitality.
- To provide practical guidance for designing of textiles for specific rooms in the home with inspirations from Period Styles and the latest forecast trends.

Learning Outcomes

The students would be able to:

- Gain knowledge regarding various uses of textile made-ups in home and hospitality.
- Learn best practices for judicious selection use, care and disposal of textiles used for home and hospitality.
- Apply the impact of recent scientific innovations, new fibres and finishes on the aesthetic and functional aspects of textiles used in home and hospitality.
- Practice the creative designing of textiles for home and hospitality with inspiration from Period styles as well as directions from latest forecasting trends.

THEORY

(Credits 3; Hours 45)

UNIT I: Introduction to Entire Spectrum of Textile Products Used n Homes as well as Various Sectors of Hospitality Industry 12 Hours

This unit lays thrust on enlisting various categories of textiles used in home and hospitality.

- Classification of textiles used in home (upholstery fabrics, window textiles, bed textiles, bathroom textiles, kitchen textiles, table linen, floor coverings, outdoor textiles)
- Textiles used in various sectors of hospitality such as; hospitals, hotel, modes of travel (air, automobile, rail, restaurants etc.)

UNIT II: Parameters (Aesthetic and Performance) for Selection, Storage, Use, Care and Disposal of Textiles for Home and Hospitality 14 Hours

In this unit, students will gain understanding of the various functional parameters essential for judicious selection of textiles used in interiors.

- Aesthetic and functional parameters for selection of textiles for home and hospitality (fibre type, colour and design, standard sizes, construction methods, finishes imparted, durability, cost etc.)
- Informative labelling and packaging
- Government regulations and standards
- Storage, use and maintenance of various product categories at domestic and commercial levels

UNIT III: Recent Scientific Innovations, New Fibres and Finishes of Textiles for Home and Hospitality 6 Hours

This unit deals with technological innovations, high performance materials and use of finishes for enhanced aesthetic and performance rating.

UNIT IV: Designing of Textiles for Home and Hospitality. 13 Hours

This unit deals with sources of inspiration for a designer involved with creating textile products used in home and hospitality.

- Period styles in home furnishings
- Forecasting trends for textiles used in home and hospitality.
- Elements and Principles of design, Structural and decorative design usage
- Collections of various designers and brands catering to textiles for home and hospitality.

PRACTICAL (Credits 1; Hours 30)

1. Selection of Textiles Used in Home and Hospitality

- Market survey of different categories of textiles used in home and hospitality (types, standard sizes, construction, performance, durability, aesthetics, price range etc.)
- Comparison of different brands (local / reputed) with respect to informative labelling and product packaging
- Compilation of swatches/ pictures of different fabrics used for interiors (woven, knit, non- woven, other methods of construction crochet, braiding, nets, laces etc.)

2. Designing of Textiles for Home and Hospitality

- Drawing inspiration from period styles
- Analysis of latest forecast trends
- Report on famous designers and key players (brands / outlets) dealing with furnishings
- Practical design exercises and preparing fabric decorations for different room types based on end use, size and type of room, type of arrangement, type of furniture, geographical location etc.

Essential Readings

- Das, Subrata (2010) Performance of Home Textiles, New Delhi, Woodland Publishing India Pvt Ltd
- Lebeau, Caroline (2004) Fabrics- the Decorative Art of Textiles, London, Thames and Hudson
- Seetharaman. P and Pannu, P (2019), Interior Design and Decoration, CBS Publishers & Distributors.
- Encyclopaedia of Fashion (1980), New York, Prentice Hall

Suggested Readings

- Howes, Karen (1997) *Making the Most of Bedrooms*, London, Conran Octopus
- Neiswand, Nonie (1998) *Bedrooms and Bathrooms*, London, Conran Octopus
- Ranall, Charles T. (2002) *Encyclopedia of Window Fashions*, California, Randall International
- Wingate, Isabel B. (1949) *Textile Fabrics and Their Selection*, New York, Prentice Hall

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DISCIPLINE SPECIFIC ELECTIVE COURSE
DSE FAS 102: GARMENT MANUFACTURING TECHNOLOGY

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSE FAS 102: Garment Manufacturing Technology	4	3	0	1		Nil

Learning Objectives

- To gain knowledge of the structure, operations, and key functional areas within the garment industry.
- To learn the processes involved in garment production, spanning pre- production, production, and post-production stages.
- To become familiar with the materials, machinery, tools, and equipment used in garment manufacturing.

Learning Outcomes

The students would be able to:

- Learn the structure and functioning of the garment industry.
- Explain the steps involved in pre-production, production, and post-production of garments.
- Get acquainted with various materials and components of garment production.
- Identify common garment defects and suggest corrective actions using quality control methods.

THEORY
(Credit 3; 45 Hours)

UNIT I: Introduction to Garment Manufacturing Industry

8 Hours

This unit introduces the student to the various departments of garment industry and its global scenario. It also lays thrust on standards and specifications followed in industry and the production systems.

- Overview of garment Industry- Domestic and global scenario

- Departments in garment Industry
- Standards and Specifications
- Garment production systems

UNIT II: Pre-production Processes

10 Hours

This unit covers the various pre-production processes which are essential for planning and sequencing for efficient garment production.

- Designing and Collection Planning
- Pattern Making and garment sampling
- Tech-pack preparation
- Production planning and control- production workflow (parts, panels, pieces & product), plant layout and line balancing
- Time and motion study and its effect on productivity, operation breakdown, calculation of Standard Allowed Minute (SAM)

UNIT III: Production Processes

20 Hours

This unit helps students understand in-production processes in garment manufacturing, including marker-making, fabric spreading, cutting, and fusing. It also explores stitching tools, techniques, and machine mechanisms, emphasizing efficiency and quality control.

- Fabric and accessories inspection
- Pattern grading and marker development
- Spreading and cutting of fabric, other operations (fusing), ticketing and bundling
- Sewing machines - Basic and Special-purpose, machine beds, feed mechanisms,
- Sewing threads & machine needles
- Seam types and stitch types
- Special attachments and work-aids
- Alternative methods of joining material: welding and moulding

UNIT IV: Post-production Processes

7 Hours

This unit covers key post-production processes, focusing on quality evaluation of garment components. It also explores finishing techniques such as trimming, pressing, packing, and shipment preparation for market-ready products.

