

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA IN PRINTING TECHNOLOGY

Semester: 4

Subject Name ADVANCED IMAGE CARRIER

Sr.No	Course content0
1.	BIMATEL AND MULTIMETAL PLATE PROCESS 1.1 Introduction 1.2 Characteristics 1.3 Structure, Processing and use of various Bi / Tri metal plates.
2.	APLICATION OF PHOTOPOLYMER IN IMAGE CARRIER
3.	LAYOUT PREPARATION FOR STEP AND REPEAT MACHINE 3.1 Introduction of Step and Repeat system. 3.2 Working process of Step and Repeat Machines for image carrier. 3.3 Layout key drawing for Step and Repeat machine.
4.	IMAGE CARRIER - GRAVURE 4.1 Introduction of gravure image carrier 4.2 Different types of metal/materiel used 4.3 Methods of preparing graviure cylinders 4.4 Troubles and remedies
5.	IMAGE CARRIER - FLEXO 5.1 Introduction of flexography image carrier 5.2 Different types of material used 5.3 Methods of preparing flexo image carrier 5.4 Troubles and remedies
6.	WATER-SOLUBLE PHOTOSENSITIVE RESIN PLATES 6.1 Introduction 6.2 Characteristics 6.3 Structure 6.4 Processing 6.5 Image reproductivity
7.	DIFFUSION TRANSFER PLATES 7.1 Reflex plates 7.2 Projection plates
8.	AUTOMATIC PLATE PROCCESING MACHINES. 8.1 Diagram (Structure) 8.2 Advantages and disadvantages 8.3 Processing and use.

9.	COMPUTER TO PLATE TECHNOLOGY. 9.1 Introduction 9.2 Various types of CTP
10.	PRE SENSITISED PLATES 10.1 Different types of pre sensitized plates. 10.2 Structures of Various PS plates. 10.3 Methods of processing Various PS plates.

LABORATORY EXPERIENCES:

1. Demonstrate the positive working electro deposited bi-metal plate.
2. Demonstrate the negative working electro deposited bi-metal plate.
3. Prepare Photopolymer plate.
4. Execute step and repeat manual system.
5. Demonstrate the step and repeat job on automatic machine.
6. Prepare water soluble photosensitive resin plates – (a) line and (b) Halftone jobs.
7. Demonstrate the diffusion transfer plate process.
8. Demonstrate the projection plate process.
9. Demonstrate automatic plate processing machine.
10. Demonstrate gravure cylinder preparation.
11. Demonstrate flexo plate preparation

Reference Books:

Sr. No.	Name of Books	Authors & Publisher
1.	Film Assembly & Plate making	Graphics and Roper, GATF
2.	Offset Plate making	GATF
3.	Photomechanics and Printing	Mertle and other
4.	Graphic Arts Procedures	Karch & Buber
5.	Machine Printing	Focal Press London
6.	Lithographers Manual	GATF
7.	Flexography, Principle and practice	Flexographic Technical Association U. S. A