

GUJARAT TECHNOLOGICAL UNIVERSITY

TEXTILE PRODUCTION

B. E. SEMESTER: VII

Subject Name: **Instrumental Analysis in Textile Processing**

(Departmental Elective -I)

Subject Code: **172806**

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam (E)		Mid Sem Exam (Theory) (M)	Practical (Internal)
				Theory	Practical		
4	0	2	6	70	30	30	20

Sr. No.	Course Content	Total Hrs.
1.	Introduction: Importance Of Instrumental Characterization Of Textile Materials, Textile Auxiliaries And Chemicals. Various Instrumental Techniques.	08
2.	Applications Of Spectroscopy: Principal And Applications Of Various Spectroscopic Methods Such As IR, FTIR, NMR, Electron Spectroscopy (ESCA) Etc.	08
3.	Applications Of Microscopy : Principle And Working Of SEM, TEM, AFM, FFM, ECFM Etc.	08
4.	Applications Of Chromatography: Principle And Working Of Paper Chromatography, TLC, HPCL, GC, GPC Etc.	08
5.	Principal And Applications Of X-Ray Diffraction Techniques In The Study Of Fine Structure Of Fibres And Polymers.	08
6.	Thermal Analysis: Principle, Working And Applications Of DSC, DTA, TGA Etc.	08

Practical:

This shall be based on prescribed syllabi.

Text Books:

Sr. No.	Title	Author
1.	Modern Textile Characterization Methods.	Mastura Raheel
2.	Hand Book of Analysis of Synthetic Polymer and Plastics	J. Urbanski

Reference Books:

Sr. No.	Title	Author
1.	Advances in Fibre Science.	S.K.Mukhopadhyay
2.	Man-made Fibres	R.W.Moncrieff