

PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Textile Engineering

Faculty Name: - Ms. Sushma

Subject Name: - Technical Textiles - I

Year/Semester: - 4th/7th

Subject Code: - PCC-TEX-401A

LESSON PLAN

Unit	Topics To Be Covered	Hours	Total Hour
Unit 1	Technical Textile: Introduction, Technical Textile: definition and growth of technical textiles, Classification of Technical Textiles	3	8
	Brief idea about technical fibres. Role of yarn construction Fabric construction and composite materials	5	
Unit 2	Filtration: Introduction, Textile and other filter media for dry and wet filtration. Filtration parameters	3	9
	Theory of dust collection and solid liquid separation, Filtration requirements, Role of fibre, fabric construction and finishing treatments	3	
	Concept of pore size and particle size, Mathematical models, Nano filters	3	
Unit 3	Geotextiles: Introduction, Types of geosynthetic and their uses, Functions and application areas of Geotextiles, Functions and application areas of Geotextiles	3	10
	Essential properties for geotextile, Fibre and fabric selection criteria for geotextile applications	2	
	Mechanics of reinforcement, filtration and drainage by Geotextiles, Natural fibre Geotextiles	3	
	Methods of long term prediction of geotextile life and survivability in soil, Geotextile testing	2	
Unit 4	Introduction to automotive textile, Application of textiles in automobiles, Fibre requirements for transport textile	3	10
	Textile in passenger cars – tyres, airbags, seat belts, hoses and filters, Textiles in other road vehicles	3	
	Textiles in Railway application, Textiles Application in aircraft and marine, Textile as structural elements in transport vehicles	4	