

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA IN TEXTILE PROCESSING TECHNOLOGY
SEMESTER: 4

Subject Name **TECHNOLOGY OF DYEING-II**

Sr.No	Course content
1.	INTRODUCTION TO DYEING OF SYNTHETIC FIBRE / FABRICS 1.1 Introduction to various man-made fibres.. 1.2 Various dyes available for the dyeing of above man-made fibres. 1.3 Difference in the dyeing technology of natural and synthetic fibres .
2.	METHODS AND MECHANISM OF DYEING OF VARIOUS SYNTHETIC FABRICS AND THEIR BLENDS 2.1 Selection of dyes for dyeing of various synthetic fabrics and their blends. 2.2 Mechanism of dyeing of various synthetic fabrics and their blends with suitable dyes. 2.3 Methods of dyeing used for various synthetic fabrics and their blends. 2.4 Role of different chemicals and auxiliaries used in above dyeing methods. 2.5 Parameters to be maintained during the above dyeing methods. 2.6 After treatments of dyed man-made fabrics and their blends. 2.7 Stripping of dyes from dyed synthetic fabrics. 2.8 Calculation of the cost of dyeing.
3.	MACHINERIES USED FOR DYEING OF SYNTHETIC FABRICS 3.1 Various dyeing machines for synthetic fabrics (Batch wise and Continuous). 3.2 Principle and working mechanism of all the above dyeing machines. 3.3 Merits and demerits of all the above dyeing machines.
4.	FAULTS IN DYEING AND THEIR REMEDIES 4.1 Various faults in dyeing related to machineries and fabrics. 4.2 Causes of all the above faults. 4.3 Remedial process of all the above faults.
5	RECENT DEVELOPMENTS IN DYEING OF SYNTHETIC FABRICS AND THEIR BLENDS 5.1 Solvent dyeing technique. 5.2 Continuous Dyeing Technology. 5.3 Differential dyeing technique. 5.4 Dyeing technique of polyester micro fibres. 5.5 Soft flow dyeing technology for woven and knitted fabrics. 5.6 Right First Time (RFT) concept in dyeing.

	5.7 Non-aqueous super critical carbon dioxide (CO ₂) technology applicable in dyeing of synthetic fabrics. 5.8 E-control concept used in dyeing of reactive dyes. 5.9 Use of Ultra sonic sound in dyeing. 5.10 Kuster roll technology used in the modern dyeing machines.
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Reference Books:

Sr. No.	Name of Books	Authors
1.	Technology of dyeing (Vol. – VI)	V. A. Shenai
2.	Processing of polyester / cotton blends	Kulkarni & Trivedi (ATIRA)
3.	Dyeing & Chemical technology of Textile Fibres	E. R. Trotman
4.	Dyeing of blends	Chintham
5.	Chemical processing of synthetic fibres & blends	Datya & Vaidya
6.	Man-made fibres	Moncrief
7.	Dyeing of wool & Silk & man-made fibres	R. S. Prayag
8.	Rapid and efficient dyeing	Shirly Institute Publication
9.	Dyeing & Texturising of polyester & polyester cotton fibre blends	Shirly Institute Publication