

DISCIPLINE SPECIFIC ELECTIVE COURSE
DSE HH 7D4: GARMENT MANUFACTURING

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/ Practice		
Garment Manufacturing DSE HH 7D4	4	2	0	2	Studied DSE HH 4D: Pattern Making and Construction	Nil

Learning Objectives

- To develop an understanding of the garment industry's structure, operations, and key functional areas.
- To comprehend the processes involved in garment production, including pre-production, production, and post-production stages.
- To gain familiarity with the various materials, machines, tools, and equipment used in garment manufacturing.

Learning Outcomes

- Enable students to understand the functioning of the garment industry, including its processes and technical parameters in garment production.
- Enhance students' awareness of sewn products, machinery, and equipment, preparing them for professional roles within the garment industry.

SYLLABUS OF DSE HH 7D4

Theory
(Credits 2; Hours 30)

UNIT I: Introduction to the Garment Industry and its Pre-Production Processes 9 Hours

This unit offers a foundation in garment industry workflows, focusing on pre-production processes like pattern making, sampling, and fabric sourcing. It covers key standards, production systems, and the role of time and motion studies in enhancing productivity.

- Overview of the garment industry, its key sectors, and their roles
- Pre-production processes- Recording measurements, Pattern making, Sampling, Fabric development, and sourcing, Preparation of specification sheet/Tech-pack, Production planning & control

- Standards and specifications
- Production systems
- Time and motion study- Introduction, the effect of time and motion study on productivity in the garment sector

UNIT II: In-production Processes in Garment Manufacturing **15 Hours**

This unit covers key 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.

- Marker-making- planning, production, efficiency, methods of making
- Spreading of fabric- requirements, methods of spreading
- Cutting- methods and tools, ticketing and bundling
- Fusing- advantages, requirements, processes, equipment, methods, and quality control
- Stitching- types of sewing machines: general and special purpose machines
- Types of sewing needles and threads
- Stitch types and seam types- suitability and usage
- Machine beds and feed mechanisms in sewing machines

UNIT III: Post-Production Processes in Garment Manufacturing **6 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.

- Evaluating the quality and fit of various garment components- neckline, collars, sleeves, cuffs, plackets, pockets, seams, hemlines, darts, pleats, gathers, flares, tucks, yokes, waistbands.
- Garment finishing- Thread trimming, stain removal, cleaning, dry-cleaning, pressing, checking, folding and packing, warehousing and shipment

PRACTICAL (Credits 2; Hours 60)

1. Developing patterns for bodices with added fullness
2. Developing variations in sleeves- bishop, puff, and short lantern styles
3. Creating collar variations- basic shawl collar and bushirt collar
4. Drafting of women's lower garment (trouser/variations of skirts/ palazzo)
5. Construction of a formal top for self with design elements such as a Peter Pan collar on an altered neckline, mandarin collar, or shawl collar, with a shirtmaker or bishop sleeve and a placket with a suitable fastener.
6. Construction of a skirt or bifurcated garment for self, featuring a waistband, inseam side-hip pocket, and placket with a suitable fastener.

Essential Readings

- Armstrong, H. J. (2014). *Pattern making for fashion design* (5th ed.). Dorling Kindersley, New Delhi.
- Brown, P., & Rice, J. (2014). *Ready to wear apparel analysis* (4th ed.). Pearson Education. New Delhi
- Tyler, D.J. (2008). *Carr and Latham's technology of clothing manufacture* (4th ed.). Blackwell, UK.
- Cooklin, G. (2006). *Introduction to clothing manufacture* (2nd ed.). Blackwell, UK.
- 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.

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
- Aldrich, W. (2008). *Metric pattern cutting for women's wear* (5th ed.). Blackwell. UK
- Azad, N. (2019). *Sewing technology*. Neelkanth Publishers Pvt. Ltd. New Delhi
- Dunham, G. R. (2021). *The fitting book: Make sewing pattern alterations and achieve the perfect fit you desire*. Gina Renee Designs Publication.
- Glock, R. E., & Kuntz, G. I. (2009). *Apparel manufacturing: Sewn product analysis*. (4th ed.). Pearson Education, New Delhi.
- MacDonald, N. M. (2010). *Principles of flat-pattern design* (3rd ed.). Fairchild Books. New York.
- 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.
- Reader's Digest (Eds.). (2002). *New complete guide to sewing: Step-by-step techniques for making clothes and home accessories*. Reader's Digest, New York
- Stamper, A. A., Sharp, S. H., & Donnell, L. B. (2005). *Evaluating apparel quality* (2nd ed.). Fairchild. New York

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