GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Diploma Engineering

Level: Diploma

Branch: Computer Aided Costume Design & Dress Making

Subject Code : DI04051021

Subject Name : Garment Sewing Technology

w. e. f. Academic Year:	2025-26
Semester:	4th
Category of the Course:	PCC

Prerequisite:	-
Rationale:	This course will provide guidance for garment manufacturing techniques followed by garment industries. It helps students to be familiar with different sewing machines and tools which improve efficiency. Students will also learn appropriate sewing technology which ensures durable, neat and professional quality garments. It enables experimentation with different fabrics, stitches and finishes. This course bridges creativity and technical skill, ensuring garments are not only attractive but also well-made, durable and product- efficient.

Course Outcome:

After Completion of the Course, Student will able to:

No.	Course Outcomes	RBT Level
01	Classify stitches and seams.	U
02	Explain basics of sewing.	U
03	Utilize different types of sewing machines.	A
04	Justify alternative methods of joining material.	E
05	Justify finishing process.	E

**Revised Bloom's Taxonomy (RBT)*

Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
				Theory		Tutorial / Practical		
L	T	PR	C	ESE (E)	PA(M)	PA(I)	ESE(V)	
3	0	2	4	70	30	20	30	150

Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	**Basic Stitches and Seams** 1.1 Stitch types • Class-100 Chain Stitches • Class-200 Stitches originating as hand stitches • Class-300 Lock Stitches • Class-400 Multithread Chain Stitches • Class-500 Overedge chain stitches • Class-600 Covering chain stitch 1.2 Seam types • Class-1 Superimposed seam • Class-2 Lapped seam • Class-3 Bound seam • Class-4 Flat seam • Class-5 Decorative stitching • Class-6 Edge neatening • Class-7 Applied Seam • Class-8 Enclosed Seam 1.3 Property of seams • Seam strength • Elasticity • Durability • Security • Comfort	10	22
2.	**Basics of Sewing** 2.1 Sewing machine Needles • Basic parts of needle • Functions of the needle • Types of needle points and their application 2.2 Sewing Thread • Fiber type construction and finish • Thread sizing • Thread packages 2.3 Sewing Machine Feed Mechanisms • Drop Feed • Differential Feed	10	24

	• Top Variable Bottom Feed • Needle Feed • Unison Feed • Cam Feed • Belt Feed • Roller Feed 2.4 Sewing Problems • Problems of stitch formation • Problems of pucker • Problems of damage to the fabric along with stitch line		
3	**Sewing Machines** 3.1 Single Needle Lock Stitch Machine 3.2 Double Needle Lock Stitch Machine 3.3 Multi Needle Chain Stitch Machine 3.4 Over Lock Machine (4 thread and / or 5 thread) 3.5 Blind Stitch Machine 3.6 Feed off the Arm Machine 3.7 Button Attaching Machine 3.8 Button Hole Machine 3.9 Bar Take Machine 3.10 Eyelet Machine 3.11 Computerized Embroidery Machine 3.12 Various types of attachments, folders, guides, pressure foot etc.	10	24
4	**Alternative methods of joining material** 4.1 Fusing • Requirements of fusing • Process of fusing • Means of fusing • Fusing equipment • Methods of fusing 4.2 Welding and adhesive 4.3 Moulding	6	14
5	**Finishing department** 5.1 Activities of finishing department • Trimming thread • Checking garment • Removing stain • Ironing garment • Folding & tagging garment	9	16

	• Packing garment • Preparation of packing list 5.2 Tools and equipment for finishing department • Thread trimmer • Needle detector • Spotting gun • Tagging gun 5.3 Pressing • Purpose of pressing • Pressing equipment – Iron, Steam press, Vacuum pressing table, Steam air finisher, Tunnel finisher		
	Total	**45**	**100**

Suggested Specification Table with Marks (Theory):

Distribution of Theory Marks (in %)					
R Level	**U Level**	**A Level**	**N Level**	**E Level**	**C Level**
10	**30**	**30**	**10**	**10**	**10**

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

References/Suggested Learning Resources:

(a) Books:

1. Technology of clothing Manufacturers by Harold Carr & Barbera Latham published by Blackwell Science (ISBN-13:978-1-4051-6198-5)
2. Apparel Manufacturing Analysis by Jacob Solinger published by Bobbin MediaCorporation, 1988 (ISBN-13: 978-1879570009)
3. Managing Quality in Apparel Industry by Mehta & Bharadwaj published by New Age Publisher, Delhi (ISBN-13:978-8122411669)
4. Garment manufacturing by Prasanta Sarkar published by Online Clothing Study. Gurgaon, India.(ISBN-13:978-9383701759)

(b) Open-source software and website:

1. https://textilelearner.net/finishing-process-in-garment-industry/
2. http://textilemerchandising.com/garments-finishing-process-steps/
3. https://textileengineering.net/fusing-process-in-garment-industry-factors-methods-and-equipments/

4. https://textilelearner.net/different-types-of-stitches-uses-in-garments/
5. https://www.youtube.com/watch?v=SKvoVsB-xJo
6. https://www.youtube.com/watch?v=4r4p61Mk84w
7. https://www.youtube.com/watch?v=Joh5yRBK7Wk
8. https://www.youtube.com/watch?v=UeuyZEiEQU0
9. https://www.youtube.com/watch?v=G3qRSDF5PvE
10. https://www.youtube.com/watch?v=ZwUZKeUTJtE

Suggested Course Practical List: If any

Pr. No.	List of Practical	Hours
1.	Sketch following Stich types. • Class-100 Chain Stitches • Class-200 Stitches originating as hand stitches • Class-300 Lock Stitches • Class-400 Multithread Chain Stitches • Class-500 Overedge chain stitches • Class-600 Covering chain stitch	10
2.	Sketch following Seam types • Class-1 Superimposed seam • Class-2 Lapped seam • Class-3 Bound seam • Class-4 Flat seam • Class-5 Decorative stitching • Class-6 Edge neatening • Class-7 Applied Seam • Class-8 Enclosed Seam	10
3.	Sketch following Sewing Machine feed Mechanism. • Drop Feed • Differential Feed • Top Variable Bottom Feed • Needle Feed • Unison Feed • Cam Feed • Belt Feed • Roller Feed	10
	Minimum Practical Hours	**30**

List of Laboratory/Learning Resources Required:

1. Drawing and sketching tools and materials

Suggested Project List:

1. Collect Photographs/ Sketches/ Samples of stitch types /Seam types.
2. Prepare chart/poster of parts of sewing machine needle/ points of sewing machine needle.
3. Create/collect samples of various stitch types.
4. Prepare chart/poster of various Sewing Thread packages /collect various Sewing Thread packages.
5. Prepare chart of various Fusing equipment.
6. Prepare chart of various Finishing equipment.
7. Prepare flow chart of sewing and fusing department.
8. Prepare flow chart of sewing and finishing department.

Suggested Activities for Students:

1. Power point presentation
2. Internet based assignments
3. Teacher guided self-learning activities
4. Library/internet/lab based mini-project etc.

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