



# GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Engineering

Level: Diploma

Branch: Computer Aided Costume Design & Dress Making

Course / Subject Code: DI03051041

Course / Subject Name: Garment Cutting Technology

<b>w. e. f. Academic Year:</b>	2024-25
<b>Semester:</b>	3 <sup>rd</sup>
<b>Category of the Course:</b>	PCC

<b>Prerequisite:</b>	NA
<b>Rationale:</b>	A clear need has been perceived for information on clothing manufacturing technology, related to current practice in the clothing industry. This course will provide guidance for garment manufacturing techniques for industry. It is essential to learn about marker planning, spreading of the fabric, cutting of the fabric and its objectives, methods of cutting, method of spreading etc. This course is useful for understanding garment manufacturing technology. Thus, this is very important course for students of CACDDM program.

### Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	Explain the pre-production activities in the garment industry.	R
02	Interpret the Marker Planning	U
03	Apply different types of spreading methods.	A
04	Choose appropriate steps in cutting process of the garment for quality cutting.	A
05	Interpret the post cutting process	U

\*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
L	T	PR		C	Theory		Tutorial / Practical	
			ESE (E)		PA(M)	PA(I)	ESE (V)	
4	0	0	4	70	30	00	00	100



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## Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1	<b>Unit-I Pre-Production activities.</b> List all the activities sequentially before production. 1.1. Initial Samples development and approvals 1.2. Fabric development 1.3. Development of print and embroidery swatches for approval. 1.4. Pattern making and grading 1.5. Fit sample development. 1.6. Size set sample development 1.7. Pre-production sample development 1.8. Sourcing and testing raw materials, 1.9. Pre-production meeting 1.10. Costing of a garment 1.11. Preparation of production schedule. 1.12 Fabric reconciliation report	9	14
2	<b>Unit-II Marker planning</b> 2.1 Marker and its meaning. 2.2 The planning, drawing and reproduction of the marker. 2.3 The requirements of marker planning. 2.4 Methods of marker planning. - Manual marker planning, Computerized marker planning 2.5 Marker efficiency calculation 2.6 Cut order planning	15	26
3	<b>Unit-III Spreading of the fabric</b> 3.1 The requirements of spreading process. 3.2 Methods of spreading. -Spreading by hand, Spreading using a travelling machine. 3.3 Effect of width variation on spreading & cutting 3.4 Effect of fabric shrinkage on spreading & cutting 3.5 The nature of fabric packages. - Open fabric – rolled; Tubular knitted fabric – rolled, Folded fabric – rolled, Folded fabric – cutted, Velvet hanging	13	22
4	<b>Unit-IV Cutting of the fabric</b> 4.1 The objectives of Cutting. 4.2 Cutting tools and Equipments. - Hand Shears, Straight Knife, Band Knife, Round Knife, Notchers, Drills & thread markers, Computer	13	22



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	Controlled Cutting knives, Die Cutting, Laser Cutting, Plasma Cutting, Water Jet Cutting, Ultrasonic Cutting,		
5	<b>Unit-V Post cutting process.</b> 5.1 Importance of Post cutting process. 5.2 Post cutting process- Fusing the garment parts, Sorting, Ticketing and Bundling, Importance and management of fabric cutting waste.	10	16
	<b>Total</b>	<b>60</b>	<b>100</b>

## Suggested Specification Table for Question Paper Design:

Distribution of Theory Marks (in %)					
R Level	U Level	A Level	N Level	E Level	C Level
30	40	30	-	-	-

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, Harold Carr & Barbara Latham, Blackwell Science
2. Apparel Manufacturing Analysis, Jacob Solinger, Bobbin Media Corporation, 1988
3. Managing Quality in Apparel Industry, Mehta & Bharadwaj, New Age Publisher, Delhi
4. Handbook of Quality, Joseph Juran, Mc Graw Hill ISBN 978-07-0162973-7
5. Garment Manufacturing Processes, Practices and Technology, Prasanta Sarkar, Power publishers, ISBN:9789383701759

### (b) Open-source software and website:

- a) <https://www.youtube.com/watch?v=-drZfpU8jLg>
- b) <https://www.youtube.com/watch?v=nmkS8brdWhI>
- c) <https://www.youtube.com/watch?v=wJK5XgYefBQ>
- d) <https://www.youtube.com/watch?v=B7H5kiEIOsU>
- e) <https://www.youtube.com/watch?v=palmFFnMT1E>
- f) <https://www.youtube.com/watch?v=AxHt1Hvo1fc>
- g) <https://youtu.be/8p7qwW4iyOM>



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## Suggested Course Practical List: If any

Pr. No.	List of Practical	Hours	% of Weightage
----	Minimum Practical Hours	-----	-----

List of Laboratory/Learning Resources Required: NA

## Suggested Project List:

- Picture collection:** Collect pictures of different types of cutting machines and prepare report/chart on it.
- Plan Preparation:** Prepare two or three cut order plans.
- Marker plan preparation:** Prepare marker plan for shirt size 42” for the given fabric width (36” and 45”) and analyze the use and cost of the fabric.
- Fabric waste management:** Prepare a report on fabric waste management in the garment unit.

## Suggested Activities for Students:

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

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