Ahmendagar Jilha Maratha Vidya Prasarak Samaj's

NEW ARTS, COMMERCE & SCIENCE COLLEGE

Lal Taki Road, Ahmednagar-414001

Syllabus

For

Bachelor of Vocation

in

Printing Technology

To be implemented from Academic Year 2020-2021 and onwards

TITLE OF THE PROGRAMME

BACHELOR OF VOCATION IN PRINTING TECHNOLOGY

(B. Voc. in Printing Technology)

Preamble:

Printing Technology has now been regarded as one of the important fields due to increasing importance of advertisement, packaging, digitalization, entertainment, information technology in the today's commercial world. Now-a-days there are ample number of opportunities of employment as well as self-employment, entrepreneurship to the new generation having a sound knowledge, technical skills and innovations in the field of printing technology. Wide range of employment opportunities are available in both government and private sector publications, commercial printing, screen printing, flexography, press consumables, digital printing, color management, solutions, print finishing, converting, ink and paper manufacturing, etc.

Aims & Objectives:

The proposed vocational Program in Printing Technology aims as following:

- Imparting a sound theoretical knowledge and trains the candidates in developing vocational skills like offset printing, gravure printing, flexography, letter press, screen printing, including the machine operations.
- The students will be equipped with the subject knowledge of printing material, pre-press technologies, digital printing, security printing, print finishing techniques, project work, business management, entrepreneurship development, cost estimation etc. The packaging technology has been included in the curriculum to impart basic knowledge of packaging so that students can develop a professional career in this emerging field.
- It involves developing the specialized, technical and managerial skills in performing pre-press work like typesetting, graphics designing and editing, making of image carrier, press work and printing, finishing the final output.
- We feel assured that the candidates having knowledge of printing technology through specially designed Diploma, Advanced Diploma and Bachelor Degree have a good potential of employment in different positions like shop floor production personnel, supervisor, production manager, works manager, maintenance personnel, and coordinator in publishing and advertising agencies, sales and marketing personnel etc.

Program Structure:

The B. Voc. program is of three year duration. It has a specific feature of multi point entry and multi point exit provision. Hence a student, who completes one year, shall be awarded Certificate in Diploma subject to the condition of earning the required credit points. Similarly, after completing the second year, Advance Diploma shall be awarded. On successful completion of third year, candidate shall be awarded the degree of Bachelor in Vocational (Printing Technology). If any student desire to take admission to other university at any other stage i.e., on

completing first year, he/she may be permitted to take admission to second year in same branch. Similarly, on completing the second year, one can be admitted to the third year of the program.

Program Outcome:

In first year students shall be equipped with the subject knowledge and required skills and training on pre-press technology, offset printing process, printing material science, packaging technology.

In second year students shall learn the subjects of digital pre-press technology, Gravure printing process, Packaging technology, software's in printing with the required practical's in these areas.

In third year, students shall learn the subjects of printing, finishing technology, flexographic printing process, digital and security printing, mechanical maintenance, cost estimation, entrepreneurship with the required practical knowledge in these areas. The practical exposure and training will be provided through a compulsory industrial training, project work, case studies etc.

STRUCTURE OF SYLLABUS

To be implemented from the academic year 2020-21

❖ Title of the Program: **BACHELOR OF VOCATION (PRINTING TECHNOLOGY)**

1. **Skills to be acquired after completion of First Year :**
   After successful completion of the first year, the student shall be equipped with the following skills.
   1) Preparation of a layout of a job.
   2) Knowledge about software : MS Word, MS Excel, MS PowerPoint, PageMaker and Typing English & Marathi (Shree-Lipi)
   3) Preparation of screen for screen printing
   4) Preparation of Pre-sensitized plates for offset lithography process
   5) Printing of different Screen Printing Jobs
   6) Skills of different offset printing jobs.

   After successful completion of first year of the program, the candidates can be placed in related fields or can start their own enterprises in the following areas
   1. Designing
   2. Screen Printing
   3. Pre-Press
   4. Offset Plate making
   5. Offset Printing

2. **Skills to be acquired after completion of Second Year :**
   After successful completion of the second year, the student shall be equipped with the following skills.
   1) Working with Scanner
   2) Working with Laser Printer and Inkjet Printer
   3) Knowledge about Software : Corel Draw, Photoshop, In Design, Illustrator
   4) Prepare a design for a given job like visiting card, wedding card, pamphlets and brochures.
   5) Knowledge about Newspaper Printing

   On successful completion of second year the candidates can get employment or entrepreneurship in their own business units in the following fields.
   1. Designing
   2. Web Offset Printing (Newspaper)
   3. Gravure Printing
   4. Paper and Ink Manufacturing

3. Skills to be acquired after completion of Third Year :

After successful completion of the third year, the student shall be equipped with following skills.

1) Preparing a layout of a Company
2) Preparing a design for a given job like Magazine, brochures, etc.
3) Preparing Design and Development of Pack for New Products
4) Preparing Flexo Plate for Flexography Printing
5) Managing of the Press Department
6) Printing of different digital jobs.

On successful completion of the course the candidates can get employment or can become entrepreneur of his own business units in the following areas.

