

Diploma in Multimedia and Animation Technique

Syllabus

CENTRE FOR DISTANCE AND
ONLINE EDUCATION

PROGRAMME CODE

2026 - 2027 ONWARDS



Centre for Distance and Online Education
BHARATHIAR UNIVERSITY

(A State University, Accredited with "A++" Grade by NAAC,
Ranked 46th among Indian Universities by MHRD-NIRF)

Coimbatore - 641 046, Tamil Nadu, India

DIPLOMA IN MULTIMEDIA AND ANIMATION TECHNIQUE

SYLLABUS (WITH EFFECT FROM 2026 ONWARDS)

PROGRAM CODE:



DEPARTMENT OF COMPUTER APPLICATION
CENTRE FOR DISTANCE AND ONLINE EDUCATION
Bharathiar University
(A State University, Accredited with “A++” Grade by NAAC and
46th Rank among Indian Universities by MHRD-NIRF)
Coimbatore 641 046, INDIA

BHARATHIAR UNIVERSITY : COIMBATORE 641046
DEPARTMENT OF COMPUTER APPLICATION

VISION

Bestow globally comparable quality education on youth, embodied with character building, to invoke the University's motto "Educate to Elevate" and uphold the secular ideals of the nation as envisioned by Mahakavi Subramania Bharathiar.

MISSION

- To be innovative and inclusive, committed to excelling in teaching, research and knowledge transfer and to serving the social, cultural and economic needs of the nation.
- To innovate and offer educational programmes in various disciplines through synergistic interaction with the industry and society.
- To impart knowledge and skills and to provide a learning environment to acquire attitudes to students and equip them to face the emerging challenges of the knowledge era.
- To provide equal opportunity to women students, differently abled, and minorities and prepare them to be equal partners in accomplishing the scientific and technological demands of the nation.
- To contribute to the advancement of knowledge through applied research leading to newer products and processes.
- To prepare the students to work for societal transformation with a commitment to justice and equality and emerge as job providers.
- To inculcate in students a global vision with skills of international competence.

TITLE OF THE PROGRAM

Diploma in Multimedia and Animation Technique

DURATION

- **Minimum Duration:** One year
- **Maximum Duration:** Two year (with provision for Re-registration if required)

CREDIT DISTRIBUTION

- **Total Credits:** 40 credits (as per UGC credit framework)

ELIGIBILITY

10 +2 (Higher Secondary) or equivalent from a recognized board unless otherwise specified.

MEDIUM OF INSTRUCTION

Medium of Instruction is **English** . However the learners are permitted to write the Continuous Internal Assessment and End Semester Examination in **English or Tamil**.

FEES STRUCTURE

Fee structure as approved by the Centre for Distance and Online Education, Bharathiar University, Coimbatore.

ATTENDANCE

- **Online Mode:**
 - Minimum 75% attendance in online sessions/webinars/tutorials recorded on LMS.
 - 120 hours of live online sessions are mandatory for 40 credit diploma programme (3 hours per credit).
- **ODL Mode:**
 - Participation of atleast Ten Personal Contact Programs (PCPs) with 60 hours of contact class (3 hours per credit) during one semester is mandatory.
 - A total Participation of atleast Twenty Personal Contact Programs (PCPs) with 120 hours of contact class (3 hours per credit) for entire programme is mandatory.

REQUIREMENT TO APPEAR FOR THE EXAMINATIONS

A candidate enrolled for the programme must have the minimum period of attendance in theory and practical classes prescribed to appear for the examinations with the fees prescribed and fulfills all other conditions stipulated from time to time.

CONDITIONS TO APPEAR FOR THE EXAMINATIONS

The learner appearing for the examination for the first time should register for all the course by remitting the fee

ODL

- The learners should specify the opted center of examinations in the examination application form.
- Learners will not be permitted to change their examination center.
- Learners shall collect their E-hall tickets from the website for the examination and get signature from the Chief Superintendent of the examinations centers opted, on submission of their identity cards during the three working days before the commencement of the examinations.

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- The learners shall collect their E-hall tickets from the website for the examination and write the examinations through online mode.
- The learners can download the question paper and scan & upload their answer script from their registered user id.

EVALUATION PATTERN

a. Distribution of Marks in Continuous Internal Assessments (CIA): 25% weightage

The following procedure shall be followed for awarding internal marks for theory courses.

