

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. Semester: II

M.E. TEXTILE ENGINEERING

Subject Name: **High Performance Fibres (Major Elective-III)**

Sr.No	Course content
1.	Introduction: to High Performance Fibres.
2.	Production of Speciality Fibres: Metal fibres, Asbestos fibres –their types & properties, KYNOL fibres, Basofil fibres
3.	High Performance Fibres: Manufacture of glass filament and staple fiber- manufacture of staple fiber yarn - properties and application of filament staple fibre yarns.
4.	Asbestos Thread: manufacturing process, properties and applications of asbestos yarn.
5.	Ultra High Modulus Fibers: Carbon fibers – Introduction- PAN and pitch based carbon fibres, physical properties and applications. Aramid and related fibers
6.	Ceramic Fibres: Introduction, silicon carbide based fibres, Alumina based fibres. Single crystal oxide fibres.
7.	Chemical resistant fibres and thermally resistant fibres: -
8.	Chlorinated Fibres: PVDC
9.	Fluorinated Fibres: PTFE, PVF, PVDF & FEP
10.	Poly(Entheretherketones): PEEK

Reference Books:

1. High Performance Fibres by J. W. S. Hearle
2. Carbon Fibres by Donnet & Bansal
3. Hand book of Fibres Science & Technology : High Technology Fibres edited by Manachem Lewin & Jack Preston
4. New Fibres by Hongu and Phillips.
5. Kevlar Aramid Fibres by yang.