1. Designing
2. Offset Printing
3. Digital and Security Printing
4. Packaging
5. Planning Department
6. Printing Machine Maintenance
7. Ink Technician
8. Advertising & Marketing
9. Flexography Printing

4. Duration:

The duration of the B.Voc. Course shall be of **Three Year.**

B.Voc. Part I - Diploma in Printing Technology
B.Voc. Part II - Advanced Diploma in Printing Technology
B.Voc. Part III - Bachelor of Vocation in Printing Technology

The final B. Voc. degree shall be awarded only after completion of three years course.
The suggested credits for each of the three years are as follows:

	Awards	Duration	Knowledge Components Credits	Skill Component Credits
Year 1	**Diploma in Printing Technology**	Two Semester	24	36
Year 2	**Advanced Diploma in Printing Technology**	Four Semester	24	36
Year 3	**B. Voc. in Printing Technology**	Six Semester	24	36
		Total	**72**	**108**

Credits are defined as the workload of the following activities
1. Lectures
2. Practical & Viva
3. Seminars
4. Library and Home Assignment
5. Examinations
6. Other related activities
7. Field Work
8. Project / Internship
9. Industrial Visits/ training

The following formula shall be used to decide credit hours.

➢ One Credit would mean equivalent to 15 lectures of 60 minutes each, for theory, workshops /labs and tutorials.
➢ For internship/field work, the credit weightage shall be equivalent to 50% of the credits to lectures/workshops.
➢ For self-learning, based on e-content or otherwise, the credit weight age shall not be more than 50% of lectures/workshops.

5. Eligibility:

1. The eligibility condition for admission to B. Voc. Program shall be **10+2** or **MCVC** (any subject) or equivalent in any stream from **any recognized board or university**
2. **10+2 ITI course in any branch** or **10+ 2 duration diploma** in any discpline of agricultural/ non-agricultural/ technical or any governmental/ autonomous educational university/ Board.
3. Students who have completed **3 Years of Diploma in Printing Technology** from a recognized board or university are eligible for admission to **Direct 2nd Year in B. Voc. Printing Technology.**
4. Any students who have completed SSC or equivalent examinations and having minimum five years' experience in public or private printing press is eligible to take admission for B. Voc. Printing Technology. However, for this criteria college will conduct written qualifying test of basic skill prerequisites and accordingly candidate is admitted for first year B. Voc. Printing Technology.
5. Admissions are given as per the merit acquired in qualifying examination.

Pattern: Semester Pattern.

6. Examination:
Scheme of examination:

➢ The semester examination will be conducted at the end of each term (both theory and practical examination). Theory and Practical examinations shall be conducted according to guidelines of UGC and affiliated university.

Structure of Three years Bachelor of vocation in Printing Technology

The Following are the details of semester wise total weightage of 750 marks (300 (T) + 450 (P)). The details of which are-

1st Year: (Semester – I)

Subject Code	Title of Theory Paper (For Semester I)	Marks
PTT101	Elements of Printing Technology	100
PTT102	Fundamentals of ICT	100
PTT103	Desktop Publishing (DTP, Adobe Photoshop)	100
	TOTAL	300

Subject Code	Practical LAB (For Semester I)	Marks
PTP104	LAB I – Screen Printing Techniques	125
PTP105	LAB II- Fundamentals of ICT	100
PTP106	LAB III – Desktop Publishing	125
PTP107	LAB IV -Communication Skills	50
PTP108	Field Work	50
	TOTAL	450

1st Year: (Semester – II)

Subject Code	Title of Theory Paper (For Semester II)	Marks
PTT201	Advanced Printing Technologies	100
PTT202	Web Designing	100
PTT203	Graphic Design & Advertisement	100
	TOTAL	300

Subject Code	Practical LAB (For Semester II)	Marks
PTP204	LAB I – Offset Machines	125
PTP205	LAB II- Web Designing	125
PTP206	LAB III- Graphic Design & Advertisement (Corel Draw)	100
PTP207	LAB IV- Personality Development	50
PTP208	Field Work	50
	TOTAL	450

2nd Year: (Semester – III)

Paper Number	Title of Theory Paper (For Semester III)	Marks
PTT301	Image Carrier Generation	100
PTT302	Offset Printing Process	100
PTT303	Ink Technology	100
	TOTAL	300

Paper Number	Practical LAB (For Semester III)	Marks
PTP304	LAB I - Image Carrier Generation	100
PTP305	LAB II- Sheet-fed Offset Printing	125
PTP306	LAB III- Ink Technology & Troubleshooting	125
PTP307	LAB IV- Cost Estimation	50
PTP308	Field Work	50
	TOTAL	450

2nd Year: (Semester – IV)

Paper Number	Title of Theory Paper (For Semester IV)	Marks
PTT401	Finishing Techniques	100
PTT402	Basic Packaging Technology	100
PTT403	Gravure, Flexography & Digital Printing	100
	TOTAL	300

Paper Number	Practical LAB (For Semester IV)	Marks
PTP404	LAB I – Finishing Techniques	125
PTP405	LAB II – Digital Printing (Adobe Illustrator)	125
PTP406	LAB III – Advanced Screen Printing	100
PTP407	LAB IV- Environmental Science	50
PTP408	Field Work	50
	TOTAL	450

3rd Year: (Semester – V)

Paper Number	Title of Theory Paper (For Semester V)	Marks
PTT501	Package Design and Development	100
PTT502	Security Printing, Copyrights and Ethics	100
PTT503	Modern Trends In Printing	50
PTT504	Material Science	50
	TOTAL	300

Paper Number	Practical LAB (For Semester V)	Marks
PTP505	LAB I – Package Design and Development	125
PTP506	LAB II – Paper and ink Testing	125
PTP507	LAB III- Troubleshooting & Machine Maintenance	100
PTP508	LAB IV- Project Stage -I	50
PTP509	Field Work	50
	TOTAL	450

