

**CORE COURSE-I - TECHNICAL TEXTILES**

**Unit I**

**Technical textile**

Introduction, definition and scope of technical textiles. Technical fabric structure-Woven and non-woven.

**Unit II**

**Home textiles**

Definition, Bed linens, Floor covering, Wall coverings Door and window treatments, Table and kitchen linens.

**Unit III**

**Medical and Survival textiles**

Introduction. Non implantable materials, Implantable materials, Health care and hygiene, textiles. Tents, helmets, gloves, sleeping bag, Survival bags and Suits.

**Unit IV**

**Textiles in transportation Geo Textiles**

Introduction, Textiles in Cars, Road vehicles, Rail ways, Aircraft and Marine applications. Essential properties of Geo Textiles, Applications of Geo Textiles, Natural fiber for soil strengthening.

**Unit V**

**Textiles in defence**

Textiles for Protection, Thermal insulation materials, Camouflage concealment and deception, Flame and Heat protective textiles, Ballistic protective materials, Intelligent textiles-use of Wearable electronics

**References:**

1. Horrocks, A.R. and Anand, S.C., Handbook of Technical Textiles, The Textiles Institute, Wood Head Publishing Ltd., England, 2000.
2. Rigby, A.J. and Anand, S.C., Non-wovens in Medical and Healthcare Products, Technical Textiles, Int., 1996.
3. Pandey, S.N., Potential for the use of Natural Fibres in Civil Engineering, Jute Technological Research Laboratory, 2002
4. Grosick, Z.J. Walson's Advanced Textile Design-compound woven structures, Woodhead Publishing, England, 2004.
5. Murphy W.S, Textile Finishing, Abhishek Publications, Chandigarh, 2000.