- Garment finishing- Thread trimming, stain removal, washing, pressing (purpose, types and equipment used)
- Quality assurance- In-line checking and end-line checking, quality procedures/audits, acceptable quality limits
- Folding and packaging (packaging materials, types of packing, packaging equipment)
- Warehousing and shipment- handling equipment, storage equipment, transportation issues

PRACTICAL
(Credit 1; 30 Hours)

1. Organizations dealing with standards and regulations in garment Industry / Garment Industry standards and regulations (report compilation)
2. Fabric Inspection procedure and fabric defects, four-point system of fabric inspection
3. Identifying seam class and stitch type
4. Evaluating the construction quality of various garments
5. Conducting a design analysis of a given garment style and preparing an operation breakdown and sequencing for garment assembly
6. Calculation of Standard Allowed Minute (SAM), Line balancing
7. Development of specification sheets and cost sheet

Essential Readings

- Brown, P. and Rice, J. (2014). Ready to Wear Apparel Analysis. Fourth Edition. Pearson Education, India.
- Cooklin. G., Hayes (Ed.), McLoughlin J. (Ed.). (2006). Introduction to Clothing Manufacture. Second Edition. Blackwell Scientific Publication, U.K.
- Kadolph, Sara J. (1998). Quality Assurance for Textiles and Apparel. Fairchild Books.
- Karthik, T., Ganesan, P. and Gopalakrishnan, D. (2017). Apparel Manufacturing Technology. CRC Press, New York.
- Tyler, D.J. (2008). Carr and Latham's technology of clothing manufacture (4th ed.). Blackwell, U.K.

Suggested Readings

- Chuter, A.J. (1999) Introduction to Clothing Production Management. Om Book Service, New Delhi
- Glock, R. E., & Kuntz, G. I. (2009). *Apparel manufacturing: Sewn product analysis*. (4th ed.). Pearson Education, New Delhi. Publications.
- Ramesh Babu, V. (2012). Industrial Engineering in Apparel Production. Woodhead Publishing India Pvt. Ltd. New Delhi.
- Stamper, Sharp and Donnell, (1991), Evaluating Apparel Quality (2nd edition), Fairchild

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DISCIPLINE SPECIFIC ELECTIVE COURSE
DSE FAS 103: FASHION COMMUNICATION

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSE FAS 103: Fashion Communication	4	2	0	2	Completed Semester 6	Nil

Learning Objectives

- To use the fundamentals of fashion photography
- To understand styling for impactful storytelling
- To equip students with the knowledge of visual merchandising
- To teach basics of graphic design for effective fashion communication
- To examine the role of media and journalism in shaping fashion narratives

Learning Outcomes

The students would be able to:

- Execute fashion photography basics to create professional images
- Curate fashion looks with the understanding of styling
- Interpret elements and principles of visual merchandising
- Comprehend basics of graphic design
- Examine and analyse use of varied media for communication and promotion

THEORY
(Credits 2; Hours 30)

UNIT I: Fashion Photography, Styling & Visual Communication **12 Hours**

This unit introduces foundational skills in fashion photography, styling, and visual branding for fashion communication.

- Introduction to Fashion Photography- Types, Visual Aesthetics and Composition
- Basics of Camera Handling and Exposure: Camera parts, Exposure Triangle and Depth of Field
- Lighting Essentials: Natural vs Studio Light, White Balance
- Styling Principles: Selection of clothing by body shapes and coordination of accessories

UNIT II: Visual Merchandising, Graphic Design and Fashion Media **18 Hours**

This unit explores the integration of visual merchandising, graphic design, and fashion media to create compelling retail and brand communication.

- Visual Merchandising: Definition, Purpose, Elements (Line, Colour and Balance), Store layout and Display techniques
- Technology in Visual merchandising
- Basics of Graphic Design: Design Process, Typography, Layouts
- Fashion Media Overview: Journalism, Digital platforms, PR, Influencer marketing and Ethics

PRACTICAL
(Credits 2; Hours 60)

1. Fashion Photography and Styling

- **Project 1: Mood Board-** Select a theme and create a mood board harmonizing colors, textures, fabrics, and accessories for a fashion shoot.
- **Project 2: Fashion shoot-** Plan, style, shoot, and edit a themed editorial-style shoot using skills learnt such as camera adjustments (professional or mobile camera), lighting, fashion styling, posing and editing.

2. Visual Merchandising

- **Project 3: Retail Display Analysis-** Visit a store and analyze its visual merchandising techniques (store layout, window display, I scheme, lighting, fixtures, etc.).
- **Project 4: Storefront Window Design-** Design a mini window display using innovative materials (eg. Laser cut mdf/ wood veneers/ mesh/ acrylic sheets/ porex/ PVC foam board/ fabric panels/ sawdust/ cork sheets etc.), props, mannequins, and lighting to communicate a theme.

3. Graphic Design

- **Project 5: Fashion Brand Identity Kit** – Design a logo, typography, and I palette for a fashion brand, applying them to business cards, website, labels, or packaging.
- **Project 6: Fashion Editorial & Marketing Design-** Design a fashion magazine cover or social media post/ carousel or ad campaign using grids and layouts.

4. Fashion Media and Journalism

- **Project 7: Fashion Blog/Article** – Write and publish an engaging article on a fashion trend or event.
- **Project 8: Fashion Podcast or Video Interview** – Conduct a mock interview with a designer, influencer, or stylist, recording a short podcast or video.
- **Project 9: Influencer Collaboration Proposal** – Develop a collaboration pitch for a brand to work with an influencer, outlining campaign goals, deliverables, and engagement strategies.

Essential Readings

- Greenwood, G. L. (2012) *Fashion Marketing Communications*, John Wiley and Sons, UK.
- Jade, L. (2012) *Fashion Photography 101: A Complete Course for the New Fashion Photographers*, Hachette, UK.
- Jay, Phyllida (2015) *Fashion India*, Thames and Hudson, London.
- Werner, T. (2018) *The Fashion Image: Planning and Producing Fashion Photographs and Film*, Bloomsbury Visual Arts, UK.
- Pegler, M. M. (2011) *Visual Merchandising and Display*, Fairchild Books, United States.
- Posner, H. (2011) *Marketing Fashion*, Lawrence King Publishing, China.
- Fogg, M. (2006) *Fashion Graphics: Designing for Branding & Communication*, Thames & Hudson, UK.
- Bradford, J. (2014) *Fashion Journalist*, Routledge, UK.

Suggested Readings

- Smith, B. (2008) *Fashion Photography: A Complete Guide*, Amphoto Books, United States.

SEMESTER II

DISCIPLINE SPECIFIC CORE COURSE
DSC FAS 201: DYEING AND PRINTING - I

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSC FAS 201: Dyeing and Printing- I	4	3	0	1		Nil

Learning Objectives

- To understand the basic theory and chemistry of dyes used on textiles.
- To gain knowledge about the application of different dyes on various textile substrates.
- To understand the fundamentals of textile printing.