3rd Year: (Semester – VI)

Paper Number	Title of Paper (For Semester VI)	Marks
PTT 601	Internship/ Industrial Training	450
PTT 602	Project Work	300
	TOTAL	750

8. Nature of question paper:

General nature of the question paper will be:

Question Number	Type	Marks	Attempt
Q.1	Short answer+ MCQ	10(5 +5)	Compulsory
Q.2	Long answer	12 (4*3)	Any Four Out of Five
Q.3	Long answer	12 (3*4)	Any Three Out of Four
Q.4	Long answer	06 (1*6)	Any One Out of Two
Q.5	Long answer	10 (2*5)	Any Two Out of Three

9. Standard of Passing:

➢ The student has to obtain minimum 40% marks in the combined examination of In-semester assessment and Semester-End assessment with a minimum passing of 30 % in both these separately.

➢ To pass, a student shall have to obtain minimum aggregate 40 % marks in each course.

➢ 10 point Grade Credit System

No. of Credits	Internal Marks Total	External Marks Total	Total Marks	Internal Passing Marks (30%)	External Passing Marks (30%)	Total Passing Marks (40%)
1	10	15	25	03	05	10
2	25	25	50	08	08	20
3	35	40	75	11	12	30
4	50	50	100	15	15	40
5	50	75	125	15	23	50
6	75	75	150	23	23	60

External Students: Not applicable for this course**.**

10. **University Term:** As per academic calendar of the university.

➢ Diploma, Advance Diploma will be provided by college & Final Degree Certificate shall be provided by University.

➢ Format of certificate shall be similar to the format of passing certificate.

➢ A student should be provided diploma, if and only if a student desires to exits and he has passed the theory and practical examination as well.

➢ First year mark sheet shall be provided by the colleges / department.

➢ First year mark sheet should be signed by Head of Department and Controller of Examination at the University Department and by the principal of college and college examination officer in the affiliated colleges.

➢ Second year and third year mark sheet should be signed by the COE of Savitribai Phule Pune University.

11. **Workload:**
Working hours will be 5 hours (300 minutes) per day.

12. **Course structure:**
The diploma, advanced diploma and degree has two semesters; each one is of 750 marks. There will be theory papers for each semester having 300 marks and practicals of 450 marks. Teaching scheme for each paper should be 60 hours per semester. The practical examination should be 90 hours per semester.

General Structure
B.Voc. Part - I (Diploma in Printing Technology)

Semester I					Semester II				
Theory					**Theory**				
Paper No.	Subject/papers	Cre-dits	In semester Assessme-nt	Evaluation End semester exam	Paper No.	Subject/papers	Cre-dits	In semester Assessme-nt	Evaluation End semester exam
PTT 101	Elements of Printing Technology	4	50	50	PTT 201	Advanced Printing Techniques	4	50	50
PTT 102	Fundamentals of ICT	4	50	50	PTT 202	Web Designing	4	50	50
PTT 103	Desktop Publishing (DTP, Adobe Photoshop)	4	50	50	PTT 203	Graphic Design & Advertisement	4	50	50
	Total	12	150	150		Total	12	150	150
Total				**300**	**Total**				**300**
Practical					**Practical**				
Practical No.	Laboratory	Cre-dits	In semester Assessment	Evaluation Term work and Practical Exam	Practi-cal No.	Laboratory	Cre-dits	In semester Assessme-nt	Evaluation Term work & Practical Exam
PTP 104	LAB I – Screen Printing Techniques	4	50	50	PTP 204	LAB I – Offset Machines	5	50	75
PTP 105	LAB II- Fundamentals of ICT	5	50	75	PTP 205	LAB II- Web Designing	5	50	75
PTP 106	LAB III – Desktop Publishing	5	50	75	PTP 206	LAB III-Graphic Design & Advertisement (Corel Draw)	4	50	50
PTP 107	LAB IV - Communication Skills	2	25	25	PTP 207	LAB IV- Personality Development	2	25	25
PTP 108	Field Work	2	50	-	PTP 208	Field Work	2	50	-
	Total	18	225	225		Total	18	225	225
Total				**450**	**Total**				**450**

B.Voc. Part - II (Advanced Diploma in Printing Technology) General Structure

Semester III

Theory

Paper No.	Subject/papers	Cre-dits	In semester Assessme-nt	Evaluation End semester exam
PTT 301	Image Carrier Generation	2	50	50
PTT 302	Web Offset Printing Process	4	50	50
PTT 303	Ink Technology	4	50	50
	Total	12	150	150
Total				**300**

Practical

Practi-cal No.	Laboratory	Cre-dits	In semester Assessme-nt	Evaluation Term work and Practical Exam
PTP 304	LAB I - Image Carrier Generation	4	50	50
PTP 305	LAB II- Sheet-Fed offset printing process	5	50	75
PTP 306	LAB III – Ink mixing & Shade Matching	5	50	75
PTP 307	LAB IV- Cost Estimation	2	25	25
PTP 308	Field Work	2	50	-
	Total	18	225	225
Total				**450**

Semester IV

Theory

Paper No.	Subject/papers	Cre-dits	In semester Assessme-nt	Evaluation End semester exam
PTT 401	Finishing Techniques	4	50	50
PTT 402	Basic Packaging Technology	4	50	50
PTT 403	Gravure, Flexography & Digital Printing	4	50	50
	Total	12	150	150
Total				**300**

