

GUJARAT TECHNOLOGICAL UNIVERSITY

TEXTILE PRODUCTION

B. E. SEMESTER: VII

Subject Name: **Ecological Aspects in Textile Processing**
(Departmental Elective-I)

Subject Code: **172805**

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.	Environment & Ecology: Environment, Ecology, Types Of Pollution & Their Impacts .Ecofriendly Textiles, Effects Of Textile Effluents On Plant & Animal Life.	06
2.	Waste Minimisations In Textile Industry: Dry Processes, Wet Processes, Dyestuff Industry, Environmental Considerations, Red Listed Chemicals, Metals, Dyes. Limits Of Banned Chemicals, Metals, Dyes & Other Parameters. List Of Presently Known Chemicals/Auxiliaries /Dyes Commonly Used In Textile Processing Which Are Eco- Unfriendly.	06
3.	Towards Eco-Friendly Chemical Processing: Desizing, Scouring, Bleaching, Mercerizing, Dyeing, Printing & Finishing, Future Developments In Eco-Friendly Chemical Processing.	06
4.	Pesticides In Fibre/Yarns, Eco-Specifications For Pesticides, Analysis & Testing	05
5.	Heavy Metals In Textiles, Eco-Standards For Heavy Metals, Testing Of Heavy Metals.	05
6.	Pentachlorophenol (PCP) In Textiles: Sources Of PCP, Toxicity Of PCP, Ecospecifications For PCP, Testing Of PCP, Substitutes For PCP.	05

7.	Formaldehyde: Toxicity, Sources Of HCHO, Eco-Limits For HCHO, Testing Of HCHO Etc	05
8.	Eco-Standards: Different Eco-Labels Viz. MST, MUT, Steilmann Etc. Eco Standards For Textiles Under Different Eco-Labels.	05
9.	Environmental Management & Auditing (ISO-1400 Family)	05

Practical:

This shall be based on prescribed syllabi.

Text Books:

Sr. No.	Title	Author
1.	Environment, Ecology, Effluent	Dr R.S.Gandhi

Reference Books:

Sr. No.	Title	Author
1.	Ecoparameters : Present status	Sussana Benny & K. P. Janakrishnan, SITRA, Coimbatore
2.	Environmental Problems in Chemical Processing of Textiles	S.A.Solekar,.Yogita NCUTE, IIT, Delhi.