Learning Outcomes

The students would be able to:

- Explain the chemistry of various dye classes.
- Describe the process of dyeing and printing various fibres with different dyes.
- Describe methods and styles of printing fabrics.
- Analyse the colour fastness properties of dyed and printed textiles.

THEORY
(Credits 3; Hours 45)

UNIT I: Principles of Textile Colouration

This unit deals with the general principles of textile colouration.

5 Hours

- Colour theory
- Structure of dyes and pigments: Chromophore, Auxochrome
- Theory of Dyeing
- Dye-fibre bonds

UNIT II: Dyeing

13 Hours

This unit lays thrust on the chemistry and application of various dye classes on different substrates.

- Chemistry and application of various dye classes: Direct, Reactive, Vat, Azoic, Sulphur, Acid, Basic, Metal Complex, Chrome Mordant, Disperse
- Natural Dyes and Mordants
- Dyeing defects

UNIT III: Printing**20 Hours**

This unit highlights the various methods and styles of printing for various textile substrates.

- Print paste and thickeners
- Methods of printing: Block, Roller, Screen (flatbed, rotary)
- Styles of printing: Direct, Resist, Discharge, Transfer
- Finishing and after treatment of printed goods: Ageing, Steaming, Baking, washing-off
- Printing defects

UNIT IV: Colour Fastness**7 Hours**

This unit deals with the concept and measurement of colour fastness

- Principle of colour fastness and its measurement: Wash, Light, Rub, Perspiration

PRACTICAL
(Credits 1; Hours 30)

- **Dyeing**
 - Cotton using Reactive, Vat and Azo dyes
 - Silk and wool using Acid, Basic and Reactive dyes
 - Acrylic using Basic Dyes
 - Polyester using Disperse dyes
 - Selected natural dyes on cotton
- **Printing**
 - Direct printing of cotton using Reactive dyes and Azoic colours (Naphthols and fast colours)
 - Resist printing of cotton using Azo dyes
 - Discharge printing of cotton using Direct dyes
- **Colour Fastness Measurement**
 - Wash fastness
 - Crock fastness
 - Perspiration fastness

Essential Readings

- Trotman, E. R. (1984) *Dyeing and Chemical Technology of fibres*, Sixth edition, England: Charles Griffin and Company Ltd.
- Rastogi, D. and Chopra, S.(Eds.) (2017), *Textile science*, India: Orient Black Swan Publishing Limited
- Miles, L.W.C. (1994) *Textile Printing*, 2nd ed., West Yorkshire: Society of Dyers and Colorists, England.

- Sekhri S. (2022) *Textbook of Fabric Science: Fundamentals to finishing*, 4th ed., PHI Learning Pvt. Ltd. Delhi
- सेखरी सीमा(2022), *वस्त्र विज्ञान*, PHI Learning Pvt. Ltd. Delhi

Suggested Readings

- Aspland J. R., (1997) *Textile Dyeing and Colouration*, NC: AATCC.
- Clarke, W. (1977) *An Introduction to Textile Printing*, London: Butterworth and Co. Ltd.
- Shenai, V.A. (1987) *Chemistry of Dyes and Principles of Dyeing*, Vol II, Bombay: Sevak Publications.
- Shore, John (Ed) (1990) *Colorants and Auxiliaries: Organic Chemistry and Application Properties*, Vol. 1 & 2, West Yorkshire: Society of Dyers and Colorists, England.

Note: Examination scheme and mode shall be as prescribed by the Examination branch, University of Delhi, from time to time

DISCIPLINE SPECIFIC CORE COURSE
DSC FAS 202: HISTORY OF COSTUMES

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSC FAS 202: History of Costumes	4	3	1	0		Nil

Learning Objectives

- To study the development of costume from ancient times to the 20th century, considering socio-cultural and technological changes.
- To create awareness and understanding of the styles and special features in costume through the ages.

Learning Outcomes

The students would be able to:

- Trace the evolution of western costume.
- Identify different styles and special features in costume through the ages.
- Draw inspiration from the long-established styles for designing.

THEORY
(Credits 3; Hours 45)

UNIT I: Importance of World Textiles and Costumes in Historical Perspective. 6 Hours

This unit outlines the historical perspective of the origin of textiles and costumes.

- Sources of information for historic costumes
 - Archaeological excavations and discoveries
 - Ancient literature, chronicles and archival records
 - Museums and art galleries
 - Sculpture and pottery
- The origin of costume
- Costume through the ages- inspiration for designing and styling

UNIT II: Costumes in Early Civilizations**10 Hours**

This unit focuses on the origin and evolution of Costumes in ancient civilizations (300BC-300 AD).

- Mesopotamia
- Egypt
- Greece
- Rome
- India

UNIT III: Costumes in the Middle Ages**13 Hours**

This unit aims to explore the advancements in textiles and costumes during the Middle Ages.

- The Feudal ages (1100 AD- 1300AD)
- The late Middle Ages (1300AD-1500AD)
- Renaissance: Italy, France, England (15th-16th century)
- India: Mughal period

UNIT IV: Costumes in 17th to 20th century**16 Hours**

This unit highlights the changes and developments in European costumes through different eras from 17th to 20th century reflecting social milieu and technological advancements.

- Baroque and Rococo periods – France and England
- French Revolution and thereafter (1790AD-1900AD)
- The Directoire and Empire period (1790AD-1820AD)
- The Romantic period (1820A.D-1850AD)
- The Crinoline period (1850 AD-1869AD)
- The Bustle period (1870 AD- 1900 AD)
- Early Twentieth Century

TUTORIAL**(Credit 1; Hours 15)**

1. To make a report or presentation on any two design collections of eminent designers inspired by historic costumes.
2. To showcase costumes styles of the ancient civilizations through draping technique.
3. To discuss and design garments and accessories inspired from any one ancient civilization

4. To make a presentation on any one prominent component of a period costume with reference to raw material, construction, embellishments/styling, use etc.
5. Case study of a historical figure (E.g. Cleopatra, Queen Elizabeth I, Emperor Akbar, Napoleon, Louis XIV etc.) for analyzing their costumes with reference to textile materials and colours used, styling of garments, silhouette, accessories etc.
6. To make a Presentation on highlighting development in textiles and costumes during 17th to early 20th century with respect to the influence of socio-cultural, technological factors on styling of costumes.

Essential Readings

- Tortora, P. G. and Marcketti, S. B. (2015) Survey of Historic Costume, Fairchild Books.
- Alkazi, R. (1983) Ancient Indian Costume, Art Heritage Books.
- Black, J. A. and Garland M. (1978) A History of Fashion, London: Orbis Publishing Ltd.