Practical

Practi-cal No.	Laboratory	Cre-dits	In semester Assessme-nt	Evaluation Term work and Practical Exam
PTP 404	LAB I – Finishing Techniques	5	50	75
PTP 405	LAB II – Digital Printing (Adobe Illustrator)	5	50	75
PTP 406	LAB III – Advanced Screen Printing	4	50	50
PTP 407	LAB IV- Environmental Science	2	25	25
PTP 408	Field Work	2	50	-
	Total	18	225	225
Total				**450**

15

B.Voc. Part - III (Bachelor of Vocation in Printing Technology) General Structure

Semester V

Theory

Paper No.	Subject/papers	Cre-dits	In semester Assessme-nt	Evaluation End semester exam
PTT 501	Package Design and Development	4	50	50
PTT 502	Security Printing, Copyrights and Ethics	4	50	50
PTT 503	Modern Trends In Printing	2	25	25
PTT 504	Material Science	2	25	25
	Total	12	150	150
Total				**300**

Practical

Practi-cal No.	Laboratory	Cre-dits	In semester Assessme-nt	Evaluation Term work and Practical Exam
PTP 505	LAB I – Package Design and Development	5	50	75
PTP 506	LAB II – Paper and ink Testing	5	50	75
PTP 507	LAB III- Troubleshooting & Machine Maintenance	4	50	50
PTP 508	LAB IV- Project Stage I	2	25	25
PTP 509	Field Work	2	50	-
	Total	18	225	225
Total				**450**

Semester VI

Theory/Practical

Paper No.	Subject/papers	Cre-dits	In semester Assessme-nt	Evaluation End semester exam
PTT 601	Internship/ Industrial Training	18	225	225
PTT 602	Project Work	12	150	150
	Total	30	375	375
Total				**750**

Detailed syllabus of F.Y. B.Voc.

Course Title:
Elements of Printing Technology

Semester: I	Course Code: PTT101	Total Marks: 100
Teaching Scheme: Theory: 04 Hrs/Week	Total Credits 04	Examination Scheme: Continuous Evaluation: 50 Marks End-Semester : 50 Marks

NOTE:
- Two tests each of 25 marks to be conducted as per the schedule.
- Total work hours per semester: 4 Hrs. x 15 weeks = 60 Hrs

Course Contents

Unit 1	Introduction of basic elements	12 Hrs.

Printing History, Need of Printing, Types of printing process, Scope of printing technology etc. ink history, types of inks , importance of ink in printing industry etc. paper history, its types importance.

Unit 2	Printing Principals	10 Hrs.

Study of working principle,(relief, planography, and intaglio), offset, gravure, flexography, screen printing, digital and letterpress printing etc. Construction Image carriers, advantages and disadvantages and Limitations.

Unit 3	Offset & Screen Printing	14 Hrs.

Offset: Introduction, Sheet fed machine units- feeding, inking, damping, printing and delivery unit. Definition of Web machine, Difference between sheet-fed and web-fed. Configuration-Blanket to Blanket, Common Impression Cylinder, Stack, Inline Applications and Limitations of offset process.

Screen Printing: Introduction, cloth, clamp, screen stretching, squeegee, off contact. Stencil- Direct, indirect Screen printing- Manual operation. Applications and limitations.

Unit 4	Paper & Printing substrate	12 Hrs.

Page layout and margin, print area and type-setting, different publications. Paper; its different types and sizes available, gsm, suitability factors for printing process, ISO paper sizes. Imposition; definition , classification and general rules, regular schemes up to 16 page

Unit 5	Basic of Ink technology	12 Hrs.
Introduction, definition, types of ink, contains of ink, basic color theory, types of ink,(solvent base, water base), different types of ink, characteristic properties.		

Reference and Text Books:

Sr. No	Title	Author	Publisher
1	Printing Technology	Adams, Faux and Rieber	Delmar publishers
2	Art and Production	N. N. Sarkar	Sagar publishers
3	Screen Printing B. D. Mendiratta	B. D. Mendiratta	

Course Title:

Fundamental of ICT
(Information and Communication Technology)

Semester: I	Course Code: PTT102	Total Marks: 100
Teaching Scheme: Theory: 04 Hrs./Week	Total Credits 04	Examination Scheme: Continuous Evaluation: 50 Marks End-Semester : 50 Marks

Course Contents

Unit 1	Computer Basics	12 Hrs.

Computer: Definition, Characteristics of Computers, Basic Applications of Computer, Generations of computers.

Components of Computer System: Central Processing Unit (CPU), input/output Devices, computer Memory: primary and secondary memory, magnetic and optical storage devices, Concepts of Hardware and Software.

Data processing: concepts of data processing, Definition of Information and data, Basic data types, Storage of data/Information as files, Representation of data/Information.

Number Systems, Decimal, Binary, Octal, Hexadecimal, Arithmetic's and inter conversions

Unit 2	Peripherals of Computer	10 Hrs.

Primary storage devices – RAM, ROM, PROM, EPROM Secondary Storage Devices – HDD, CD, DVD, Pen drive I/O Devices- Keyboards, Scanners, Digitizers, Plotters, LCD, Plasma Display, Pointing Devices –Mouse, Joystick, Touch Screens Introduction to Network devices – Hubs, Switches, Routers, NAS, MODEM, Access

Unit 3	Operating System and Application Software	14 Hrs.

