

GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)

Competency-focused Outcome-based Green Curriculum-2021 (COGC-2021)

Semester - II

Course Title: Desktop Publishing

(Course Code: C4325803)

Diploma programme in which this course is offered	Semester in which offered
Printing Technology	Second

1. RATIONALE

Modern printing uses desktop publishing extensively for wide usage and applications. Application software like CorelDraw and Illustrator are used for designing work and efficient working of this absolutely essential to work in the printing industry. This software is also helpful to students for making carrier in publishing, graphic design, advertising, printing, and reprographics companies as well establish their own enterprise.

2. COMPETENCY

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

- Design printing jobs using designing software.

3. COURSE OUTCOMES (COs)

The practical exercises, the underpinning knowledge, and the relevant soft skills associated with the identified competency are to be developed in the student for the achievement of the following COs:

- a) Install and set up the operating system and related software on a computer.
- b) Create various designs using CorelDraw software.
- c) Use PageMaker software to design publication work.
- d) Create various designs using Illustrator software.

4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P/2)	Examination Scheme				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	CA	ESE	CA	ESE	
0	0	2	1	00	00	25*	25	50

(*): For this practical only course, 25 marks under the practical CA has two components i.e. the assessment of micro-project, which will be done out of 10 marks and the remaining 15 marks are for the assessment of practical. This is designed to facilitate the attainment of COs holistically, as there is no theory ESE.

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

5. SUGGESTED PRACTICAL EXERCISES

The following practical outcomes (PrOs) are the sub-components of the COs. They are crucial for that particular CO at the 'Precision Level' of Dave's Taxonomy related to 'Psychomotor Domain'.

S. No.	Practical Outcomes (PrOs)	Unit No.	Approx. Hrs. required
1	Align text in various shapes	II	02
2	Apply 3D effects on text	II	02
3	Create custom type using DTP Software	II	02
4	Use step and repeat options to create a design	II	02
5	Apply text masking effect in CorelDraw	II	02
6	Use power clip command for various design	II	02
7	Prepare a banner design using CorelDraw	II	02
8	Create Greeting Card using CorelDraw	II	02
9	Use print and merge command for variable data printing	II	02
10	Prepare 4-page layout of the book in adobe PageMaker	III	02
11	Prepare advertisement using Adobe PageMaker	III	02
12	Create a master page in adobe PageMaker	III	02
13	Create 16-page imposition scheme in Adobe PageMaker	III	02
14	Prepare student ID card using Illustrator	IV	02
15	Create business card using Illustrator	IV	02
16	Prepare alphabetic logo using Illustrator	IV	02
17	Prepare webinar invitation card using Illustrator	IV	02
18	Prepare advertisement using Illustrator	IV	02
19	Design a certificate for the event using Illustrator	IV	02
20	Design application form using Illustrator	IV	02
21	Prepare wedding card using Illustrator	IV	02
22	Apply the various effects to photos using Illustrator	IV	02
23	Apply texture effects using Illustrator	IV	02
24	Create a flat illustration using Illustrator	IV	02
	Minimum Practical Hours		28

Note

- i. More **Practical Exercises** can be designed and offered by the respective course teacher to develop the industry-relevant skills/outcomes to match the COs. The above table is only a suggestive list.
- ii. The following are some **sample** 'Process' and 'Product' related skills (more may be added/deleted depending on the course) that occur in the above listed **Practical Exercises** of this course required which are embedded in the COs and ultimately the competency.

S. No.	Sample Performance Indicators for the PrOs	Weightage in %
1	Select relevant tools and options.	20
2	Collection of required data.	20
3	Operate the software and computer system	20
4	Question and answers	20
5	Interpret the outcome and reflect	20
Total		100

6. MAJOR EQUIPMENT/ INSTRUMENTS REQUIRED

These major equipment with broad specifications for the PrOs is a guide to procure them by the administrators to usher in uniformity of practicals in all institutions across the state.