Suggested Readings

- Cumming, V. (2004) Understanding Fashion History, London: Batsford.
- Lester, K.M. (1956) Historic Costume, Illinois: Chas A Bennett Co. Inc.
- Peacock, J. (2007) The Chronicle of Western Costume, Thames and Hudson.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time

DISCIPLINE SPECIFIC CORE COURSE
DSC FAS 203: ADVANCED PATTERN MAKING AND GARMENT CONSTRUCTION- I

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSC FAS 203: Advanced Pattern Making and Construction- I	4	2	0	2		Nil

Learning Objectives

- To develop skills in advanced pattern-making techniques and industry practices
- To identify and evaluate materials used in garment construction
- To analyse garment fit and apply correction techniques
- To gather knowledge about CAD tools used for digital pattern-making and virtual fitting

Learning Outcomes

The students would be able to:

- Apply advanced pattern-making techniques effectively
- Select appropriate materials for garment construction
- Assess and correct garment fit issues
- Get acquainted with CAD tools for pattern development and visualization
- Draft and construct various garment elements with precision

THEORY
(Credits 2; Hours 30)

Unit 1: Fundamentals of Advanced Pattern Making and Fabric Knowledge

18 Hours

- Terminology, tools, pattern making techniques and types of patterns used in industry
- Introduction to commercial paper patterns
- Digitizing hand-drafted patterns, pattern grading and automated marker making
- Computer-Aided Design (CAD) and AI in Pattern Development
- Fashion fabrics- aesthetics and functional performance

- Underlying fabrics- purpose, types, applications, evaluation
- Supporting materials- Boning, Stays, Closures, Trims, Shoulder Pads, etc

Unit 2: Fit Analysis and Pattern Adjustment Techniques

12 Hours

- Evaluating fit: bodice, skirt, torso block, semi-fitted dress, A-line dress and various components of a garment
- Common fitting issues based on specific body requirements and corresponding fit corrections
- Fit correction techniques and pattern alteration techniques
- Advanced tools for fit assessment (3D body scanning, virtual fitting and 3D visualization)

PRACTICAL (Credits 2; Hours 60)

1. Developing patterns in bodices with added fullness, yoke variations, dart clusters, graduated darts, parallel darts, asymmetric darts, radiating darts etc.
2. Drafting of collars- bush shirt collar, shirt collar, basic shawl collar, peter pan collar on altered neckline
3. Drafting variations in sleeves- shirtmaker, bishop, leg-o-mutton, puff, and short lantern
4. Drafting of women's lower body garment (trousers/variations of skirts/ palazzo)
5. Construction of samples: Kurta placket, Zipper attachments, Patch, In-seam and slash pockets
6. Construction of:
 - Formal top/ blouse/kurta featuring collar, sleeve and placket with a suitable fastener
 - Skirt/bifurcated garment featuring a waistband, pocket, and placket with a suitable fastener

Essential Readings

- Armstrong, H. J. (2009). *Pattern making for fashion design (5th ed.)*. Harper Collins Publishers.
- Beazley A., & Bond, T. (2004). *Computer-aided pattern design and product development*. Om Book Service. New Delhi
- Brown, P., & Rice, J. (2014). *Ready to wear apparel analysis (4th ed.)*. Pearson Education. New Delhi
- Liechty, E. et.al. (2010). *Fitting and pattern alteration: A multi-method approach to the art of style selection, fitting and alteration*. (2nd ed.). Fairchild Publications. New York.
- Shaeffer, C. (2014). *Sewing for the apparel industry: Pearson new international edition* (2nd ed.). Pearson Education Limited. United States of America
- Tyler, D.J. (2008). *Carr and Latham's technology of clothing manufacture (4th ed.)*. Blackwell, U.K.

Suggested Readings

- Aggarwal, J., Yadav, S., & Sonee, N. (2024). *Manual for B.Sc. Home Science pattern making and apparel construction*. Elite Publishing House. New Delhi
- Dunham, G. R. (2021). *The fitting book: Make sewing pattern alterations and achieve the perfect fit you desire*. Gina Renee Designs Publication.
- Pepin, H. (1947). *Modern pattern design: the complete guide to the creation of patterns as a means of designing smart wearing apparel*. Funk and Wagnalls. New York.
- Stamper, A. A., Sharp, S. H., & Donnell, L. B. (2005). *Evaluating apparel quality* (2nd ed.). Fairchild. New York

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DISCIPLINE SPECIFIC ELECTIVE COURSE
DSE HSC 201: ADVANCED RESEARCH METHODS IN HOME SCIENCE

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSE HSC 201: Advanced Research Methods in Home Science	4	3	0	1		Nil

Learning Objectives

- To explain the types and approaches to research.
- To describe the principles and process of quantitative research approach.
- To describe the principles and process of qualitative research approach.
- To elaborate the critical ethical issues for planning, conducting and publishing research.

Learning Outcomes

The students would be able to:

- Describe the types, paradigms and approaches to research.
- Employ the principles and process of quantitative research approach.
- Appraise the principles and process of qualitative research approach.
- Apply the principles of ethics in designing, executing and reporting of research.
- Formulate a research proposal in any specialized area of Home Science.

THEORY
(Credits 3; Hours 45)

UNIT I: Research: Paradigms, approaches and process

10 Hours

This unit introduces the concept, types, designs, paradigms, approaches and process of research. The unit also highlights the concerns of reliability and validity in research.

- Definition and objectives of research
- Importance, scope and types of research

- Research design: Concept and significance
- Paradigms of research
- Research approaches: Quantitative, qualitative and mixed methods
- Reliability and validity in research – methods and concerns
- The Research Cycle

UNIT II: Principles and Process of Quantitative Research Approach

12 Hours

This unit focuses on various research designs, methods of sampling and data collection techniques followed in quantitative research approach. It also emphasizes on the levels of measurement of data and errors in quantitative research

- Components, types and applications of research designs in quantitative research approach: Observational and experimental designs
- Concept of sampling, sampling methods - Probability and non-probability sampling in quantitative research
- Methods of data collection in quantitative research
- Measurement in research, scales and errors in measurement
- Errors in inference - bias and confounding

UNIT III: Principles and Process of Qualitative Research Approach

14 Hours

This unit introduces students to qualitative research methodologies, exploring their philosophical foundations, data collection methods, analysis techniques and ethical considerations.

- Philosophical underpinnings: Constructivism, interpretivism and critical theory
- Approaches to qualitative research: Ethnography, phenomenology, case study research, grounded theory and action research.
- Sampling in qualitative research
- Data collection methods and techniques: Observation, interview, focus group discussion and case study.
- Data management and analysis in qualitative research: Thematic, narrative and discourse analysis

UNIT IV: Research and Publication Ethics

9 Hours

This unit addresses issues related to research integrity, responsibilities of researchers and ethical standards for publishing academic work.