Definition of Software, Types of software: System Software, Application Software. System Software: Operating System. Types of O.S., Basic Commands in DOS, Introduction to GUI: Desktop Icons, File and Directory structure, Menu Items, Control Panel, File and Directory Search Utility programs: Anti-plagiarism software, Anti-virus, Disk Cleaning, Defragmentation, Compression/Decompression of files. Application software: Examples of commercial software with brief introduction Unit IV Editors, Word Processors,

Spreadsheets & Presentation Tools		
Unit 4	**Editors, Word Processors, Spreadsheets & Presentation Tools**	**12 Hrs.**

Editors and Word Processors: Features and functionalities, examples of basic and advanced editors like notepad, vi and Emacs, Introduction to desktop publishing – Features and functionalities Spreadsheets: Features and functionalities, Spreadsheet Applications Introduction to Google Apps: Google Docs, Sheets and Forms and its applications Presentation Tools: Design Slides (using Text, images, charts, clipart), Slide Animation, Template and theme creation

Unit 5	**Computer communication and Networking**	**12 Hrs.**

Basic of Computer networks: LAN, WAN, MAN. Introduction to Network devices – Hubs, Switches, Routers, NAS, MODEM, Access points.

Internet: Introduction to internet and its application/services.

Service on Internet: WWW and web-sites, Electronic mails, Communication on Internet.

Web Browsers: Internet Explorer, Netscape Communicator.
Surfing the Internet: Giving the URL address, Search, Moving Around in a web-site, Printing or saving portion of web pages, down loading Chatting on Internet

Reference and Text Books:

Sr. No	Title	Author	Publisher
1	Computer Fundamentals	P.K. Sinha & Priti Sinha,	3rd edition, BPB pub
2	Computer Fundamentals	Anita Goel	Pearson Education India
3	PC/HARDWARE	Join Josh	O'Reilly Publication

Course Title:
DTP
(Desktop Publishing)

Semester: I	Course Code: PTT103	Total Marks: 100
Teaching Scheme: Theory: 04 Hrs/Week	Total Credits 04	Examination Scheme: Continuous Evaluation: 50 Marks End-Semester : 50 Marks

Course Contents

Unit 1	Basics of Desktop Publishing (DTP)	12 rs.

DTP: Definition, Concept of DTP, Purpose, Features, Application areas, Softwares used for DTP, Steps in using DTP

Unit 2	Basics of Adobe Photoshop	10 Hrs.

Software introduction, concept of Raster/ Vector Graphics, Pixel, resolution, file formats compatible with photoshop (PNG, JPEG, GIF, PDF)
Toolbar & tool presets (all Tools), Menubar, Selections, making selections with different tools, working with selections, modify selections, save selections
Transform, Scale, Content Aware, resize, rotate, etc.

Unit 3	Image and Color Adjustments	14 Hrs.

Image size & resolution, Create, open & import images, Color & Image mode, Color models, Color swatches, Blending modes, Color cast, Image information
Layers, layer masks, fill layers, smart filter, smart objects
Brightness/ Contrast, Hue, Saturation, Shadow/ Highlight, tonal adjustments, special color effects, Level/ curves adjustments, Histogram
Filters, Correct image distortion, Image retouching, Noise,
Text, text tool, text to path
Shapes, Gradient, drawing with pen, pattern fill & stroke, texture, pattern

Unit 4	Color Managements	12 Hrs.

Understanding color management, color setting, Color profiles, Pantone, Spot color, Duotone,
PDF presets for printing, Color managing while viewing, color managing when printing

Unit 5	Quark Express	12 Hrs.
Introduction, QuarkXPress tools, Documents and Projects, Single and multiple layouts ,Creating text and picture boxes Importing text and picture Setting up pages in Quark, Setting the page size and margins, Columns and gutters, Positioning the document origin, Quark's measurement systems, Using multiple undo The document layout palette, Creating and deleting pages, The Measurements palette Text and graphics features, Framing text and picture boxes, Rotating graphics, Cropping images, Wrapping text around items		

Course Title:
LAB- I Screen Printing Technology

Semester: I	Course Code: PTP104	Total Marks: 100
Teaching Scheme: Theory: 06 Hrs.'/Week	**Total Credits 04**	**Examination Scheme:** Continuous Evaluation: 50 Marks End-Semester : 50 Marks

Course Contents

Exercise
1. Study of screen printing equipment and materials.
2. Screen Frame Making
3. Determining optimum exposure for various stencil methods.
4. Screen preparation and printing by direct method.
5. Screen preparation and printing by indirect method.
6. Manual Registration Method
7. To print single color image by screen printing on paper
8. To print two color image by screen printing on paper
9. Product printing: Visiting card, Letterhead, Office File, Pen, Envelope Textile - T-Shirt, Nonwoven.
10.   Factors related to Screen Printing Problems and solutions

Course Title:
LAB- II Fundamental of ICT
(Information and Communication Technology)

Semester: I	Course Code: PTP105	Total Marks: 125
Teaching Scheme: Theory: 06 Hrs./Week	Total Credits 05	Examination Scheme: Continuous Evaluation: 50 Marks End-Semester : 75 Marks

Course Contents

Practical Exercise

1. Create a new folder and do the following:
    1. Make a word document in it.
    2. Make an Excel document in it.
    3. Make a new folder in it
    4. Rename the initial folder
    5. Move the initial folder
    6. Copy the initial folder.
    7. Delete the initial folder

2. Implement the various well known features of Windows operating system such as Notepad, WordPad, Paint, System tools, Entertainment etc. enclosed in Start→Programs→Accessories.

