



GOVERNMENT OF TAMILNADU
DIRECTORATE OF TECHNICAL EDUCATION, CHENNAI
STATE PROJECT COORDINATION UNIT
(Established under Canada India Institutional Cooperation Project)

CURRICULUM

Course Name	Basics of Printing Technology
Course Code	PT/2020/003
Course Duration	40 Hours
Minimum Eligibility Criteria and Pre-requisites (if any)	8th Std & above
Course Objectives	Training module has been designed to provide the participants <ul style="list-style-type: none"> • Understanding of the basics printing Processes • Understanding of types of offset presses. • Understanding designing and editing of printing • Understanding of print finishing methods. • Knowing the structure and evolution of printing industry • Knowledge of complete printing from start to end • Learning the print finishing and converting techniques
Course Outcomes	At the end of training, the participants will be able to <ul style="list-style-type: none"> • Knowledge to choose different printing process • Carry the designing of all job by applying fundamentals. • Prepare for single color printing by offset. • Carry all kind of book finishing required. • Handle all printing and finishing tools. • Carry maintenance of offset printing machine
Expected Job Roles	Basic Printer

TEACHING AND SCHEME OF EXAMINATION						
Course Code	Course Name	Hours		Assessment Marks		Duration of Examination
				Min	Max	
PT/2020/003	Basics of Printing Technology	Theory	12	10	20	3 Hours
		Practical	28	40	80	
		Total	40	50	100	

PT/2020/003- Basics of Printing Technology
DETAILED SYLLABUS

Unit No	Modules	No.of.Hrs.	
		Th	Pr.
I	Printing Processes	9 Hours	
1.1	Evolution of Printing – Invention of Movable wooden and metal type printing	03	
1.2	Structure of Printing Industry – Pre-media, Prepress – Film reproduction, Image assembly, Plate making and Digital prepress, Press, and Post Press		
1.3	Basic Principles of Lithography, Offset Press, Flexography, Gravure, Screen Printing and Digital Printing.		
1.4	Design 2D/3D shapes: Table / chair / cupboard / speaker box / gift box using lines, shapes.		06
1.5	Feeder setting in single color sheet-fed offset printing machines.		
1.6	Binding a book by saddle stitching method		
II	Visual Design and DTP	10 Hours	
2.1	Design elements - line, shape, value, format, texture, type, color, and space-negative and positive.	03	
2.2	Design Principles, Balance - Symmetrical and asymmetrical, , Contrast, Unity, Emphasis rhythm, proportion and harmony.		
2.3	Measurements followed in typography – Point and Pica. Anatomy of types -- X height, Ascender and descender, base line and body width.		
2.4	Parts of type face - arm, stroke, bracket, bowl, terminal, serif, hairline, counter, stem and spine.		
2.5	Creating a logo for an organization using words, symbols, initials, combinations		07
2.6	Create duotone image and monochrome image from a color original		
2.7	Design a visiting card using design elements		
III	Offset Printing Technology	11 Hours	
3.1	Construction of offset machine – Feeding unit, Printing unit and Delivery unit	03	
3.2	Configuration/ Structure of Sheefed Presses: Single color, Multi color and convertible presses		
3.3	Printing Units in offset presses - Plate Cylinder, Blanket Cylinder, Impression Cylinder		
3.4	Delivery setting in single color sheet-fed offset printing machines		08
3.5	Setting sheet registering devices		
3.6	Make ready procedures for single color printing.		
IV	Print Finishing and Converting	10 Hours	
4.1	Brief Introduction to Print Finishing. Classification of Book Binding – Quarter bound book, Half bound book – old style and new style and Full bound book	03	
4.2	Binding and Finishing Tools - Folder, Needle, Tenon saw, Bodkin, Piercer/Awl, Eyelet punch, Brushes, Hammer, Scale, Carpenter's L – Square, Scissors, Binders knife, Spring divider, Finishing tolls - Type Holder, Fillet		
4.3	Cutting, Trimming, Folding – Types of Folding – Folding-to-paper, Folding-to-Print and Lump Folding Creasing, Gathering, Collating, Binder's/Collating mark, Inserting and Attaching of Plates and Maps		
4.7	Preparing a quarter bound cut flush book		07
4.8	Preparing a half bound old style book		
4.9	Preparation of full bound book		
Total Theory/Practical Hours		12	28
Total Hours		40	

ASSESSMENT AND CERTIFICATION

S.No	Criteria for Assessment
1.	A trainee will be assessed based on the performance in End Examination for Theory and Practical conducted internally in the Project Polytechnic College for a duration of 3 hours
2.	A trainee must have 75% of attendance to appear for End examination in Theory and Practical.
3.	The assessment for theory part will be based on the marks scored in the end examination on the knowledge bank of questions (1 word/objective type questions)
4.	The assessment for practical part will be based on the marks scored in the end examination conducted by the Project Polytechnic and assessed by the Examiners approved by Strategic Plan Implementation Committee (SPIC) of the project polytechnic.
5.	The criteria for successful completion of training is every trainee should score 50% of marks in theory and practical examination.
6.	On successful completion of training , Certificate will be issued to the participants by the Directorate of Technical Education through the Project Polytechnic.

END EXAMINATION

ALLOCATION OF MARKS

S.No	Description	Max.Marks
1.	Theory	20
2.	Practical Examination	
	a)Procedure – 10 Marks b)Exercise – 50 Marks c) Record – 20 Marks	80
Total Marks		100

THEORY MODEL QUESTION PAPER
PT/2020/003- BASICS OF PRINTING TECHNOLOGY

Maximum Marks: 20

(N.B.: Answer any Twenty questions)

20x1=20 marks

1. Who is the father of printing?
2. Who is the inventor of Lithography.
3. What is the use of anilox roller?
4. What is CTP?
5. What is saddle stitching?
6. What is the principle of offset printing?
7. Name any two design elements.
8. What are the types of balance?
9. What is x height?
10. What is spine in typography?
11. What is logo?
12. What is duotone?
13. Name the units present in an sheet fed offset printing machine.
14. What are the configurations of sheetfed offset press?
15. What is undercut?
16. What is bearer?
17. What are sheet registering devices?
18. What is make ready book?
19. What are the types of quarter bound book?
20. What are the types of half bound book?
21. Name any two binding tools.
22. Name any two finishing tools.
23. What is gathering?
24. What is collating?
25. What is inserting?