- Continuous Internal Assessment (CIA) Test - 10 marks
- Assignment - 5 marks
- Seminar - 5 marks
- Participation - 5 marks

Total - 25 marks

1. CIA Test and question pattern :

Two Continuous Internal Assessments (CIA-I & CIA II) must be conducted. Better of the TWO will be counted for Test Marks (10 Marks)

- Section A – Objective Question 5*1 = 5 marks
- Section B – Short Essay (2 out of 3) 2*5 = 10 marks
- Section C – Essay Type (Either or type) 1*10 = 10 marks

2. **Assignments – I and II.** Better of the TWO will be counted for Assignment Marks (5 Marks)
3. **Seminar** will be conducted for 5 Marks.
4. **Participation** (which includes attendance) – 5 Marks

b. Project/Dissertation/Internship (4 Credits) – At the end of Second Semester

- Major project / Internship (100 marks)
Internal – 50 marks & External – 50 Marks

c. End-Semester Examination (ESE): 75% weightage

ODL

- Examinations will be Conducted through offline at a designated physical location (University / Learner Support Centers (LSCs)) with invigilators and a fixed schedule.
- **Duration:** 3 hours, covering theory and applications.

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- Conducted through an online/proctored computer based examination (an assessment conducted using a computer or other digital device, replacing traditional pen-and-paper methods).
- **Duration:** 3 hours, covering theory and applications.
- **Examination Integrity:** Online proctoring, biometric verification, or designated centers.

Distribution of marks in the End-Semester Examination - Question Paper Pattern:

Section	Type of question	No. of questions	Marks	Total
A	Objective Question	10 (Compulsory)	1	10
B	Short Essay (300 words each)	3 out of 5	5	15
C	Essay Type (1000 words each)	5 Questions (Either or Type)	10	50
Total				75

d. Passing Criteria:

- Minimum 40% passing marks in each component
(Internal – 10 marks out of 25 & External – 30 marks out of 75 separately).
- Minimum 40% passing marks in practical / project component
- Aggregate of 40% marks required for successful completion of the diploma programme.

e. Grading System : (As per 10-point UGC Credit Framework)

The following table gives the marks, grade points, letter, grades and classification to indicate the performance of the candidate.

For the entire programme:

- CGPA = Sum of the multiplication of grade points by the credits of the entire programme / Sum of the credits of the courses for the entire programme.

$$\text{Cumulative Grade Point Average [CGPA]} = \frac{\sum n \sum i C_{ni} G_{ni}}{\sum n \sum i C_{ni}}$$

RANGE	CGPA	Grade	Classification of Result
95-100	9.5-10.0	O+	First Class- Exemplary*
90-94	9.0 and above but below 9.5	O	
85-89	8.5 and above but below 9.0	D++	First Class with Distinction*
80-84	8.0 and above but below 8.5	D+	
75-79	7.5 and above but below 8.0	D	
70-74	7.0 and above but below 7.5	A++	First Class
65-69	6.5 and above but below 7.0	A+	
60-64	6.0 and above but below 6.5	A	
55-59	5.5 and above but below 6.0	B+	Second Class
50-54	5.0 and above but below 5.5	B	
45-49	4.5 and above but below 5.0	C+	Third Class
40-44	4.0 and above but below 4.5	C	
0-39	0.0 and above but below 4.0	U	Re-appear

- a. A candidate who has passed all the courses in the first appearance within the prescribed duration of the diploma programmes and secured a CGPA of 9 to 10 and equivalent

grades “O” or “O+” in Core and Practical/Project courses shall be placed in the category of “**First Class – Exemplary**”.

- b.** A candidate who has passed all the courses in the first appearance within the prescribed duration of the Diploma programmes and secured a CGPA of 7.5 to 9 and equivalent grades “D” or “D+” or “D++” in Core and Practical/Project courses shall be placed in the category of “**First Class with Distinction**”.
- c.** A candidate who has passed all the courses of the Diploma programmes and secured a CGPA of 6 to 7.4 and equivalent grades “A” or “A+” or “A++” in Core and Practical/Project courses shall be declared to have passed in “**First Class**”.
- d.** A candidate who has passed all the courses examination of the Diploma programmes and secured a CGPA of 5.0 to 5.9 and equivalent grades “B” or “B+” in Core and Practical/Project courses shall be declared to have passed in “**Second Class**”.
- e.** A candidate who has passed all the courses examination of the Diploma programmes and secured a CGPA of 4.0 to 4.9 and equivalent grades “C” or “C+” in Core and Practical/Project courses shall be declared to have passed in “**Second Class**”.

