

TLEP

Program Name: BCA	
Course Name: Computer Application	Semester: II
Subject Name: Digital Design	
No. of Hours: 45	
Credits: 3	
Course Instructor Name: Mr. Arghya Kamal Roy	
Start Date/End date: 02 January 2024	
Concepts: Activity; B (Direct Instructions)	

A – Activities

Activity 1: Patterns Design	
Date of Announcement	08 January 2024
Date of Assignment	13 January 2024
Topic	Applying graphic design fundamentals to creating patterns.
Learning Outcome	Ability to create different patterns.

Activity 2: Colour Wheel	
Date of Announcement	22 January 2024
Date of Submission	27 January 2024
Topic	Creating colour wheel using colour pencil.
Learning Outcome	Ability to understand colour theory and its uses.

Activity 3: Typography	
Date of Announcement	05 February 2024
Date of Submission	10 February 2024
Topic	Creating Typography by using 3D text.
Learning Outcome	Ability to design different writing style.

Activity 4: Image Manipulation / Collage creation	
Date of Announcement	19 February 2024
Date of Submission	24 February 2024
Topic	Creating Collage Design.
Learning Outcome	Ability to create collage design by using image manipulation technique.

Activity 5: Illusion painting / Caricature	
Date of Announcement	26 February 2024
Date of Submission	02 March 2024
Topic	Creating Illusion painting.
Learning Outcome	Ability to create illusion painting by using complementary color.

Activity 6: Logo Design / Icon Design	
Date of Announcement	11 March 2024
Date of Submission	16 March 2024
Topic	Creating name logo design.
Learning Outcome	Ability to create any brand logo.

Activity 7: Business Card Design	
Date of Announcement	25 March 2024
Date of Submission	30 March 2024
Topic	Creating business card design.
Learning Outcome	Ability to create business cards for any profession and organization.

Activity 8: Poster Design	
Date of Announcement	08 April 2024
Date of Submission	13 April 2024
Topic	Creating poster designs for art competitions.
Learning Outcome	Ability to create any type of poster to pass information.

Activity 9: Illustration	
Date of Announcement	15 April 2024
Date of Submission	20 April 2024
Topic	Creating 2D illustration of any object or character.
Learning Outcome	Ability to create any kind of digital illustration.

B – Direct Instructions

Module 1: Introduction to Digital Design and Graphics:	
Topic	<ul style="list-style-type: none"> ➤ Overview of digital design, Fundamentals of graphic design principles (composition, typography, color theory). ➤ Introduction to graphic design software, Image and File Formats, File Compressions, Properties of Bitmap Image, Raster and vector, Electromagnetic spectrum, Analog and digital color, symbolism, additive and subtractive colors, mixing colors, Colors for Painting
Link	
Learning Outcome	The student will be able of understanding colour theory in digital media

Module 2: Digital Imaging and Photo Manipulation:	
Topic	<ul style="list-style-type: none"> ➤ Understanding image formats and resolutions. ➤ Image editing techniques (cropping, resizing, retouching). ➤ Introduction to layers and masks in graphic design software. ➤ Photo manipulation and compositing.
Link of video / article	
Learning outcome	Student will able to categorise file formats in digital art

Module 3: Introduction to Raster Graphics Tools:	
Topic	<ul style="list-style-type: none"> ➤ Introduction of Unit ➤ Layers ➤ Adjustment Tools ➤ Painting ➤ Creating Logo Design ➤ Color Manipulation ➤ Layer Blending ➤ Masking ➤ Export Parameters
Link	
Learning Outcome	Students will be able to categorise the role of raster graphics in digital media

Module: 4 Image Manipulation Techniques:	
Topic	<ul style="list-style-type: none"> ➤ Gradient ➤ cloning ➤ filters ➤ color correction ➤ Hue and saturation ➤ grayscale to color conversion ➤ Carricature using liquify
Video Link	

Learning Outcome	The student will be able to Creating Own logos and digital design
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Module: 5 Introduction to Text effects:	
Topic	<ul style="list-style-type: none"> ➤ Text manipulation ➤ Typography art ➤ Brochure/poster/business card designing ➤ Print and web graphics ➤ icon Designs ➤ Single and Multipage Illustrations
Link	
Learning Outcome	Student will confident to develop image manipulation and digital art.