- Definition and importance of research ethics: Ethical concerns for research in the field of Home Science
- Ethical principles in Research planning and execution: Informed consent, anonymity, confidentiality and privacy, voluntary participation, safety and dignity of participants, transparency
- Data integrity and ethical data collection: use of appropriate methodology,

ensuring accuracy and validity, managing sensitive data, avoiding misuse of information

- Bias and conflict of interest in research
- Forms of research misconduct: Fabrication and falsification of data and plagiarism
- Ethical issues in research publication: Selective reporting, misrepresentation of data, salami slicing and predatory publications

PRACTICAL (Credits 1; Hours 30)

1. Critical review of a published original research article in any area of Home Science.
 - Identification and documentation of strengths and weaknesses of various components of the selected research article
2. Sampling in Research
 - Probability and non-probability sampling techniques
3. Formulation of a data collection tool
4. Referencing and Citation in Scientific Writing
 - Importance and different styles of referencing
 - Concept of in-text and post-text referencing
 - Digital tools for referencing
5. Plagiarism in research
 - Concept and types of Plagiarism
 - Technical writing using quotations, paraphrasing and summarizing
 - Plagiarism detection software
6. Formulation of a research proposal
 - Identification of a research problem/thrust area in any specialization of Home Science
 - Literature review related to the identified research problem
 - Proposal formulation giving timeline for conducting the research study

Essential Readings

- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4th ed.). Cengage Learning.
- Kothari, C. R., & Garg, G. (2023). *Research Methodology: Methods and Techniques*. New Age International Pvt Ltd, New Delhi.
- Kumar, R. (2019). *Research Methodology: A Step-by-Step Guide for Beginners*. 5th Ed. Sage Publications, New Delhi.
- UGC (2021) *Academic Integrity and Research Quality*. New Delhi: UGC, Retrieved from https://www.ugc.ac.in/e-book/Academic%20and%20Research%20Book_WEB.pdf

Suggested Readings

- Aggarwal, J. & Sabharwal, V. (2025). *Essentials of Research Methodology- A Practical Manual*. Elite Publishing House, New Delhi.
- Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches*. Thousand Oaks, CA.: Sage.
- Maxwell, J. A. (2013). *Qualitative research design: An interactive approach* (3rd ed.). SAGE Publications.
- Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE Publications.
- Silverman, D. (2020). *Qualitative research* (5th ed.). SAGE Publications.

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DISCIPLINE SPECIFIC ELECTIVE COURSE
DSE FAS 201: SUSTAINABILITY IN FASHION

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSE FAS 202: Sustainability in Fashion	4	3	0	1		Nil

Learning Objectives

- To introduce the concept of sustainability in various stages of textile and apparel production, understanding of the environmental issues in textile supply chain
- To be familiar with sustainable development goals and understand guidelines and regulations
- Explore sustainable approaches in fashion, including eco-friendly production
- Learn about legal regulations, industry standards and responsible consumption

Learning Outcomes

The students would be able to:

- Learn about the textile supply chain, associated sustainability issues and the effect of industrial revolution on current fashion scenario
- Understand the environmental impact of textile fibres and fashion industry processes
- Explain the social economic and environmental aspects of sustainability; impacts and their measurement
- Understand various approaches to sustainability - Life cycle thinking, Circular economy, Corporate Social Responsibility, Sustainable design, Green Supply chain
- Familiar with United Nation's Sustainable Development Goals and sustainability standards and voluntary organisation

THEORY
(Credits 3; Hours 45)

UNIT I: Fashion Industry and Environmental Issues

12 Hours

This unit introduces the students to the issues related to fashion industry and factors leading to those issues

- Types of textile fibers; the textile value chain and associated

processes, environmental issues associated with various textiles: natural and manmade fibres

- Factors influencing environmental impacts in textile supply chain: energy (electricity and fossil fuels), water use, water pollution, chemicals, dyes, auxiliaries, waste, air, noise fast fashion, overconsumption, sweatshops
- Industrial revolutions: evolution of fashion through first, second, third and fourth industrial revolution; Industry 5: Use of technology in promoting sustainable fashion

UNIT II: Sustainability: Definition, Various Aspects and Methods of Assessment

12 Hours

This unit will give an understanding of the idea of sustainability, related terminology and how sustainability can be measured

- Definition of Sustainability, the triple bottom framework: social, economic, environmental perspectives of sustainability
- Terminology in sustainability: environmental sustainability: ecology and ecological balance, circles of sustainability
- Sustainability analysis: risk assessment, life-cycle assessment (carbon footprint, water footprint), Life Cycle Costing, Social LCA, benefit-cost analysis, ecosystem-services valuation, integrated assessment models, environmental justice, and present and future scenario tools

UNIT III: Approaches to Achieve Sustainability

12 Hours

This unit deals with factors sustainable ways of producing and consuming clothing

- Sustainable Consumption: Slow fashion, Durability, Appropriateness, Multifunctional garments, Trans-seasonal garments, emotionally durable design, Local Consumption and production: Supporting local artisan
- Sustainable production – Sustainable design, Circular economy, R's of waste management, Eco friendly textile processing and waste minimization, Sustainable and Regenerated fibres, fibers from waste material and bioengineered fibers

UNIT IV: Sustainability Regulations and Voluntary Initiatives in Textile Production

9 Hours

This unit introduces the student to various standards, regulations and voluntary organisations that promote sustainability in fashion industry

- Sustainable Measures taken by Industry Affiliates, Non-profit Organizations and Governmental and Educational Institutions
- Environmental Management System: ISO 14000 Certification and standards
- Environmental Impact Assessment (EIA), Best Available Techniques (BAT) / Best Available Techniques Reference (BREF)
- Corporate Social responsibility, Workers and community safety: use of safe dyes and auxiliaries, safe chemical handling practices
- Voluntary organizations and campaigns: GOTS, GRI, ZDHC, SAC, OEKOTEX, REACH, Detox Campaign, Revolution Blue Sign, Fair trade

PRACTICAL (Credits 1; Hours 30)

1. Measuring sustainability through Life Cycle Assessment of a textile product

- Concept of “Cradle to Grave”, developing a process flow chart, data collection
- Assessment of energy consumption of a textile product
- Assessment of carbon footprint of a textile product
- Assessment of water footprint of a textile product

2. Understanding and Enhancing Textile Sustainability through the following

- Case studies of brands addressing sustainability in different ways –each student presenting a case study through PowerPoint presentation
- Product Development from Sustainable Materials - using textile waste and thermoset resins, recycled/reused material in fashion – each student submitting an innovative product and a written report about how it is a sustainable product and presenting it with power point

