

**GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT**  
**COURSE CURRICULUM**

Course Title: Basic of Printing  
(Code: 3315801)

Diploma Programmes in which this course is offered	Semester in which offered
Printing Technology	<b>First Semester</b>

### 1. RATIONALE

This subject provides knowledge regarding various printing processes, their classification, physical & chemical properties of each process. Student will get knowledge of various printing processes. It also provides knowledge of pre-press, press & post-press sequences. It also provides knowledge of ink, paper & other printing substrates.

### 2. LIST OF COMPETENCIES

The course content should be taught and implemented with the aim to develop different types of skills leading to the achievement of the following competencies.

- i. Explain different printing processes with sequence of pre-press, press & post-press and use of printing Ink, paper and other printing substrates.

### 3. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				Total Marks
L	T	P		Theory Marks		Practical Marks		
L	T	P	C	ESE	PA	ESE	PA	100
4	0	0	4	70	30	0	0	

**Legends:** L-Lecture; T – Tutorial/Teacher Guided Theory Practice; P -Practical; C – Credit;  
ESE -End Semester Examination; PA - Progressive Assessment.

**4. DETAILED COURSE CONTENTS**

<b>Unit</b>	<b>Major Learning Outcomes</b>	<b>Topics and Sub-topics</b>
<b>Unit – I Classification of major printing processes.</b>	1.1 Identify the major printing processes. 1.2 Distinguish Physical and chemical properties of Printing processes. 1.3 Understand basics of printing process.	<ul style="list-style-type: none"> <li>• Introduction of Physical and chemical properties of Printing processes.</li> <li>• Identification of Image area &amp; non image area.</li> <li>• Introduction of Basics of process to print.</li> </ul>
<b>Unit– II Classification of other printing processes.</b>	2.1 Identify other printing processes. 1.2 Distinguish Physical and chemical properties of other Printing processes. 1.3 Understand basics of other printing process.	<ul style="list-style-type: none"> <li>• Introduction of Physical and chemical properties of Other Printing processes.</li> <li>• Identification of Image area &amp; non image area.</li> <li>• Introduction of Basics of other process to print.</li> </ul>
<b>Unit– III Study of printing processes.</b>	3.1 Understand importance and requirement of each printing process. 3.2 Appreciate advantages & disadvantages of each printing process. 3.3 Select appropriate printing process for a job.	<ul style="list-style-type: none"> <li>• Introduction of study of various printing process with the help of printed samples.</li> <li>• To know the importance of each printing process.</li> <li>• Knowledge of Direct &amp; Indirect printing processes.</li> <li>• Knowledge of Advantages &amp; disadvantages of each printing process.</li> </ul>
<b>Unit– IV Printing pre- press process.</b>	4.1 Understand Typography, Graphic Design, and pre-press processes. 4.2 Select proper photographs. 4.3 Differentiate between images and photographs.	<ul style="list-style-type: none"> <li>• Introduction of Typography.</li> <li>• Introduction of Graphic Design.</li> <li>• Introduction of process photography.</li> <li>• Introduction of Image Carriers.</li> </ul>
<b>Unit– V Printing post- press process.</b>	5.1 Understand the post - press processes. 5.2 Bind job as per requirement and finish it. 5.3 Pack print job suitably	<ul style="list-style-type: none"> <li>• Introduction of various Binding processes.</li> <li>• Introduction of various finishing processes.</li> <li>• Introduction of converting processes.</li> <li>• Introduction of Packaging.</li> </ul>
<b>Unit– VI Printing Ink Structure.</b>	6.1 Understand printing Ink. 6.2 Distinguish between different types of inks. 6.3 Choose appropriate ink for a given job based on physical & chemical characteristics.	<ul style="list-style-type: none"> <li>• Introduction of printing Ink drying system.</li> <li>• Introduction of ingredients of Ink.</li> <li>• Introduction of Physical &amp; chemical characteristics of ink for different printing process.</li> </ul>
<b>Unit – VII Paper &amp; other substrates for printing</b>	7.1 Understand paper & other substrates for printing. 7.2 Find right kind of paper and other substrates for printing.	<ul style="list-style-type: none"> <li>• Introduction of paper and board.</li> <li>• Introduction of standard paper sizes.</li> <li>• Introduction of other substrates for printing.</li> </ul>

**5. SUGGESTED SPECIFICATION TABLE WITH HOURS & MARKS (THEORY)**

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total
1.	Classification of major printing processes.	08	02	08	02	12
2.	Classification of other printing processes.	04	01	04	01	06
3.	Study of each printing process	04	01	01	04	06
4.	Out line of pre-press process	08	02	08	02	12
5.	Out line of post-press process	08	02	08	02	12
6.	Outline of Printing Ink Structure.	08	01	01	08	10
7.	Outline of paper & other substrates for printing.	08	01	01	10	12
<b>Total</b>		56	10	31	29	<b>70</b>

**Legends:**

R = Remembrance; U= Understanding; A= Application and above levels (Revised Bloom's axonomy)

**6.SUGGESTED LIST OF PRACTICAL/EXCERSICES**

There are no practical in this course

**7. SUGGESTED LIST OF PROPOSED STUDENT ACTIVITIES****8. SUGGESTED LEARNING RESOURCES****A. List of Books**

S.No.	Author	Title of Books	Publication
1	Helmut Kipphan Ed.	Handbook of Print Media	Sprigler-Verlag Berlin Heidelberg, Newyork, 2001
2			
3			

**B. List of Major Equipment/ Instrument**

Computer System with Internet, LCD Projector

**9. COURSE CURRICULUM DEVELOPMENT COMMITTEE****Faculty members from Polytechnic**

- **Prof. B. A. Patel**, HOD Printing Technology, R C technical Institute Ahmedabad
- **Shri B L Patel** Lecturer in Printing Technology, R C technical Institute Ahmedabad

**Coordinator and Faculty Members From NITTTR Bhopal**

- **Dr. Nishith Dubey**, Professor, Department of Vocational Education and Entrepreneurship, NITTTR, Bhopal.

