

## GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)

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

Semester -II

Course Title:**Basic Graphic Design**

(Course Code:4325802 )

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

#### 1. RATIONALE

This course covers the study of design as a decision-making discipline. It includes design methods of various printed products, techniques of copy preparation, layout, dummy preparation of various jobs, and computer application in the designing field. The aim of teaching this course is to get the detailed study of various Graphic Design features that will help students start their enterprise or apply the knowledge in their professional carrier for better employment.

#### 2. COMPETENCY

The purpose of this course is to help the student to attain the following industry identified competencies through various teaching-learning experiences:

- **Use the concepts of design in the pre-press department**

#### 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) Apply the basic principles of design in visual art and communication.
- b) Use colour terminology for the given Graphic Design.
- c) Suggest a Final Layout of different graphic products.
- d) Use the creative process, symbols, slogans and create a design for various printed products.

#### 4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P/2)	Examination Scheme				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	CA	ESE	CA	ESE	
3	-	4	5	30*	70	25	25	150

*(\*):Out of 30 marks under the theory CA, 10 marks are for assessment of the micro-project to facilitate the integration of Cos, and the remaining 20 marks are the average of 2 tests to be taken during the semester for assessing the attainment of the cognitive domain UOs required for the attainment of the COs.*

**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. *Some of the PrOs marked ‘\*’ (in approx. Hrs column) are compulsory, as 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	Use various shapes to prepare a design.	I	02
2	Prepare a design by using lines of various sizes and proportions.	I	02
3	Prepare a design by using different textures.	I	02
4	Prepare a color wheel	II	02
5	Design an advertisement using warm colour.	II	02
6	Design an advertisement using cool colour.	II	02
7	Use the balance principle to design a poster.	I	02
8	Use the contrast principle to design a poster.	I	02
9	Use emphasis principle to design a poster	I	02
10	Use the rhythm principle to design a poster.	I	02
11	Use the unity principle to design a poster.	I	02
12	Use the proportion principle to design a poster.	I	02
13	Use the repetition principle to design a poster.	I	02
14	Prepare a line artwork using designing software.	III	02
15	Prepare a continuous artwork using designing software.	III	02
16	Prepare a halftone artwork using designing software.	III	02
17	Prepare a logo.	IV	02
18	Prepare a monogram.	IV	02
19	Prepare a symbol.	IV	02
20	Prepare a package design.	IV	02
21	Design a brochure.	IV	02
22	Design a cover page for the magazine	IV	02
23	Design a cover of the book.	IV	02
24	Design a visiting card.	IV	02
25	Design a proforma of bill book	IV	02
26	Design letterhead of printing firm	IV	02
27	Prepare a pharma package design.	IV	02
28	Design an advertisement using contrast colour.	II	02
<b>Minimum 14 Practical Exercises</b>			<b>28 Hrs.</b>

### **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. 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	Prepare experimental setup.	10

S. No.	Sample Performance Indicators for the PrOs	Weightage in %
3	Operate the equipment setup	20
4	Follow safe practices.	10
5	Attainment of the objective.	20
6	Interpret the outcome and reflect.	20
<b>Total</b>		<b>100</b>

## 6. MAJOR EQUIPMENT/ INSTRUMENTS REQUIRED

This 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	<b>Computers</b> Windows 11 or Windows 10, 64-bit, with latest Updates Intel Core i3/5/7/9 or AMD Ryzen 3/5/7/9/Threadripper, EPYC OpenCL 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	<b>Color printer</b> A3 Color Laser Printer, Copy and Scan Print speed up to 30 ppm (black), 50 ppm (color) USB 2.0, Ethernet, Hardware Integration Pocket <b>Black and white printer</b> Laser printer Multi-function Monochrome Black, toner cartridge Copy and scan print speed up to 30 ppm (black) USB 2.0, Ethernet, Hardware Integration Pocket	1 to 28
3	CorelDRAW Graphics Suite 2020 or above	1 to 12
4	Illustrator Software version CC2020	12 to 28

## 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 competency.

- a) Work as a leader/a team member.
- b) Follow safety practices.
- c) Adopt ethical practices.
- d) Manage time

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 1<sup>st</sup> year
- ii. 'Organization Level' in 2<sup>nd</sup> year.
- iii. 'Characterization Level' in 3<sup>rd</sup> 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 higher-level 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
<b>Unit – I</b> <b>Introduction to Graphic Design</b>	1a. Identify the relationship of the printing process to the Printer's design. 1b. Enlist principles of graphic design 1c. Choose fundamentals of graphic design. 1d. Apply principles of graphic design for the preparation of various layouts.	1.1 Introduction to Printer's Design: Printer's design and its importance 1.2 Relation: printing process's relation to printer's design 1.3 Principles of graphic design like: balance, proportion, contrast, unity, rhythm and its uses, advantages, and limitations. 1.4 Fundamentals of graphic design: line, space, texture, tone, colour, and its uses and purposes.
<b>Unit – II</b> <b>Colours in graphic design</b>	2a. Apply colour terminology used for graphic design. 2b. Describe the use of color wheel 2c. Explain colour selection criteria. 2d. Select an appropriate colour scheme for a job.	2.1. Define Color 2.2. Colour Theory: additive color theory and subtractive color theory 2.3. Colour terminology: hue, shade, tint, value, chroma, brightness 2.4. Color wheel: primary, secondary, tertiary, warm, cool, and contrast. 2.5. Various types of color schemes: complementary, analogue, triad, soft, dark, and monochromatic. 2.6. Selection of colour: the emotional appeal of colour, the response of color, types of substrates
<b>Unit– III</b> <b>Originals</b>	3a. Identify various types of originals 3b. Select appropriate original for a job.	3.1 Line original, continuous original, etc. 3.2 Black & White photographs, color photographs, use of various lenses