3. Implement various display properties by right clicking on the Windows Desktop.

4. Explore the taskbar of Windows, Set the wall paper and screen saver, Set the data/time.

MS Word

5. Create a document and
    a. Put Bullets and Numbers
    b. Apply various Font parameters.
    c. Apply Left, Right, and Centre alignments.

    d. Apply hyperlinks

    e. Insert pictures

    f. Insert ClipArt

    g. Show the use of WordArt

    h. Add Borders and Shading

    i. Show the use of Find and Replace.

    j. Apply header/footers

6. Create any document and show the difference between paste and paste special.

7. Create a document to show the use of Watermark.

8. Implement the concept of mail merge.

9. Implement the concept of macros.

10. Implement the concept of merging the documents.

11. Crate a student table and do the following:

    a) Insert new row and fill data

    b) Delete any existing row

    c) Resize rows and columns

    d) Apply border and shading

    e) Apply merging/splitting of cells

12. Create your resume using General Templates.

MS PowerPoint Presentation

13. Make a presentation of College Education System using

    1. Blank Presentation

    2. From Design Template

    3. From Auto Content Wizard

14. Make a presentation on "Wild Life" and apply the following:

    1. Add audio and video effects

    2. Apply various Color Schemes

    3. Apply various animation schemes.

    4. Apply Slide Show

MS Excel Spreadsheets

15.   Compute the division of each and every student of a class.

16.   Generation of Electricity Bill

17.   Generation of Telephone Bill

18.   Generation of Salary statement of an employee

19.   Generation of Mark Sheet of a student.

20. To compute mean/median/mode.

Course Title:
LAB- III DTP
(Desktop Publishing)

Semester: I	Course Code: PTP106	Total Marks: 125
Teaching Scheme: Theory: 06 Hrs.'/Week	Total Credits 05	Examination Scheme: Continuous Evaluation: 50 Marks End-Semester : 75 Marks

Course Contents

Exercise
1. Software Introduction, workspace tour, Toolbar, Menu-bar
2. Basics of image and color, Resizing of image, crop, import, color palettes, color models, color and image mode.
3. Working with layers, create, manage, group, lock layers, layer opacity, blending, layer masks, smart filters, smart objects, vector mask
4. Working with selections, make selections with different tools, pixel selections.
5. Background changing, change background with solid color, image adjustments, tonal adjustments.
6. Image transformation, Selective color change, scaling, transform, content-aware, wrap, rotate, Free transform, crop
7. Image adjustments, Perspective wrap, image sharpness & blur, color adjustments, brightness/ contrast, level, hue, saturation, black and white to color and color to black and white
8. Filters, Blur, Clipping mask
9. Image repair, content aware, Move, Image retouch, correct image distortion & Noise.
10.   Drawing shapes, Gradient, Brush presets.
11.   Text

12.	Face/ Image retouch
13.	Banner, Poster, Hoarding design,
14.	Product design
15.	Certificate design
16.	Passport size photograph design
17.	Theme/ Background Design
18.	Design an Advertisement
19.	Invitation cards, Cards, etc
20.	Logo Design

Course Title:
LAB IV -Communication Skills

Semester: I	Course Code: PTP107	Total Marks: 50
Teaching Scheme: Theory: 02 Hrs.'/Week	Total Credits 02	Examination Scheme: Continuous Evaluation: 25 Marks End-Semester : 25 Marks

Course Contents

Exercise

1. Communication:
Meaning of communication: definition, objectives and Importance of communication Elements/Process of communication Types of communication: Formal, Informal, Verbal, Nonverbal, vertical, Horizontal, Diagonal Barriers of Communication: Physical, Mechanical, Psychological, Language Principles of effective communication

2. Formal Written Communication
Develop notices, circulars and emails: I. Office Drafting: Notice, Memo, Circulars and e-mails II. Job application and resume Draft letters on given topics Business correspondence: Enquiry, Reply to an enquiry order, complaint, adjustment Analytical writing: Language of specification writing, Technical writing, Report generation including graphs, pie charts, bar charts, comparatives, etc.

3. Speaking Skills Develop formal conversational techniques:
Conversations : Meeting & Parting, Introducing and influencing requests, Agreeing & disagreeing, Formal enquiries, Types of speech- Welcome Speech, Farewell speech, Vote of thanks

4. Telephone Skills Basics of Telephone communication
How to handle calls- telephone manners Leaving a message Greeting and Leave Taking over phone(etiquette)

5. Verbal/ Non Verbal Communication
Group Discussion, Oral Presentation with/without audio visual aids, Listening to any recorded or live material and asking oral questions for listening comprehension, Making conversation and taking turns , Oral description or explanation of a common object, situation or concept, Giving interviews

Course Title:
Field Work

Semester: I	Course Code: PTP108	Total Marks: 50
Teaching Scheme: Theory: 50 hours	Total Credits 02	Examination Scheme: Continuous Evaluation: 50 Marks

- ➢ Students should visit and work full 10 days, 5 hours each day on field suggested or appointed by college authority.
- ➢ Students should complete given task by company/ printing press/establishment.
- ➢ At last students have to produce field work report including attendance report signed by concerned authority.
- ➢ Students must complete 50 hours at the appointed organization.

Course Title:
Advanced Printing Technology

Semester: II	Course Code: PTT201	Total Marks: 100
Teaching Scheme: Theory: 04 Hrs/Week	**Total Credits 04**	**Examination Scheme:** Continuous Evaluation: 50 Marks End-Semester : 50 Marks

NOTE:
- Two tests each of 25 marks to be conducted as per the schedule.
- Total work hours per semester: 4 Hrs. x 15 weeks = 60 Hrs

Course Contents

Unit 1	**Conventional and Digital Printing**	12 Hrs.