Essential Readings

- Fletcher, K., & Grose, L. (2012). *Fashion & sustainability: Design for change*. Hachette UK
- Fletcher, K. (2013). *Sustainable fashion and textiles: design journeys*. Routledge.
- Gwilt, A., & Rissanen, T. (2012). *Shaping sustainable fashion: Changing the way we make and use clothes*. Routledge.
- Jacques, P. (2020). *Sustainability: the basics*. Routledge.
- Gardetti, M.A., & Torres, A.L. (Eds.). (2013). *Sustainability in Fashion and Textiles: Values, Design, Production and Consumption* (1st ed.). Routledge.
- Pratibhan, M. Ed. (2017); *Sustainability in Fashion & Apparels (Challenges & Solutions)*; Woodhead Publishing
- Mahapatra N. N. (2015); *Textiles & Environment*: Woodhead Publishing

Suggested Readings

- Blackburn, R.S. (2005) *Biodegradable and Sustainable Fibres*: Woodhead Publishing Series in Textiles, ISBN-10: 185573916X, ISBN-13: 978-1855739161
- Blackburn, R.S. (2009) *Sustainable Textiles: Lifecycle and Environmental Impact*: Woodhead Publishing Series in Textiles, ISBN: 9781845694
- Gordon J. F. Hill C. (2014), *Sustainable Fashion: Past, Present and Future*, Bloomsberry Academic Publications, New York
- Muthu S. (2017), *Sustainable fibres and Textiles*, ISBN: 9780081020418, Woodhead Publishing
- Jain, C. (2016) *Simplifying Corporate Sustainability – A guide to implementing Sustainable Practices in Textile Industry*: Createspace Independent Pub. ISBN 978- 981-11-0386-5 Gardetti, M.A., Torres, A.L. and Gardetti, M.A. (2013) *Sustainability in Fashion and Textiles*, Greenleaf Publishing Limited, ISBN 978-1-906093-78-5 (hbk)

- ISO - Central Secretariat, 2009. Environmental management: The ISO 14000 family of International Standards. Published by International Standards Organisation

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DISCIPLINE SPECIFIC ELECTIVE COURSE
DSE FAS 202: TEXTILE CONSERVATION AND RESTORATION

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
DSE FAS 203: Textile Conservation and Restoration	4	2	0	2		Nil

Learning Objectives

- To discuss concepts which enable students to contribute to the understanding and preservation of culturally significant textile artifacts.
- To describe the core ethical principles underlying professional conservation practice.
- To demonstrate practical skills for textile collection preservation.
- To explain effective storage and display solutions for textile artifacts.

Learning Outcomes

The students would be able to:

- Acquire a combination of academic and practical skills essential for textile conservation.
- Apply ethical principles of conservation in professional practice.
- Use tools, equipment and conservation grade materials effectively for practical purposes.
- Develop expertise in handling, conserving and restoring diverse textiles professionally.

THEORY
(Credits 2; Hours 30)

UNIT I: Introduction to Textile Conservation, Materials and their Deterioration

15 Hours

This unit introduces the core principles and concepts of conservation and covers the fundamentals of textile material science and factors that influence their deterioration and preservation

- Definition and scope of textile conservation
- History and development of textile conservation
- Ethics and principles of textile conservation
- Overview of textile conservation techniques and methods
- Types of natural fibers (cotton, silk, wool, etc.)
- Textile construction techniques (weaving, knitting, etc.)
- Properties of textiles (strength, durability, etc.)
- Causes of textile deterioration
- Types of textile damages
- Assessment and documentation of textile condition

UNIT II: Collection Maintenance Practices.

15 Hours

This unit provides in-depth look at conservation practices, focusing on materials, tools, collection care and storage and display methodologies

- Cleaning methods
- Stabilisation and Restoration techniques
- Dyeing and colour matching techniques
- Storage: Types and techniques
- Display: Materials and techniques
- Conservation quality supplies

PRACTICAL (Credits 2; Hours 60)

1. Identify different types of fibers using various techniques, such as microscopy and burn tests.
2. Dye analysis techniques for identifying dye in textiles.
3. Handle specialized equipment, such as vacuum cleaners, humidifiers, digital microscope, spectrophotometer or conservation-grade materials.
4. Visit a textile museum or collection and survey external and internal factors.
5. Examine textile artifacts and prepare condition reports.
6. Photograph textiles from different angles.
7. Clean different types of textiles using various dry and aqueous cleaning methods.
8. Hand-stitching techniques for repairing and reconstructing textiles.
9. Re-weave for repairing damaged or missing areas of textiles.
10. Mount textiles on different types of supports, such as boards, rollers, or mannequins.
11. Display textiles in a way that minimizes damage and maximizes visibility.
12. Deacidification techniques for neutralizing acidic materials in textiles.
13. Pest management techniques for preventing and treating infestations in textiles.

Essential Readings

- Finch, K. and Putnam, G. (1985), *The Conservation of Tapestries and Embroideries*, Butterworth Heinemann, London UK.
- Landi, S. (2nd edition, 2000), *The Textile Conservator's Manual-A comprehensive guide to textile conservation*. Butterworth-Heinemann, London UK.
- Lennard, F. and Ewer P (2010), *Textile Conservation: Advances in Practice; A collection of essays on textile conservation techniques and practices*, Elsevier, Amsterdam, Netherlands.
- Wood, Elizabeth J. (2017), *Textile Science: An Introduction - A comprehensive textbook on textile science, covering fibers, yarns, fabrics, and finishes*, Bloomsbury Academic, London UK
- Trotman, E. R. (1984) *Dyeing and Chemical Technology of fibres*, Sixth edition, England: Charles Griffin and Company Ltd.

Suggested Readings

- American National Standards Institute (ANSI) Standards for Textile Conservation - A set of standards for textile conservation, covering topics such as cleaning, stabilization, and repair.
- International Organization for Standardization (ISO) Standards for Textile Conservation
- A set of international standards for textile conservation, covering topics such as textile testing, cleaning, and repair.
- The Textile Conservation Code of Ethics - A code of ethics for textile conservators, outlining principles and guidelines for professional practice.
- Journal of the American Institute for Conservation (JAIC) - A leading journal on conservation and preservation, including textile conservation.
- Studies in Conservation - A peer-reviewed journal published by the International Institute for Conservation of Historic and Artistic Works (IIC), covering various aspects of conservation, including textiles.

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SKILL BASED COURSES

SKILL BASED COURSE**SBC FAS 01: FASHION ILLUSTRATION: TECHNIQUES AND APPLICATION****CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
SBC FAS 01: Fashion Illustration: Techniques and Application	2	0	0	2	Nil	Nil

Learning Objectives

- Describe the basics of fashion illustration, including proportion, pose, and facial features.
- Demonstrate various illustration techniques, such as drawing and painting
- Illustrate rendering techniques for different fabrics, textures, and details.
- Propose various styles in fashion illustration.

