

LESSON PLAN		
Sem./ Branch: 5 th Sem./ Text. Tech.		Duration:
Subject: Technical Textile		Name of Faculty: GF3
Week	Theory Topics (3 Periods/ Week)	Practical (3 Periods/ Week)
1 st	Introduction: Definition, classification of technical textiles. Introduction, definition, fibers used for Geo-textiles and their properties.	Draw the chart of classification of technical textiles and its applications
2 nd	Characteristics of Geo-Textiles: Woven and non-Woven, Application of Geo-Textiles: Geo-grids, Geo-nets, Geo-composite, Geo membranes, Geo-Cell, Geo-mattress.	Collect and analyze sample of geo-textiles (any one) w.r.t to its composition material, construction and any other relevant properties.
3 rd	Medical Textiles: Introduction, definition and Characteristics of fibers used for medical textiles.	Collect and analyze samples of (any one) medical textiles w.r.t to its composition material, construction and any other relevant properties
4 th	Application of Medical Textiles: Based on their use Outside the body (pressure garments, bandages, dressings, gowns, masks, caps, shoe covers etc.) Inside the body (bifurcated arterial prosthetic graft, artificial kidneys, joints, tendon, vascular grafts & artificial heart valve etc.) 3	Collect and analyze samples of (any one) automotive textiles w.r.t to its composition material, construction and any other relevant properties.
5 th	Introduction, Definition, Fibers used for automotive textiles and their specific properties. Applications of Automotive Textiles: Upholstery, carpets, tyres, safety devices, filters and engine compartment items.	Collect and analyze samples of (any one) sports textiles w.r.t to its composition material, construction and any other relevant properties
6 th	1st Sessional test	
7 th	Protective Textiles: Introduction, Definition, Fibers used for protective textiles and their specific properties. Application of Protective Textiles: Bullet Proof fabric, fire proof fabric, high visibility fabric, protection from electromagnetic radiations, protection against micro-organisms, chemicals and pesticides.	Collect and analyze a sample of non-woven carpet w.r.t material used, construction, extension, compactness, wettability and bonding property.
8 th	Introduction, Definition, Fibers used for industrial textiles and their specific properties. Application of Industrial Textiles: Cords and ropes, belts and filter fabrics.	Draw flow chart of production cycle of non woven process.
9 th	Sports Textiles: Introduction, Definition, Fibers used for sports textiles and their specific properties. Application of Sports Textiles: Sports clothing, waterproof breathable materials, sports surfaces and equipments	Draw line diagram and explain the dry-laid web formation method.
10 th	Textiles for Packaging: Introduction, Definition, Fibers used in packaging and their specific properties. Application of Packaging Textiles: Fabrics for bags and luggage, food packaging.	Draw line diagram and explain the wet-laid formation method.
11 th	2nd Sessional test	
12 th	Coating and Laminating Textiles-Introduction and Definition. Applications of coating and laminating textiles.	Draw sketch and explain the spun bond system.
13 th	Polymeric materials and fabric substrates for coating. Fabric lamination process and resins used for it.	Draw sketch and explain the melt blown system.
14 th	Non Woven Textiles-Introduction and Definition. Raw Material (fibers) used in manufacturing of non-woven textiles, fibre properties - Crimp, count, length, finish etc. resultant fabric properties of non- woven textiles made from different fibers. Flow chart of production cycle of non- woven textiles	Draw sketch and explain the needle punching bonding method.
15 th	3rd Sessional test	
16 th	Web formation methods: Purpose of web formation methods. Dry laid system, Wet laid system, Spun bond system and Melt blown system. Web Bonding Methods: Purpose of bonding methods. Mechanical bonding, Thermal bonding and Chemical bonding. Applications of non-woven textiles.	Draw sketch and explain the thermo-bonding method.