Conventional : Definition, Impact- non impact printing process, Examples, contact printing and non-contact printing, advantages & disadvantages, limitations

Digital Printing: Introduction, definitions, Types (Electrophotography, Magnetography, Inography, Xerography), types of printers, , advantages & disadvantages, limitations

Unit 2	**Rotogravure**	10 Hrs.

Principles, quality factor of printing cylinder, ink transfer, features of rotogravure, factors affecting in ink transfer, concept of ESA, requirements of paper properties, heat-set web offset vs rotogravure

Unit 3	**3D Printing and Holographic Printing**	14 Hrs.

Concept of hologram, reconstruction of hologram, types of hologram, considerations of hologram, applications of holographic printing, Concept of 3D printing, types of 3D printing, components of 3D printing, Applications of 3D Printing and Future

Unit 4	**Paper Technology**	12 Hrs.

Basics of paper technology, pulping process, types of pulp, fourdriner machines, paper manufacturing process, paper finishing operations, paper properties and testing properties, application areas for different types of paper.

Unit 5	Applications of Print Industry	12 Hrs.
Print publications, advertising, branding, food & beverage packaging, Label printing, sticker printing, pharmaceutical packaging, future of printing industry		

Reference and Text Books:

Sr. No	Title	Author	Publisher
1	Rotogravure printing	BDJA60A1300	UPM
2	3D printing	Richard Home	Kalyanikirkhausam

Course Title:
Web Designing

Semester: II	Course Code: PTT202	Total Marks: 100
Teaching Scheme: Theory: 04 Hrs./Week	Total Credits 04	Examination Scheme: Continuous Evaluation: 50 Marks End-Semester : 50 Marks

Course Contents

Unit 1	Web Fundamentals	10 Hrs.

Introduction to WWW: Protocols and programs, secure connections, application and development tools, the web browser, What is server, Client Server Architecture, dynamic and Static Web Design: Web site design principles, planning the site and navigation.

Unit 2	HTML	12 Hrs.

Introduction to HTML, What is HTML, HTML Documents, Basic structure of an HTML document, Creating an HTML document, Mark up Tags Heading-Paragraphs, Line Breaks, HTML Tags.

Elements of HTML,, Introduction to elements of HTML, Working with Text, Working with Lists, Tables and Frames, Working with Hyperlinks, Images and Multimedia, Working with Forms and controls.

Unit 3	CSS	12 Hrs.

Style sheets : Need for CSS, introduction to CSS, basic syntax and structure, using CSS, background images, colors and properties, manipulating texts, using fonts, borders and boxes, margins, padding lists, positioning using CSS, CSS2

Unit 4	Javascript	10 Hrs.

Javascript : Client side scripting, What is Javascript, How to develop Javascript, simple Javascript, variables, Operators, functions, conditions, loops and repetition

Unit 5	XML and Advanced tools	10 Hrs.

XML : Introduction to XML, uses of XML, simple XML, XML key components, DTD and Schemas, Well formed, using XML with application, Advances in Web Design, Hosting Website, Introduction to Web Design Tools,

Introduction to Google Site

Reference or study material:

Sr. No	Title	Author	Publisher
1	HTML & CSS: design and build websites (Vol. 15)	Duckett, J	(2011). Indianapolis, IN: Wiley
2	Learning web design: A beginner's guide to HTML, CSS, JavaScript, and web graphics.	. Robbins, J. N.	2 (2012). " O'Reilly Media, Inc.".
3	https://www.w3schools.com		

Course Title:
Graphic Design and Advertisement

Semester: II	Course Code: PTT03	Total Marks: 100
Teaching Scheme: Theory: 04 Hrs/Week	**Total Credits 04**	**Examination Scheme:** Continuous Evaluation: 50 Marks End-Semester : 50 Marks

NOTE:
- Two tests each of 25 marks to be conducted as per the schedule.
- Total work hours per semester: 4 Hrs. x 15 weeks = 60 Hrs

Course Contents

Unit 1	**Basics of Graphic Design**	12 Hrs.

Software's used in graphic design, Introduction to Corel Draw, concept of Vector Graphics, resolution, file formats compatible with Corel Draw (TIFF, CDR, AI, PDF)

Corel Draw workspace tour, standard tool bar, toolbox, property bar, Docker, status bar

Working with lines, Shapes and outlines

Unit 2	**Working with Objects**	8 Hrs.

Working with Objects, select, transform, clone, copy, position, align and distribute objects, scale, rotate, group, combine and lock objects

layers, local & master layers, symbols, QR Code and BARCODE

Text and fonts, Templates and styles

Unit 3	**Color Management**	12 Hrs.

Color fill, transparencies, color model, color depth, document and color palette, uniform fill, pattern fill, texture, pattern, object transparencies

Color management, color profiles, Color management presets, color styles

Unit 4	**Image Handling & Printing with Corel draw**	12 Hrs.

