

16TF303 GARMENT DYEING, PRINTING AND EMBROIDERY

Hours Per Week :

L	T	P	C
3	-	3	5

Total Hours :

L	T	P	WA/RA	SSH/HSB	CS	SA	S	BS
45	-	45	10	20	-	-	-	-

Course Description and Objectives:

This course offers the concepts of garment dyeing, printing, finishing, embroidery and various machines used for it. Objective of this course is to impart knowledge on garment value addition processes.

Course Outcomes:

The student will be able to:

- differentiate garment dyeing techniques
- differentiate garment printing styles.
- know the different types of garment finishes.
- understand the concepts of garment embroidering.

SKILLS:

- ✓ *Perform the dyeing of garments.*
- ✓ *Perform the printing of garments.*
- ✓ *Carryout the garment finishing.*
- ✓ *Carry out the garment embroidery.*

UNIT - 1

L-8

GARMENT DYEING : Importance of garment processing, Concepts of garment stage and pre garment stage dyeing, flow chart for garment dyeing, Various machinery used for Garment dyeing like paddle dyeing machine, drum dyeing machine, Drying of garment dyed goods – Various drying machinery like Hydro-extractor, Tumble dryer, RF dryer. Problems in garment dyeing and its remedies.

UNIT - 2

L-10

GARMENT PRINTING : Special print recipes for garments – Khadi, Metallic, Flock, Plastisol, Reflective, Pear, Fluorescent, High density printing, Puff Printing, Foil Printing, Plastic Printing. Printing of Garments with Photo chromatic and Thermo chromatic dyes, Garment Printing Machinery - Table printing, Multi arm flat bed printing machine for Garments, Digital printing, Transfer printing.

UNIT - 3

L-9

GARMENT FINISHING : Classification, Fragrance finish, UV protection finish, Cool finish, thermo cat finish, water resistant breathable finishes. Functional Finishes - Wrinkle free, durable press, Feather touch finish, Rubbery touch finish, Stain Resistant Teflon finish, Moisture management finish; Bio Polishing – Mechanism involved, problems and it's remedies.

UNIT - 4

L-9

GARMENT WASHING : Introduction – Various wash down effect, Flow chart, Stone washing – Various stone less stone washing effects like enzyme wash, Mud wash, Ion wash, Chalk wash and Monkey wash; Other novel wash down effects - Acid wash, Antique wash, Denim Hand Sand /Scraping, Sand Blasting, Ball Blasting, Whiskering, Ozone Fading, Back Staining-It's causes and remedies.

UNIT - 5

L-9

GARMENT EMBROIDERY : Introduction to embroidery, hand embroidery, origin of embroidery, threads and fabrics for hand embroidery, machine embroidery - eyelet work, lace work, stone work, bead and sequins work, bobbin thread embroidery; computerised embroidery machines, types and purpose of frames and backing material, cost estimation of embroidery articles.

ACTIVITIES:

- *Flow chart preparation for list of parameters to be considered during garment dyeing and printing.*
- *collection of different dyed, printed and finished samples.*
- *Identify the types of wash suitable for the particular garment.*
- *Plan for the particular finish required for the garment based on the end use.*

LABORATORY EXPERIMENTS

Course Outcomes:

The student will be able to:

- perform the garment dyeing using different machineries.
- perform the printing of garment with different types.
- perform the finishing of garment.
- perform the embroidery work on the garment.

LIST OF EXPERIMENTS

Total hours: 45

1. Dyeing of garment with reactive dyes using paddle dyeing machine.
2. Study of Problems in garment dyeing and its remedies.
3. Direct style of printing with reactive dyes.
4. Direct style of printing with pigment.
5. Discharge style of printing with reactive dye.
6. Resist style of printing with reactive dye.
7. Bio-polishing treatment on garment.
8. Stone wash on garment.
9. Acid wash on garment.
10. Plastizol printing on garment.
11. Khadi printing on garments.
12. Pearl Metallic Printing on garments.
13. Hand embroidery work on T- shirt.

TEXT BOOKS:

1. J.N. Ethers, "Influence of Fabric Surface Effects on Colour Depth and Hue of Garment Dyed Textiles", American Dyestuff Reporter, 1997.
2. J.M. Murphy, "Improving Preparation Techniques for Garment Dyeing", American Dyestuff Reporter, 1987.

REFERENCE BOOK:

1. D. Mahajan, "Know All About Denim", Mahajan Publishers Private Limited, Ahmadabad.