<p><b>and layout</b></p>	<p>3c. Explain the use of various types of layouts</p> <p>3d. Prepare final layout using attributes for a given graphic product.</p> <p>3e. Identify the impact of design on the target audience.</p>	<p>and filters.</p> <p>3.3 High &amp; low contrast, brightness for improving quality of Photographic prints, resizing, and cropping.</p> <p>3.4 Definition of layout and stages: definition of Layout and attributes of good layout, stages involved in preparing a good layout such as visualization, thumbnail, rough layout, and Final Layout.</p> <p>3.5 Geometry: basic geometric shapes, space, use of the geometric and optical center.</p> <p>3.6 Impact: impact of design on various target audiences. relationship between design and sale of the product, graphic-designer, and their role.</p>
	<p>4a. Apply design consideration for given commercial product.</p> <p>4b. Apply design consideration for a given packaging product.</p> <p>4c. Create symbol and slogan</p> <p>4d. Create design for commercial and packaging products.</p>	<p>4.1 Design for the commercial product: design considerations for books, magazines, newspapers, leaflets, letterhead, visiting card and envelopes.</p> <p>4.2 Design for packaging product: design considerations for cartons, labels, pouches, and metal can.</p> <p>4.3 Creation of symbol and slogan</p> <p>4.4 Use of logo, monogram, trademark, copyright, etc.</p> <p>4.5 Sustainability in graphic design</p>

## 9. SUGGESTED SPECIFICATION TABLE FOR QUESTION PAPER DESIGN

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
I	Introduction	10	6	6	6	18
II	Colors in graphic design	10	4	6	8	18
III	Originals and layout	12	4	6	9	19
IV	Design of different printing products	10	4	4	7	15
<b>Total</b>		<b>42</b>	<b>18</b>	<b>22</b>	<b>30</b>	<b>70</b>

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

**Note:** This specification table provides general guidelines to assist students for their learning and to teachers to teach and question paper designers/setters to formulate test items/questions assess the attainment of the UOs. The actual distribution of marks at different taxonomy levels (of R, U and A) in the question paper may vary slightly from the above table.

## 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 conduct the following activities in group and prepare reports of about 5 pages for each activity, also collect/record physical evidences for their (student's) portfolio which will be useful for their placement interviews:

- a) Collect specimens for a relevant topic.
- b) Visit locations like hospitals, schools, etc. to study color symbolism
- c) Conduct a market survey of display advertisements.
- d) Visit any pre-press house nearby to learn commercial job designing.
- e) Visit any pre-press house nearby to learn Packaging job designing.

## 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) Use of Video/animation films to explain various concepts of designing.
- g) Display of various graphic products printed by different printing processes.
- h) Use of different instructional strategies in classroom teaching.

## 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 are 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) Identify and collect printed samples from various printing processes. Classify collected samples according to the principles of graphic design. Make a collage.
- b) Enlist and use various software used for designing and make a summary of it.
- c) Collect samples with cool, warm, and contrast color schemes and write your reflections.
- d) Collect samples of layouts for different target audiences (children, young, adults, elders).  
Collect and analyze samples with a good layout.
- e) Collect samples for designs of commercial products like leaflets, letterheads, visiting cards, envelopes, newspapers. Collect samples for packaging product designs like Cartons, labels, pouches, and metal can.
- f) Prepare various designs on different concepts like tree plantation, earth day, avoid deforestation, recycling and reusing and create awareness among people. Present a report.
- g) Visit NGOs that work to save the environment and help them in designing their various needs and present a report.

### 13. SUGGESTED LEARNING RESOURCES

S. No.	Title of Book	Author	Publication with the place, year, and ISBN
1	Graphic Design: A Concise History	Hollis, Richard	Newyork: Thames and Hudson, 1994 Print ISBN: 9780500202708
2	Graphic Design: A New History	Stephen J Eskilson	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 2014, Associates ASIN : B00K8G3IU0

### 14. SOFTWARE/LEARNING WEBSITES

- a) <https://www.invisionapp.com/defined/principles-of-design>, For Principles of Graphic Design
- b) <https://www.slideshare.net/SujitJadhav4/basic-design-elements-principles>, For Fundamentals of Graphic Design
- c) <https://99designs.com/blog/tips/the-7-step-guide-to-understanding-color-theory/>, for Color understanding and colour Schemes
- d) <https://www.invisionapp.com/inside-design/understanding-color-theory-the-color-wheel-and-finding-complementary-colors/>, For Color theory
- e) <https://g.co/kgs/bFaKvb>, For understanding Colour Concepts
- f) <https://99designs.com/blog/tips/ultimate-guide-to-product-packaging-design/>, For Designing a packaging product
- g) <https://visme.co/blog/ad-design/>, For creating Advertisement designs

### 15. PO-COMPETENCY-CO MAPPING

Semester I	Fundamentals of Basic Graphic Design (Course Code: 4325803)						
	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
<u>Competency</u>	Use the concepts of design in the pre-press department						
<u>Course Outcomes</u>							
CO a) Use Principles of Graphic Design for various Layouts	3	2	-	3	-	-	2
CO b) Use Color Terminology for the given Graphic Design	3	2	-	3	-	-	2
CO c) Suggest Final Layout of different graphic Products	3	2	-	3	2	-	2
CO d) Understand the Creative Process, Symbols, Slogans and create a design for various Printed Product	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	V. B. Patel	R. C. Technical Institute, Sola, Ahmedabad	9825219434	vinita_printing@yahoo.com
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### NITTTR Resource Persons

S. No.	Name and Designation	Department	Contact No.	Email
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