Page Layout, working with tables, working with bitmaps, bitmaps color modes, Special Effect categories, 3D effects, Filters, special effects

Basics of Printing and web graphics, file formats used for web graphics

Unit 5	Advertisement and Multimedia	12 Hrs.
Introduction – Advertising as a tool of communication Role of Advertising in marketing mix. Types of Advertising – Product advertising, Service advertising, Institutional Advertising, Public Relations advertising, Public Service Advertising, Financial Advertising Research – Types / Scope of research, Market Research – Market surveys – Audience surveys Market segmentation Targeting, Advertising Research, Advertising evaluation, ADGMAR approach, Types of Advertising evaluation Brand and Brand equity – personality, positioning Multimedia, File formats, Non-linear programs, Collaboration of different media such as video skills, audio & animation, Authoring, Animated advertising Case study		

Reference and Text Books:

Sr. No	Title	Author	Publisher
1	Foundations, Foundations of advertising theory & practice	Chunawalla, Sethia	Himalaya Publishing
2	Advertising Management	Batra, Myers, Aaker,	Prentice Hall
3	Handbook of Multimedia		

Course Title:
LAB - Offset Machines

Semester: II	Course Code: PTP204	Total Marks: 100
Teaching Scheme: Theory: 04 Hrs/Week	Total Credits 04	Examination Scheme: Continuous Evaluation: 50 Marks End-Semester : 50 Marks

NOTE:
- Two tests each of 25 marks to be conducted as per the schedule.
- Total work hours per semester: 4 Hrs. x 15 weeks = 60 Hrs

Course Contents

Exercise
1) Introduction to offset machine.
2) Feeder setting for various stocks.
3) Mounting of plate with packing.
4) Mounting of blanket with packing.
5) Gripper setting of impression cylinder.
6) Setting of dampening roller.
7) Preparation of fountain solution.
8) Cleaning & washing of Dampening and Inking system.
9) Inking unit setting according to job.
10) Setting – joggers, skeleton wheels, delivery anti set-off spray.
11) Single Color printing.
12) Multicolor printing.
13) Troubleshooting

LAB- II Web Designing

Semester: II	Course Code: PTP205	Total Marks: 125
Teaching Scheme: Theory: 06 Hrs./Week	Total Credits 05	Examination Scheme: Continuous Evaluation: 50 Marks End-Semester : 75 Marks

Course Contents

Practical Exercise

1. Introduction to HTML. Create a basic HTML file0
2. Create a static webpage using table tags of HTML
3. Create a static web page which defines all text formatting tags of HTML in tabular format
4. Create webpage using list tags of HTML
5. Create webpage to include image using HTML tag
6. Create your class timetable using table tag.
7. Create user Student feedback form (use textbox, text area , checkbox, radio button, select box etc.)
8. Create employee registration webpage using HTML form objectsWrite html code to develop a webpage having two frames that divide the webpage into two equal rows and then divide the row into equal columns fill each frame with a different background color.
9. Create your resume using HTML tags also experiment with colors, text , link , size and also other tags you studied.

CSS

Apply style sheet in Web page. [inline, embedded and linked]
2. Design a web page of your home town with an attractive background color, text color, an Image, font etc. (use internal CSS).
3. Use Inline CSS to format your resume that you created.
4. Use External CSS to format your class timetable as you created.
5. Use External, Internal, and Inline CSS to format college web page that you created.

JavaScript

Develop a JavaScript to display today's date.
2. Develop simple calculator for addition, subtraction, multiplication and divisionoperation using JavaScript
3. Create HTML Page with JavaScript which takes Integer number as input and tells whether the number is ODD or EVEN.
4. Create HTML Page that contains form with fields Name, Email, Mobile No , Gender , Favorite Color and a button now write a JavaScript code to combine and display the information in textbox when the button is clicked.
5. Create simple site by using any tool

Course Title:

LAB III- Graphic Design & Advertisement (Corel Draw)

Semester: II	Course Code: PTP206	Total Marks: 100
Teaching Scheme: Theory: 06 Hrs.'/Week	Total Credits 04	Examination Scheme: Continuous Evaluation: 50 Marks End-Semester : 50 Marks

Course Contents

Exercise

6. Software Introduction, workspace tour, Toolbar, Menu-bar, standard toolbox, property bar, status bar

2. Working with shapes, Lines and Outlines, symmetrical drawing, shape objects

3. Working with objects, select, transform, clone, copy, position, align and distribute objects, scale, rotate, group, combine and lock objects

4. layers, local & master layers, symbols, Generate & scan QR Code and BARCODE

5. Color fills, uniform, pattern, texture, transparencies, uniform, pattern, texture, object transparency,

6. Special Effects, lenses, 3D, Mosaics

7. Text and Font, Templates and styles

8. Tables and Bitmaps

9. Logo Design

10. Visiting Card design

11. Clip Arts Design

12. Banner, pamphlet, flyer, leaflet design

13. Poster, Magazine cover page

14. Product design

15. Package design

16. Branding

17. Vector Illustrations

18. Background design

19. Theme design

20. Character design

21. 3D design with Corel Draw

22. Design an advertisement all by own

23. Animation

Course Title:
LAB IV- Personality Development

Semester: II	Course Code: PTP207	Total Marks: 50
Teaching Scheme: **Theory: 02 Hrs.'/Week**	**Total Credits 02**	**Examination Scheme:** **Continuous Evaluation: 25 Marks** **End-Semester : 25 Marks**

Course Contents

Exercise
1. Definition and Basics of Personality 2. Business Etiquettes and Public Speaking 3. Making a presentation. 4. Coping management, working on Attitudes.

Course Title:
Field Work

Semester: II	Course Code: PTP208	Total Marks: 50
Teaching Scheme: Theory: 50 hours	Total Credits 02	Examination Scheme: Continuous Evaluation: 50 Marks

➢ Students should visit and work full 10 days, 5 hours each day on field suggested or appointed by college authority.
➢ Students should complete given task by company/ printing press/establishment.
➢ At last students have to produce field work report including attendance report signed by concerned authority.
➢ Students must complete 50 hours at the appointed organization.

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