S. No.	Equipment Name with Broad Specifications	PrO. No.
1	Computers Windows 11 or Windows 10, 64-bit, with latest Updates Intel Core i3/5/7/9 or AMD Ryzen 3/5/7/9/Thread ripper, EPYC Open CL 1.2-enabled video card with 3+ GB VRAM 8+ GB or more recommended 512 GB or more hard disk space 1280 x 720 screen resolution at 100% (96 dpi) DVD drive optional (for box installation); Internet nodes	1 to 28
2	Color printer A3 Color Laser Printer, Copy and Scan Print speed up to 30 ppm (black), 50 ppm (color) USB 2.0, Ethernet, Hardware Integration Pocket Black and white printer Laser printer Multi-function Monochrome Black, toner cartridge Copy and scan print speed up to 30 ppm (black) USB 2.0,	1 to 28

S. No.	Equipment Name with Broad Specifications	PrO. No.
	Ethernet, Hardware Integration Pocket	
3	CorelDRAW Graphics Suite 2020 or above	1 to 12
4	Illustrator Software version CC2020	12 to 28
5	Adobe PageMaker 7.0 version	14 to 24

7. AFFECTIVE DOMAIN OUTCOMES

The following *sample* Affective Domain Outcomes (ADOs) are embedded in many of the above-mentioned COs and PrOs. More could be added to fulfill the development of this course competency.

- a) Work as a leader/a team member.
- b) Follow safety practices while stretching and making screen frame
- c) Practice Good housekeeping
- d) Follow ethical practices
- e) Realize the importance of green energy.

The ADOs are best developed through laboratory/field-based exercises. Moreover, the level of achievement of the ADOs according to Krathwohl's 'Affective Domain Taxonomy' should gradually increase as planned below:

- i. 'Valuing Level' in 1st year
- ii. 'Organization Level' in 2nd year.
- iii. 'Characterization Level' in 3rd year.

8. UNDERPINNING THEORY

The major underpinning theory is given below based on the higher level UOs of Revised Bloom's taxonomy that is formulated for the development of the COs and competency. If required, more such UOs could be included by the course teacher to focus on the attainment of COs and competency.

Unit	Unit Outcomes (UOs) (4 to 6 UOs at different levels)	Topics and Sub-topics
Unit – I DTP Software	1a. Get knowledge of DTP software and environment 1b. Identify different parts of the computer and attached different input and output devices with the system. 1c. Install and configure Windows OS and application software. 1d. Delve into the capabilities of a DTP system 1e. Identify the user of DTP systems 1f. Identify some specific features of commonly used software 1g. Use printer, scanner, and their	1.1 Introduction of DTP software 1.2 Capabilities of DTP software like handling text, generation of graphics, editing of images, outputting 1.3 User of Desktop Publishing Systems 1.4 Equipment required for DTP software like Hardware, Operating System, printer, scanner 1.5 Different software like word processing software, spreadsheet application, Graphic software: object-oriented software, paint oriented software, layout software 1.6 Features of various DTP software

	peripheral devices.	1.7 Some do's and don'ts while working
Unit – II CorelDR AW	2a. Identify various features of CorelDraw software. 2b. Apply available tools of CorelDraw software for designing 2c. Apply available options given in software for designing. 2d. Set print-related parameters for design in CorelDraw. 2e. Prepare various jobs in CorelDraw Software.	2.1. Configure Application software – CorelDraw 2.2. Identify interface, palettes, and toolbars. 2.3. Draw an illustration/ sketch using different tools. 2.4. Design the various line work objects. 2.5. Modify an object 2.6. Fill different textures, color, picture 2.7. Apply special effects 2.8. Handling various text and apply different formatting 2.9. Place, Import, and export various contents 2.10. Set the file for printing
Unit– III Adobe Pagemak- er	3a. Identify various features of Adobe PageMaker software 3c. Use available tools for designing 3d. Use available options and menus for designing 3e. Design pages with precision	3.1 Introduction and features of PageMaker software 3.2 Requisites for creating a new document 3.3 Creating master page 3.4 Using rulers and guidelines 3.5 Entering texts, formatting type, changing font families, character specification, editing text 3.6 Adding graphics, text-wrap, adding color 3.7 Create a Table by using Table Editor. 3.8 Use color palette and create, edit, and remove colors from the palette. 3.9 Insert an importable file within the document and also establish a link. 3.10 Insert/ draw graphics, crop it and wrap text around graphics. 3.11 Create a book containing a table of contents, index, and the page number. 3.12 Print the publication by choosing odd pages, even pages, proof, reverse printing, composite colour, 4 colour separation using a laser printer
Unit– IV Adobe Illustrato r	4a. Identify features and capabilities of Illustrator software 4b. Use available tools of illustrator for designing 4c. Use available options and menus of Illustrator for designing 4d. Design different printed products	4.1 Introduction and features of an illustrator software 4.2 Vectorize the raster image 4.3 Identify interface, palettes, and toolbars. 4.4 Draw an illustration/ sketch using different tools.