PROGRAMME: Bachelor of Computer Application
SEMESTER – II

Teaching-Learning & Evaluation Plan

Course Information:

Course Code: 23SCA2V01

Course Title: Digital Design

Credits Units: 03

Contact Hours:45

L-T-P: 3-0-0

IA: UE Weightage -50, 50
Marks: 40

Pass Marks (IA & UE) – 20, & 20

Aggregate Pass

Special Examination Fees: NA

Pre-requisite (if any): Laptop, colour pencil,

Drawing book

Course Facilitator (s): Mr. Arghya Kamal Roy

Programme Outcomes (POs) and Programme Specific Outcomes (PSOs):

At the end of the programme, students will be able to	
PO 1	PO1: Product Development: Analyse, design and develop novel products and solutions for emerging new media opportunities.
PO 2	PO2: Skill Competency: Demonstrate globally accepted competent skills in passive and interactive content space.
PO 3	PO3: Problem Analysis: Identify, formulate and solve complex media design challenges using fundamental principles involved in technology, design and storytelling.
PO 4	PO4: Modern Tool / Techniques usage: Select, adapt, and apply appropriate tools, techniques, resources to various activities, with an understanding of their boundaries.
PO 5	PO5: Professional Ethics: Understand and commit to professional ethics and IP regulations, responsibilities, and norms of professional publishing practices based on Criteria.
PO 6	PO6: Life-long learning: Recognize the need, and have the ability, to engage in independent learning for continual development as a creative professional.
PO 7	PO7: Communication Efficiency: Communicate effectively with the creative community, and with society at large by being able to comprehend audience/ viewers requirement and tell compelling story narratives, structured design processes, make effective presentations, and give and understand clear instructions.
PO 8	PO8: Societal and Environmental Concern: Understand and assess societal, environmental, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to creative requirements.
PO 9	PO9: Individual and Team work: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary environments.
PO 10	PO10: Innovation and Entrepreneurship: Identify a timely opportunity and using

	innovation to pursue that opportunity to create value and wealth for the betterment of the individual and society at large.
PO11	PO11: Conduct Investigations of complex production and distribution problems: Use research-based knowledge and research methods, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO12	PO12: Project management and finance: Demonstrate knowledge and understanding of the computing and management principles and communicate efficiently with team, to manage projects and in multidisciplinary environments.
PSO 01	Recognize current and emerging technologies in the field of computer science and information technology.
PSO 02	Demonstrate proficiency in computer programming and software engineering.
PSO 03	Employ modern tools and techniques in software development.
PSO 04	Design and develop software solutions for real-world problems in business and society.

Course Objectives:

Sl. No.	Course Outcome	Description	Bloom's Taxonomy Level
1.	CO 1	Explaining Design System using for Software platform.	L2
2.	CO 2	Demonstrate the software and live demo & drawings, illustration, prototyping modules and develop applications using it.	L2
3.	CO 3	Understanding proficient technical and aesthetic skills using various tools to generate a broad range of two-dimensional images.	L2
4.	CO 4	To study the elements of art and principles of composition through various digital media projects and effectively use artistic planning techniques to apply skills learned in Studio in Art to create more sophisticated artworks.	L4
5.	CO 5	Creative Design System using for Software platform.	L6

Course Outcomes:

Sl. No.	Course Outcome	Description	Bloom's Taxonomy Level
1	COB1	Demonstrate colour theory in digital media	L2
2	COB2	Applying editing techniques to manipulate digital images	L3
3	COB3	Application of raster graphics editing techniques in digital media.	L3

4	COB4	Creating digital art	L6
5	COB5	Creating logos and digital design	L6

Course Outcome	Skills	POs	Blooms Level	Assessment Tool
CO 1	Understanding	PO1, PO2, PO3, PO4	L2	Patterns, Colour Wheel
CO 2	Applying	PO2, PO3, PO4, PO5	L3	Image Manipulation / Collage creation
CO 3	Applying	PO2, PO4, PO5, PO6, PO7, PO8	L3	Typography, Illusion painting
CO 4	Create	PO8, PO6, PO4, PO9	L6	Illustration and Illusion painting
CO 5	Design	PO10, PO11, PO12	L6	Logo, poster, icon design

