

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA IN PRINTING TECHNOLOGY

Semester: 4

Subject Name **ADVANCED OFFSET PRINTING**

Sr.No	Course content0
1.	INTRODUCTION TO MULTICOLOUR SHEET FED AND WEB FED OFFSET PRINTING MACHINE 1.1 Defination of multicolour printing. 1.2 Outline of the multicolour printing process and importance. 1.3 Principles involved and method of imparting impressions on paper and its substitute. 1.4 Introduction to various machines and their job suitability. 1.5 Differentiation in Sheet Fed and Web Fed.
2.	CONFIGURATION OF MULTICOLOUR SHEET FED AND WEB FED OFFSET PRINTING MACHINE. 2.1 Two colour sheet fed and web fed. 2.2 Four colour sheet fed and web fed. 2.3 Sheet fed perfector and web fed perfector. 2.4 Outline of other operational facility in sheet fed and web fed offset printing machine.
3.	CONSTRUCTION AND WORKING OF MULTICOLOUR SHEET FED AND WEB FED OFFSET PRINTING MACHINES, THEIR UNITS, PRESS ACCESSORIES AND AUXILIARY UNITS. 3.1 Introduction to various units of sheet fed and web fed offset printing machines. 3.2 Feeding and web tension. 3.3 Plate installation. 3.4 Inking and damping unit. 3.5 Printing unit and registration devices. 3.6 Web dryer and chill rolls. 3.7 Remoisturer unit. 3.8 Delivery unit. 3.9 Use of various accessories for multicolour printing i.e. Ink Agitator, Static Eliminator, Anti Set off Spray, Split Fountain, Water Stop, Punch Register, etc. For sheet fed and web fed offset printing machines. 3.10 Use of various auxiliary equipments i.e. Imprinter, perforators, Cutoff Control, Recirculation of fountain solution, Counter, etc.
4.	MAKEREADY AND PRINTING OF VARIOUS JOBS. 4.1 Setting of various units of sheet fed and web fed offset printing machines for printing of :- 4.2 Multicolour job. 4.3 Multicolour job with folding and perforating. 4.4 Multicolour job with perfecting. 4.5 Colour sequence. 4.6 Use of Progressive proof. 4.7 Inline finishing.

5.	INTRODUCTION TO SHEET FED METAL DECORATING PRESS AND INKS USED FOR THE PROCESS. 5.1 Introduction to metal decoration press and its uses. 5.2 Construction and working of metal decoration press. 5.3 Printing procedure on metal decorating press & pre and post printing operation. 5.4 Characteristics of ink required for metal decorating press.
6.	ADVANCE DEVELOPMENTS IN MULTICOLOUR SHEET FED AND WEB FED OFFSET PRINTING MACHINES. 6.1 List of various advancement in multicolour sheet fed and web fed offset machine, and introduction. 6.2 Use of C. P. C. 6.3 Use of C. T. P. 6.4 Limitation of each advancement.
7.	MONITORING SHEET FED OFFSET AND WEB FED OFFSET PRINTING MACHINES. 7.1 Necessity of monitoring sheet fed and web fed offset printing machine. 7.2 Factors influencing in monitoring. 7.3 Ideal layout and planning for small, medium and big size press organization
8.	VARIOUS SUBSTRATES / OBJECTS / PRINTING JOBS BASED ON OFFSET PRINTING TECHNIQUE (PAD PRINTING) 8.1 Introduction of Pad printing. 8.2 Introduction to types of image carrier for Pad printing. 8.3 Various printing machines used for Pad printing.
9.	DIGITAL OFFSET PRINTING 9.1 Introduction of Digital Offset printing techniques. 9.2 Advantages and Disadvantages of Digital offset printing. 9.3 Various printing machines used for Digital offset printing.

Reference Books:

Sr. No.	Name of Books	Author	Publication
1.	Machine Printing	W.R. Durraut C. W. Meacock R. F. Whitworth	Focal Press London/ New York
2.	Lithographer`s Manual	Charles Sharpwers	G.A.T.F.
3.	A hand book of Printing and Packaging	Bishwanath Chakrawarty	Galgotia & sons New Delhi
4.	Advance Press Manship	C. W. Latham	G. A. T. F.
5.	Web offset press tech.	David & Crouaw	G. A. T. F.

6.	A hand book of Web Printer	W. R. Darrant	Focal Press London
7.	Lithographers manual	R. F. Reed	G. A. T. F
8.	Web offset press troubles	--do--	--do--
9.	A manual of Lithographic Press Operating	A.S. Porter	Lithographic Technical Services U.K.
10.	What the Lithographers should know about ink	R. F. Reed	G A T F. Pittsburg