	with Illustrator	4.5 Blend objects 4.6 Stylize paths with the paintbrush 4.7 Rulers and guides 4.8 Working with type and selection tool 4.9 Design different items like, visiting card, logo, advertisement, invitation card, certificate etc.
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9. SUGGESTED SPECIFICATION TABLE FOR QUESTIONPAPER DESIGN

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
Not Applicable						

Legends: R=Remember, U=Understand, A=Apply and above (Revised Bloom's taxonomy)

10. SUGGESTED STUDENT ACTIVITIES

Other than the classroom and laboratory learning, the following are the suggested student-related **co-curricular** activities which can be undertaken to accelerate the attainment of the various outcomes in this course. Students should perform the following activities in group and prepare reports of about 5 pages for each activity. They should also collect/record physical evidences for their (student's) portfolio which may be useful for their placement interviews:

- a) Use different online free software like Canva, greeting island to make different occasions greeting cards.
- b) Prepare one YouTube post of anyone features of Corel Draw software.
- c) Prepare one Instagram post of any one feature of Illustrator software.
- d) Collect different good designs from well-known magazines.
- e) Prepare certificate for the college-level event.
- f) Prepare a newsletter for the institute.
- g) Design different stationery for nearby NGO
- h) Design different brochures on different state government and central government schemes and circulate by various social sites.

11. SUGGESTED SPECIAL INSTRUCTIONAL STRATEGIES (if any)

These are sample strategies, which the teacher can use to accelerate the attainment of the various outcomes in this course:

- a) Massive open online courses (**MOOCs**) may be used to teach various topics/subtopics.
- b) Guide student(s) in undertaking micro-projects.
- c) '**L**' in **section No. 4** means different types of teaching methods that are to be employed by teachers to develop the outcomes.

- d) About **20% of the topics/sub-topics** which are relatively simpler or descriptive in nature are to be given to the students for **self-learning** but to be assessed using different assessment methods.
- e) With respect to **section No.10**, teachers need to ensure to create opportunities and provisions for **co-curricular activities**.
- f) Guide students on how to address issues on the environment and sustainability.

12. SUGGESTED MICRO-PROJECTS

Only one micro-project is planned to be undertaken by a student that needs to be assigned to him/her at the beginning of the semester. In the first four semesters, the micro-project is group-based (group of 3 to 5). However, **in the fifth and sixth semesters**, the number of students in the group should **not exceed three**.

The micro-project could be industry application-based, internet-based, workshop-based, laboratory-based, or field-based. Each micro-project should encompass two or more COs which are in fact, integration of PrOs, UOs and ADOs. Each student will have to maintain a dated work diary consisting of individual contributions in the project work and give a seminar presentation of it before submission. The duration of the micro-project should be about **14-16 (fourteen to sixteen) student engagement hours** during the course. The students ought to submit micro-project by the end of the semester to develop the industry-oriented COs.