Learning Outcomes

The students would be able to:

- Sketch the figure in correct proportion and various poses.
- Translate various illustration techniques to develop fashion figures.
- Create visually appealing and commercially viable illustrations that showcase fashion designs, textures, and details.
- Develop personal style of fashion illustration.

PRACTICAL
(Credits: 2; Hours 60)

1. Introduction to Fashion Illustration**6 Hours**

- Understanding the basics of proportion, pose, and facial features
- Introduction to various illustration techniques and mediums

3. Drawing and Painting Techniques**12 Hours**

- Drawing the fashion figure, including proportion and pose
- Practicing various drawing techniques, such as line work, shading, and texture
- Introduction to various mediums, including pastels, pencil, water and poster colours

3 Illustrating Fabrics and Textures**14 Hours**

- Illustrating different fabrics, including woven and knit textures
- Practicing various techniques for rendering texture and details
- Introduction to illustrating accessories, such as jewellery, footwear and handbags

4 Understanding Poses**14 Hours**

- Introduction to illustrating movement and gesture
- Practicing various techniques for conveying mood and atmosphere

5 Final Project**14 Hours**

- Creating a final portfolio that showcases skills and personal style

Essential Readings

- Abbing, B. (1988) Fashion sketch book, Om books International
- Brambatti, M. (2017) Fashion Illustration & Design, Promopress
- Ireland, Patrick John, (2005), Figure templates for fashion illustration, Batsford Ltd
- Hagen, Kathryn, (2005) Fashion illustration for designers, Pearson Prentice Hall, NJ
- Takamura, Z. (2012) Fashion Illustration Techniques, Rockport Publishers

Suggested Readings

- Tate, Sharon Lee, 1982 Complete Book of Fashion Illustration, Barnes & Noble
- Seaman, Julian, 1996 Fashion Illustration: Basic Techniques
- Hopkins, John, 2010, Fashion Drawing

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SKILL BASED COURSE
SBC FAS 02: ADVANCED COMPUTER AIDED DESIGN

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
SBC FAS 02: Advanced Computer Aided Design	2	0	0	2	Nil	Nil

Learning Objectives

- To gain proficiency in advanced CAD software for fashion design.
- To explore innovative and creative design possibilities
- To develop and create detailed garment specifications and digital patterns

Learning Outcomes

The students would be able to:

- Design intricate fashion sketches and patterns digitally.
- Translate design concepts into visualizations and technical drawings.
- Implement CAD and AI to execute design ideas

PRACTICAL
(Credits 2; Hours 60)

1. Drawing fundamentals in vector-based software

- Overview of interface, tools, panels, workspace and shortcuts (CorelDraw/Inkscape/any other open-source application)
- Figure Proportion Exercise
- Fashion Croquis Creation
- Flat sketches of garments and accessories

2. Digital Fashion Design

- Vector Based Software (CorelDraw/Inkscape/any other open-source application)
 - Text and object manipulation
 - Types of motifs and motif development
 - Forms of motif- natural, stylised, abstract and geometric forms
 - Motif repeats and colourways
 - Theme based design collection
 - Tech Pack Creation

- Raster Based Software (Photoshop/ Photopea/ GIMP/ any other open source application)
 - Overview of interface, tools, panels, workspace and shortcuts
 - Moodboards and concept boards
 - Colour, Pattern and Textures
 - Colour modification, filters and blending options
 - Layer mask, clipping mask- text and shape
 - Garment rendering

3. New Ways of Designing Fashion

This unit explores innovative approaches to fashion design, incorporating emerging technologies to depict creative ideas.

- Introduction to generative AI in Fashion Design
- AI for inspiration and trend forecasting
- AI assisted sketches and pattern generation (Deep dream generator, Re-Sleeve, Silk PLM, Outfit Anyone, AI image, etc.)
- Traditional and AI assisted design process: A critique

Essentials Readings

- Aspelund. K. (2014) Design Process, Fairchild - Bloomsbury Publication, 3rd Edition
- Duggal, (2000) V. A General Guide to Computer Aided Design and Drafting , Mailmax Publications, New York
- Grosicki, Z.J. (1989) Advanced Textile Design (4th Ed) - Watson's, London, Newness Butterworths

Suggested Readings

- Meller S and Eiffer. J (1991) Textile Design, London, Thames and Hudson
- Roojen PV (2002) Art Nouveau Designs, The Pepin Press- Agile Rabbit Editions, Singapore
- Wilson Eva (1994) 8000 Years of Ornament, London, the British Museum Press
- Web tutorials of vector and raster based softwares
- Web tutorials of AI based applications

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SKILL BASED COURSE
SBC FAS 03: SURFACE DESIGN TECHNIQUES

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
SBC FAS 03: Surface Design Techniques	2	0	0	2	Nil	Nil

Learning Objectives

- To describe various surface design techniques.
- To demonstrate different surface design techniques.
- To develop students' creative and problem-solving skills.

Learning Outcomes

The students would be able to:

- Identify different design methods like embroidery, ari work and embellishments, color application like painting, dyeing and printing, macrame, braiding and lace making.
- Create different structures using above techniques.
- Develop a product after acquiring skills in design techniques.

PRACTICAL
(Credits 2; Hours 60)

- | | |
|---|-----------------|
| 1. Basic Fabric Manipulation Techniques <ul style="list-style-type: none"> • Cuts and removal of threads • Folding and pleating • Gathering and ruching • Tucking • Hand-stitching and machine-stitching techniques | 12 Hours |
| 2. Embellishment Techniques <ul style="list-style-type: none"> • Padding and quilting • Appliqué, <i>Ari</i> work and embroidery • Beading and sequencing | 12 Hours |

3. **Dyeing, Printing and Painting Techniques** **14 Hours**
 - Hand painting: Painting designs directly onto fabric using brushes and paint.
 - Tie-dye: Folding and binding fabric to create unique, dyed patterns.
 - Shibori: Folding and binding fabric to create intricate, dyed patterns.
 - Block and Screen Printing: Creating designs using blocks, screens and ink
 - Batik: Using wax and dye to create unique, patterned designs

4. **Thread structure Techniques** **10 Hours**
 - Macrame
 - Braiding
 - Lace making (Crochet, Tatting)

5. **Product development using mixed design exploration techniques.** **12 Hours**

Essential Readings

- Wolff, C. 1996, The Art of Manipulating Fabric, Krause Publication, Wisconsin
- Juracek, A. Judy, 2000, Soft Surface, Thames & Hudson Ltd.
- Milne D'Aary Jean, 2006, Fabric Left Overs, Octopus Publishing Group Ltd.
- Singer Margo, 2007, Textile Surface Decoration-Silk & Velvet, A&C Black Ltd.

