

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E Semester: 3

DIPLOMA IN PRINTING TECHNOLOGY

Subject Code 335803
Subject Name IMAGE CARRIER

Sr.No	Course content
1.	DIFFERENT TYPES OF METALS 1.1 Characteristics of Zinc. 1.2 Characteristics of Aluminium. 1.3 Characteristics of Copper. 1.4 Characteristics of Chromium 1.5 Different metals suitable for surface preparation
2.	SURFACE TREATMENT TO THE PLATE. 2.1 Graining machine. 2.2 Graining materials and its application 2.3 Various Process of Graining. 2.4 Requirement of lithographic grain texture
3.	ENVIRONMENTAL CONDITION 3.1 Chemical hazards and Safety precaution, light, temperature, ventilation. 3.2 Equipments for plate making
4.	CHEMISTRY OF SENSITISING AND DESENSITISING 4.1 Colloides and their suitability 4.2 Sensitising materials and their characteristics 4.3 Desensitising materials and their characteristics
5.	STUDY OF VARIOUS IMAGE CARRIERS FOR DIFFERENT PRINTING PROCESSES 5.1 Engraving Block. 5.2 Flexo plates. 5.3 Gravure Cylinders. 5.4 Offset plates. (classification) 5.5 Screen preparation.
6.	FILM ASSEMBLY 6.1 Layout and page-making
7.	IMAGE CORRECTION 7.1 Image removal 7.2 Image addition

LABORATORY EXPERIENCES

1. Study of different types of metals, including physical and chemical properties.
2. Study of metal, its influencing properties as image carrier.
3. Get acquainted with different machines / tools / chemical used in image carrier techniques.
4. Study of different colloids and their suitability desensitising characteristics.
5. Prepare schematic diagram of preparing relief plates for line work.
6. Prepare schematic diagram of preparing relief plate for halftone work and line halftone combined job.
7. Prepare schematic diagram of preparing offset plate using different techniques involving waterless & PS type.
8. Demonstration performing various image carrier preparation techniques.
9. Practice of layout and imposition for a given job.
10. Practice of image removing / addition.
11. Study of health hazards chemicals, safety, quality control.

Reference Books:

Sr. No.	Name of Books	Author	Publisher
1.	Printing Metal	F.M.F. Ltd.	London
2.	Printing Metal (Their Production, Nature and Use)	F.M.F. Ltd.	London
3.	Graphic Reproduction	W. P. Spencer	Benett Publishing Illionis
4.	A Handbook of Printing & Packaging	Bishwanath Chakravarty	Galgotia
5.	Lithographers Manual	---	GATF
6.	Film Assembling & Plate Making	Catehouse & Roper	GATF
7.	Offset Plate Making	Catehouse & Roper	GATF
8.	Platomechanics & Printing	Mertle & Others	VNR, USA
9.	Offset Platemaking (Alb + Deep etch)	AIFMP	New Delhi
10.	Formulay	AIFMP	New Delhi