A suggestive list of micro-projects is given here. This has to match the competency and the COs. Similar micro-projects could be added by the concerned course teacher:

- a) Visit a nearby graphic studio and prepare a report on it.
- b) Visit any well-known graphic designer and discuss skill requirements for designing and prepare a report.
- c) Collect the data on trends of modern designing and prepare a report on it.
- d) Collect 10 samples of advertisement and prepare a report on it.
- e) Collect information on newly launched features in various DTP software.
- f) Prepare a report on technical specifications required for computer and laptop for 2021 versions.
- g) Correlate different graphic design principles and prepare a report on them.
- h) Identify designing defects in various printed products and give a solution for them.
- i) Identify the various ways of doing the same thing in CorelDraw, Illustrator, and PageMaker and prepare a report.
- j) Prepare a brochure on the know your river concept and circulate it on various social sites.
- k) Prepare a brochure on climate change and put it on the college notice board.
- l) Prepare a report on sustainability in designing

13. SUGGESTED LEARNING RESOURCES

Sr. No.	Title of Book	Author	Publication with place, year and ISBN
1	Graphic Design: A Concise History	Hollis, Richard	Newyork: Thames and Hudson,1994

Sr. No.	Title of Book	Author	Publication with place, year and ISBN
			Print ISBN:9780500202708
2	Graphic Design: A New History	Eskilson, Stephen	New Haven: Yale UP 2007. Print ISBN: 9780300172607
3	Elements and Principles of Design: Tools for digital imagery, art, and design	Zena O'Connor	Sydney: Design Research Associates 2014 ASIN :B00K8G3IU0

Other Learning Resources

14. SOFTWARE/LEARNING WEBSITES

- Align text in various shapes: <https://www.youtube.com/watch?v=uH04AMidp7c>
- Apply 3D effects on text: <https://www.youtube.com/watch?v=LegtbMgj-yY>
- Create custom type using DTP Software:
https://www.youtube.com/watch?v=yH2L_d3E-tk
- Use step and repeat options to create a design:
<https://www.youtube.com/watch?v=eUdw9-8wctc>
- Apply text masking effect in CorelDraw:
<https://www.youtube.com/watch?v=i8oxoJz43Eg>
- Use power clip command for various designs:
<https://www.youtube.com/watch?v=JrdDCCsRghU>
- Use print and merge command for variable data printing:
<https://www.youtube.com/watch?v=MeSJcKhd7vw&t=253s>
- Prepare alphabetic logo using Illustrator:
<https://www.youtube.com/watch?v=ymBosZVeRc8>
- Apply various effect to photos using Illustrator:
<https://www.youtube.com/watch?v=IL2XEchbMXE>
- Apply texture effects using Illustrator:
https://www.youtube.com/watch?v=0oCMw1qd_tE
- Create flat illustration using Illustrator:
<https://www.youtube.com/watch?v=AUKW2id17CQ>

15. PO-COMPETENCY-CO MAPPING

Semester I	Desktop Publishing(Course Code: C4325803)						
	POs						
Competency & Course Outcomes	PO 1 Basic & Discipline specific knowledge	PO 2 Problem Analysis	PO 3 Design/ development of solutions	PO 4 Engineering Tools, Experimentation&Testing	PO 5 Engineering practices for society, sustainability & environment	PO 6 Project Management	PO 7 Life-long learning
Competency	Design printing jobs using designing software.						
<u>Course Outcomes</u> CO a) Install and setup operating system and	3	-	-	-	-	2	-

related software in a computer.							
CO b) Create various designs using CorelDraw software.	3	-	2	3	-	2	-
CO c) Use PageMaker software to design publication work.	3	-	2	3	-	2	-
CO d) Create various designs using Illustrator software.	3	-	2	3	-	2	-

Legend: '3' for high, '2' for medium, '1' for low and '-' for no correlation of each CO with PO.

16. COURSE CURRICULUM DEVELOPMENT COMMITTEE

GTU Resource Persons

S. No.	Name and Designation	Institute	Contact No.	Email
1	S. D. Gohel	R. C. Technical Institute, Sola, Ahmedabad	8460609775	sandy_printmedia@yahoo.com
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