

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA IN TEXTILE PROCESSING TECHNOLOGY

SEMESTER: 4

Subject Name TECHNOLOGY OF PRINTING - II

Sr.No.	Course content
1.	INTRODUCTION TO PRINTING OF SYNTHETIC FIBRE / FABRICS 1.1 Nature of various synthetic fibre / fabrics to be printed. 1.2 Preparation of synthetic fabrics for printing. 1.3 Selection of thickeners for the printing of various synthetic fabrics. 1.4 Selection of dyes for the printing of various synthetic fabrics.
2.	PRINTING OF SYNTHETIC FABRICS AND THEIR BLENDS 2.1 Printing of polyester fabric with disperse dye and pigment. 2.2 Printing of nylon fabric with acid, disperse, metal complex, reactive Dyes and Pigments. 2.3 Printing of acrylic fabric with disperse and modified basic dyes. 2.4 Printing of acetate rayon fabric with disperse dyes. 2.5 Printing of Cationic dyeable polyester (CDPET) with cationic dyes. 2.6 Printing of Polypropylene (PP) with Disperse dyes. 2.7 Printing of various blends prepared from synthetic/synthetic and synthetic/natural fibres with suitable dyes' combinations.
3.	MACHINERIES USED FOR PRINTING OF SYNTHETIC FABRICS 3.1 Principle, working mechanism and operation of semi automatic and fully automatic flat bed screen printing machines. 3.2 Principle, working mechanism and operation of conventional and wider width rotary screen printing machines. 3.3 Various techniques of transfer printing technology. 3.4 Comparison, advantages and disadvantages of all the above printing machines.
4.	STYLES OF PRINTING 4.1 Discharge style of printing on synthetic fabrics. 4.2 Resist style of printing on synthetic fabrics. 4.3 Crimp style of printing on synthetic fabrics. 4.4 Brasso style of printing on polyester/cotton, polyester/viscose, nylon/cotton and nylon/viscose blends. 4.5 Advantages and disadvantages of all the above styles of printing.

5.	METHODS OF FIXATION 5.1 Importance and necessity of fixation stage in printing. 5.2 Various methods of fixation of the dyes printed on synthetic fabrics : (i) Pressure ager, (ii) Loop ager and (iii) Thermofixation on stenter.
6.	POST TREATMENTS 6.1 Importance and necessity of post treatments in printing. 6.2 Various post treatments applied to printed fabrics after fixation stage such as reduction clearing, soaping, washing etc. 6.3 Principle, working mechanism and operation of various machines used for all the above post treatments.
7.	FAULTS IN PRINTING 7.1 Various faults in printing related to machines and fabrics. 7.2 Causes of all the above faults. 7.3 Remedies of all the above faults.
8.	RECENT DEVELOPMENTS IN PRINTING 8.1 Transfer printing on cellulosic fabrics. 8.2 Digital ink-jet printing technique on textiles. 8.3 Machine invented to print the garments with high production rate. 8.4 Preparation of rotary screens by conventional method and by modern Laser Technology.

Reference Books:

Sr. No.	Name of Books	Authors
1.	Introduction to Printing of synthetic fibre fabric	W. Clerk
2.	Technology of printing (Vol. – IV)	V. A. Shenai
3.	Screen printing	W. Miles
4.	Textile printing	Knetch & Fothergill
5.	Technology of Textile printing	R. S. Prayag