CO-PO/PSO Mapping:

CO-PO/PSO Mapping: (3-Strong Correlation 2- Medium Correlation 1- Low Correlation)

Course Outcome	Blooms Taxonomy Level	Program Outcomes (PO)												Program Specific Outcomes (PSO)			
		PO 01	PO 02	PO 03	PO 04	PO 05	PO 06	PO 07	PO 08	PO 09	PO 10	PO 11	PO 12	PSO 1 (L2)	PSO 2 (L3)	PSO 3 (L5)	PSO 4 (L6)
CO1	L2	2	3	2	1	-	-	-	-	-	-	-	-	3		2	2
CO2	L2	-	2	2	3	1	-	-	-	-	-	-	-	3	-	3	3
CO3	L2	-	3	-	3	3	2	3	1	-	-	-	-	-	-	3	3
CO4	L4	-	-	-	3	-	3	-	1	2	-	-	-	2	-	2	2
CO5	L6	-	-	-	-	-	-	-	-	-	1	3	2	-	-	3	3

Course Contents: Syllabus

Module	COURSE CONTENTS	Hours
1	Introduction to Digital Design and Graphics: Overview of digital design, Fundamentals of graphic design principles (composition, typography, color theory). Introduction to graphic design software, Image and File Formats, File Compressions, Properties of Bitmap Image, Raster and vector, Electromagnetic spectrum, Analog and digital color, symbolism, additive and subtractive colors, mixing colors, Colors for Painting	9
2	Digital Imaging and Photo Manipulation: Understanding image formats and resolutions. Image editing techniques (cropping, resizing, retouching). Introduction to layers and masks in graphic design software. Photo manipulation and compositing.	9
3	Introduction to Raster Graphics Tools: Introduction of Unit Layers Adjustment Tools Painting Creating Logo Design Color Manipulation Layer Blending Masking Export Parameters	9
4	Image Manipulation Techniques: Gradient cloning filters color correction Hue and saturation grayscale to color conversion Carricature using liquify	9
5	Introduction to Text effects: Text manipulation Typography art Brochure/poster/business card designing Print and web graphics icon Designs Single and Multipage Illustrations	9

Reference Books (RB):

RB-1	Sarkar, N. N. (2008). Art and Print Production: Concept, Technology and Application.
RB-2	Wiley, (1993); Principles of Form and Design by Wucius Wong John Wiley & Sons, New York2.
RB-3	Maureen Furniss, 2008 The Animation Bible: A Practical Guide to the Art of Animating from Flipbooks to Flash, Harry N. Abrams
RB-4	E. I. Brooks, A. Brooks, C. Sylla, & A. K. Møller (Eds.), (2021), Design, Learning,

	and Innovation. The Saint Bookstore,
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Web link (WL):

WL-1	https://www.colormatters.com/color-and-design/basic-color-theory
WL-2	https://en.wikipedia.org/wiki/Image_file_formats
WL-3	https://helpx.adobe.com/in/photoshop/tutorials.html

MOOC Courses (MC):

Sr.No.	Platform	Topic	CO	Link	Duration
MC-1	Swayam	Module 1,2,3,4,5	1, 2, 3, 4, 5	https://onlinecourses.swayam2.ac.in/ntr20_ed15/preview	08 Week

Hardware/Software/Equipment (HSE):

HSE-1	Drawing book, Colour pencil, Laptop, Photoshop, Illustrator, Mouse or digital drawing tablet.
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Session-Wise Plan

Abbreviations & Expansions		
Pedagogy/Activity planned		Mode of Delivery

P1	PPT presentation & Classroom interaction	M1	Synchronous – PPT
P2	Blended Learning with Hands on	M2	Asynchronous / synchronous
P3	Flip Class & Module Quiz	M3	Synchronous - Hands on
A1	Activity-1	M4	Synchronous - Discussion
A2	Activity-2		

Session-Wise Plan:

Module	Topic	No. Of Session	CO Mapping	Mode of Delivery
Module 1 - Introduction to Digital Design and Graphics (9 Hours)	➤ Introduction to Digital Design and Graphics	1	CO1	Class room interactive / Hands-on
	➤ Fundamentals of graphic design principles, Lines and shapes	2	CO1	Class room interactive / Hands-on
	➤ colour theory, Analog and digital colour. Colour Wheel.	3	CO1	Class room interactive / Hands-on
	➤ Shape to Volume, Typography, 3D text creation.	3	CO1	Class room interactive / Hands-on
Module 2 - Digital Imaging and Photo Manipulation: (9 Hours)	➤ Introduction to graphic design software,	3	CO2	Class room interactive / Hands-on
	➤ Image editing techniques cropping, resizing, retouching,	3	CO2	Class room interactive / Hands-on
	➤ symbolism, additive and subtractive colors, mixing colors, Colors for Painting Illusion painting	3	CO2	Class room interactive / Hands-on
Module 3 - Introduction to Raster Graphics Tools: (9Hours)	➤ Introduction of Unit Layers, Image and File Formats, File Compressions,	2	CO3	Class room interactive / Hands-on
	➤ Adjustment Tools, Layer Blending, Masking	2	CO3	Class room interactive / Hands-on
	➤ Digital Illustration and Painting, Color Manipulation Export Parameters.	5	CO3	Class room interactive / Hands-on
Module 4 - Image Manipulation Techniques (9 Hours)	➤ Gradient, cloning, filters	2	CO4	Class room interactive / Hands-on
	➤ colour correction, Hue and	2	CO4	Class room

	saturation, grayscale to colour conversion,			interactive / Hands-on
	➤ Caricature using liquify, Pictogram design	5	CO4	Class room interactive / Hands-on
Module 5 - Introduction to Text effects: (6 Hours)	➤ Text manipulation, Typography art, Logo Design	3	CO5	Class room interactive / Hands-on
	➤ business card designing, icon Designs	3	CO5	Class room interactive / Hands-on
	➤ poster Design, Print and web graphics	3	CO5	Class room interactive / Hands-on

Total No of hours: 45

Total no of conduct hours:

Assessment Scheme: IA: UE – 50:50

Sl. No .	Assessment Instrument	Formative/ Summative	Frequency/ Stages	Weightage (%)	CO
1.	Activity	Formative	9	45	CO1, CO2, CO3, CO4, CO5
2.	Class Participation			5	
3.	Final Exam	Summative	1	50	CO1, CO2, CO3, CO4, CO5
Total				100	

Assessment Scheme: IA – 50

Sl. No .	Assessment Instrument	Formative/ Summative	Frequency/ Stages	Weightage (%)	CO
1.	Activity 1: Patterns Design	Formative	1	5	CO1,

2.	Activity 2: Colour Wheel	Formative	1	5	CO1, CO2
3.	Activity 3: Typography	Formative	1	5	CO1, CO5
4.	Activity 4: Image Manipulation / Collage creation	Formative	1	5	CO2, CO4, CO5
5.	Activity 5: Illusion painting / Caricature	Formative	1	5	CO2, CO3, CO4,
6.	Activity 6: Logo Design/ Icon Design	Formative	1	5	CO1, CO2, CO4, CO5
7.	Activity 7: Business Card Design	Formative	1	5	CO1, CO2, CO4, CO5
8.	Activity 8: Poster Design	Formative	1	5	CO1, CO2, CO3, CO4, CO5
9.	Activity 9: Illustration	Formative	1	5	CO1, CO2, CO3, CO4, CO5
10.	Class Participation	Summative		5	
Total				50	

ASSESSMENT CRITERIA (IA):

No	Assessment Criteria	Marks Bifurcation (5 Marks)
1	Originality	1
2	Creativity	1
3	Skills	1
4	Aesthetic Appeal	1
5	Presentation & Viva	1

Assessment Scheme: ESE – 50

Sl. No	Assessment Instrument	Formative/ Summative	Frequency/ Stages	Weightage (%)	CO
3.	Final Exam	Summative	1	50	CO1, CO2, CO3, CO4, CO5
Total				50	

ASSESSMENT CRITERIA (ESE):

No	Assessment Criteria	Marks Bifurcation (50 Marks)
1	Presentation	20
2	Viva	20
3	Record Book	10