Suggested Readings

- Gunner, J. (2007). Shibori for textile artists. Kodansha America.
- Zedenius, F., & Lightbody, K. (2017). Macramé: the craft of creative knotting for your home. London, Quadrille Publishing.
- Day, L. F. (2008). *Art in needlework*. Lulu. com.
- Higgin, L. (2022). Handbook of embroidery. DigiCat.
- Brown, C. (2013). Embroidered & Embellished: 85 Stitches Using Thread, Floss, Ribbon, Beads & More. C&T Publishing Inc.

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SKILL BASED COURSE
SBC FAS 04: FASHION STYLING

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Theory	Tutorial	Practical		
SBC FAS 04: Fashion Styling	2	0	0	2	Nil	Nil

Learning Objectives

- To grasp the fundamentals of fashion styling and explore its career opportunities.
- To delve into the various categories of styling within the fashion industry.
- To comprehend the business of styling in the fashion industry.
- To train the students with professional ways of understanding wardrobe needs and their development.

Learning Outcomes

The students would be able to:

- Comprehend the responsibilities and roles of a fashion stylist in the industry.
- Apply key styling techniques across personal and commercial disciplines.
- Analyse market trends and implement marketing strategies in the fashion styling business.
- Organize a wardrobe, create a capsule collection, and apply maintenance strategies for long-term functionality.

PRACTICAL
(Credits 2; Hours 60)

1. Introduction to Fashion Styling

10 Hours

This unit introduces the basics of styling, the role of stylist and career opportunities.

- Basics of Fashion Styling
- Role of Fashion Stylist in the Industry
- Career Prospects in Fashion Styling

2. Fashion Styling Disciplines

30 Hours

This unit explores various aspects of personal and commercial styling across different platforms and events.

a) Personal Styling

- Body Shape Analysis and Flattering Silhouettes
- Face Shape Analysis
- Personal Color Analysis
- Identification of Personal Style Archetypes
- Style Consultation for Special Occasions

b) Commercial Styling

- Editorial Styling for Digital Platforms
- Celebrity Styling
- Styling for Television, Film, and Music Videos
- Styling for Fashion Shows and Events

3. Wardrobe Management and Planning

20 Hours

This unit covers effective wardrobe planning and long-term management.

- Wardrobe Analysis
- Wardrobe Essentials
- Organization, Categorization and Storage of Wardrobe Items
- Wardrobe Maintenance
- Capsule Wardrobe and Budgeting

Essential Readings

- Griffiths, D. (2017) *The Fashion Stylist's Handbook*, Fashionary, United Kingdom.
- Constantine, S., & Woodall, T. (2017) *The Body Shape Bible: Forget Your Size, Discover Your Shape, Transform Yourself*, Weidenfeld & Nicolson, United Kingdom.
- Funder, D. C. (2001) *The Personality Puzzle* (2nd ed.), W.W. Norton, United States.
- Daly, T. (2015) *Style Forever: The 50+ Guide to Dressing for Your Shape*, Harper Collins, UK.
- Prendergast, S. (2000) *The Fashion Business: Theory, practice, and application*, Berg Publishers, New York.
- Rasband, J. (2006) *Wardrobe strategies for women* (Student edition), Fairchild Books, United States.

Suggested Readings

- Phares, J. E. (1991) *Introduction to personality* (3rd edition), Harper Collins, United States.
- Baumgartner, J. (2012) *You Are What You Wear*, Da Capo Press, United States.
- McCall, A. (1975) *Sewing in Color* (11th edition), Hamlyn Publishing Group, United Kingdom.

- Romano, C. (2001). *Plan Your Wardrobe*, New Holland Publishers, United Kingdom.
- *Vogue* and *Harper's Bazaar* for industry insights and trends.
- Online platforms like Pinterest and Instagram for current styling trends.

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SKILL BASED COURSE**SBC FAS 05: COMMUNITY OUTREACH IN TEXTILE AND APPAREL SECTOR****CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
SBC FAS 05: Community Outreach in Textile and Apparel Sector	2	0	0	2		Nil

Learning Objectives

- To recognise the significance of textile heritage, sustainability, and contemporary interventions in community engagement.
- To apply hands-on skills to engage communities through textile-based initiatives.
- To design outreach programs that promote awareness, education, and social impact.
- To evaluate the effectiveness of community interaction through workshops, exhibitions, and social initiatives.

Learning Outcomes

The students would be able to:

- Organize and execute textile outreach activities.
- Develop engaging communication strategies for different audiences.
- Analyze and promote sustainable and traditional textile practices through community initiatives.
- Document and evaluate the impact of outreach programs.

PRACTICAL
(Credits 2; Hours 60)

1. Understanding and Designing Textile Outreach Programmes

- Introduction to the concept of community outreach and engagement, and identification of target communities (schools, craft clusters, consumers, NGOs, etc.)
- Field visit to artisan communities, upcycling studios, or textile NGOs
- Case studies of successful textile outreach initiatives
- Designing outreach objectives and activities
- Communication strategies and storytelling for effective engagement

2. Community Engagement for Skill Development, Empowerment, and Impact Assessment

- Conducting hands-on workshops in sewing, tie-dye, block printing, embroidery, digital marketing, etc., and teaching sustainable practices like recycling/upcycling
- Organizing awareness campaigns (online/offline) and collaborating with NGOs for community engagement
- Planning and hosting outreach events such as exhibitions and textile melas for marketing and sales
- Collecting feedback and analyzing outreach impact through reports, presentations, and visual documentation
- Reflecting on learnings and identifying areas for improvement

Essential Readings

- Muthu, S. S., (Ed.). (2018). *Textiles and clothing sustainability: Recycled and upcycled textiles and fashion*. Springer.
- Gillow, J., & Barnard, N. (2014). *Indian textiles*. Thames & Hudson.
- Shah, A. (2021). *Crafting a future: Stories of Indian textiles and sustainable practices*, Niyogi Books Pvt. Ltd.
- Blake, B. R., Martin, R. S., & Du, Y. (2011). *Successful community outreach: A step-by-step guide to developing and implementing a community outreach plan*. (A How-To-Do-It Manual for Librarians). Neal-Schuman Publishers.

Suggested Readings

- Wood, D. (2007). *The practical encyclopedia of sewing: Textile arts, techniques, craft, DIY projects, fashion design, fabric knowledge*. Lorenz Books.
- Gunner, J. (2007). *Shibori for textile artists*. Kodansha International.

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