

GUJARAT TECHNOLOGICAL UNIVERSITY

TEXTILE TECHNOLOGY (29)

FABRIC STRUCTURE II

SUBJECT CODE: 2162906

B.E. 6th SEMESTER

Type of course: Engineering

Prerequisite: Knowledge of Fabric Structure I

Rationale: Fabric Structure II covers the colour & weave effect, compound woven structures.

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks						Total Marks
L	T	P		Theory Marks			Practical Marks			
				ESE (E)	PA (M)		PA (V)		PA (I)	
		PA	ALA		ESE	OEP				
4	0	2	6	70	20	10	20	10	20	150

Content:

Sr. No.	Content	Total Hrs	% Weightage
1.	Simple Colour & Weave Effects	04	8.33
2.	Compound Colour & Weave Effects	04	8.33
3.	Construction & Development of Jacquard Designs	06	12.50
4.	Damask Brocade & Tapestry Structures. Figuring with Extra Threads	03	6.25
5.	Backed Cloth	04	8.33
6.	Double Cloth – Principle of Construction, factors affecting double cloth. Different methods of tying double cloth.	04	8.33
7.	Interchanging Double Cloth	02	4.17
8.	Treble cloth - Construction & Designs.	04	8.33
9.	Gauze & Leno Structures	06	12.50
10.	Weft Pile Fabrics	04	8.33
11.	Terry Pile Structures	03	6.25
12.	Warp Pile Fabrics	04	8.33

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
10	15	15	10	10	10

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above Levels (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

1. Watson Textile Design and colour, Z. GROSICKI.
2. Watson's Advanced Textile Design (Compound Woven Structures), Z. GROSICKI.
3. Grammar of Textile Design, Nisbet.

Course Outcome:

After learning the course the students should be able to

1. Weave multi-layer fabric.
2. Develop Jacquard design.
3. Correlate compound design with actual weaving of the fabric.
4. Construct as well as analyze weaves & different figuring fabrics.
5. Construct as well as analyze weaves used for terry pile, gauze and leno fabrics.
6. Construct tapestry, damask & brocade fabrics.
7. Analyze the compound fabric.

List of Experiments:

1. Samples analysis of Compound Structures.
2. Weaving Samples of Compound Weaves on Hand Loom.

Open Ended Problems/Design Oriented Problems: Apart from above experiments a group of students has to undertake one open ended problem/design problem. Few examples of the same are given below.

1. Development of Leno Figures.
2. Development of Multilayer Fabric.

Major Equipments:

Pick Glass
Hand Loom

List of Open Source Software/learning Website: <http://nptel.iitm.ac.in>, World Wide Web, Google Search Engine etc.

ACTIVE LEARNING ASSIGNMENTS: Preparation of power-point slides, which include videos, animations, pictures, graphics for better understanding theory and practical work – The faculty will allocate chapters/ parts of chapters to groups of students so that the entire syllabus to be covered. The power-point slides should be put up on the web-site of the College/ Institute, along with the names of the students of the group, the name of the faculty, Department and College on the first slide. The best three works should submit to GTU.