BHARATHIAR UNIVERSITY: COIMBATORE 641 046

Department of Computer Application
Diploma in Multimedia and Animation Technique
Centre or Distance and Online Education
(For the students admitted during the academic year 2026-2027 onwards)

PROGRAMME STRUCTURE

FIRST SEMESTER

Course Code	Title of the Course	Credits	Maximum Marks			
			Theory	CIA	ESE	Total
	FUNDAMENTAL OF COMPUTERS	4	12	25	75	100
	INTRODUCTION TO MULTIMEDIA	4	12	25	75	100
	2D ANIMATION	4	12	25	75	100
	3D ANIMATION	4	12	25	75	100
	ANIMATION PRACTICAL LAB	4	12	40	60	100
TOTAL		20	60	140	360	500

SECOND SEMESTER

Course Code	Title of the Course	Credits	Maximum Marks			
			Theory	CIA	ESE	Total
	AUDIO VIDEO EDITING	4	12	25	75	100
	GRAPHICS DESIGNING	4	12	25	75	100
	PHOTOSHOP	4	12	25	75	100
	CORELDRAW	4	12	25	75	100
	CORELDRAW AND PHOTOSHOP LAB	4	12	40	60	100
TOTAL		20	60	140	360	500

OVERALL

SEMESTER	CREDIT	MARKS
FIRST	20	500
SECOND	20	500
TOTAL	40	1000

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)	
PEO1	Graduates will be able to apply fundamental principles of animation, multimedia, and visual communication to create professional-quality 2D and 3D animation content.
PEO2	Graduates will demonstrate proficiency in using industry-standard animation and multimedia software tools to develop creative and technical solutions for media projects.
PEO3	Graduates will be capable of working effectively in team-based production environments, following industry workflows, ethical practices, and communication standards.
PEO4	Graduates will be prepared for employment, freelancing, or entrepreneurship in animation, multimedia, gaming, advertising, and digital media industries, with a commitment to continuous skill development.

PROGRAMME OUTCOMES (POs)

PROGRAM OUTCOMES (POs)	
After successful completion of the program, students will be able to:	
PO1	Apply basic principles of animation, design, and multimedia to create simple 2D and 3D animation projects.
PO2	Use industry-relevant animation and multimedia software tools for modeling, texturing, animation, editing, and rendering.
PO3	Demonstrate creative thinking and visual storytelling skills in the development of animation and digital media content.
PO4	Work effectively as an individual or team member in animation production environments, following professional and ethical practices.
PO5	Communicate ideas clearly through visual presentations, storyboards, and digital media, and adapt to emerging trends through continuous learning.

PROGRAM SPECIFIC OUTCOMES (PSOS)

PROGRAM SPECIFIC OUTCOMES (PSOS)	
After the successful completion of the program, the students are expected to	
PSO1	Create 2D animations using principles of drawing, timing, movement, and visual storytelling.
PSO2	Develop 3D models and animations using industry-standard software tools for modeling, texturing, rigging, and rendering.
PSO3	Apply audio, video, and visual effects techniques to enhance animation and multimedia projects.
PSO4	Design and produce digital content for media platforms such as films, advertisements, games, and social media.
PSO5	Demonstrate practical skills in animation production workflows, including pre-production, production, and post-production processes.
PSO7	Use storyboarding, scripting, and visual storytelling techniques to create engaging animation content.

SEMESTER - I

SEMESTER I

DIPLOMA IN MULTIMEDIA AND ANIMATION TECHNIQUE

Course code	TITLE OF THE COURSE	L	T	P	C
Core paper	FUNDAMENTAL OF COMPUTERS	4	-	-	4
Course Objectives					
<p>The main objectives of this course are:</p> <ol style="list-style-type: none"> 1. Learn the basics of computers 2. Understand number systems 3. Know about computer peripherals 4. Study the internal parts of a computer 5. Learn about different software 6. Understand MS-DOS and Windows basics 7. Develop basic computer skill 					
Expected Course Outcomes:					
On the successful completion of the course, student will be able to					
1	Explain the basic parts and functions of a computer				K1
2	identify and describe common input and output devices				K2
3	Describe the internal components of a computer				K3
4	Differentiate system software and application software				K5
5	Use basic MS-DOS and Windows commands				K3
6	Apply basic computer skills confidently				K4
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create					
UNIT 1	Introduction to Computers	04 hours			
<p>Computer system: characteristics and capabilities. Computer Hardware and Software: Block Diagram of a Computer, Different Data Processing: Data, Data Processing System, Storing Data, Processing Data. Types of Computers: Analogue, Digital, Hybrid, General and Special Purpose Computers. Generation of Computers. Computer Systems: Micros, Minis & Main-frames. Limitations of Micro Computer.</p> <p>Number systems: Decimal Number system, Binary number system, Octal & Hexadecimal number system, 1's&2's complement Codes: ASCH, EBCDI Codes, Gray code & BCD.</p> <p>Logic Gates: AND, OR, NOT GATES and their Truth tables, NOR, NAND & XOR gates</p>					
UNIT 2	Computer Peripherals	04 hours			
<p>Introduction to Input Devices: Categorizing Input Hardware, Keyboard, Direct Entry — Card Readers, Scanning Devices — O.M.R., Character Readers, Thumb Scanner, MICR, Smart Cards, Voice Input Devices, Pointing Devices — Mouse, Light Pen, Touch Screen.</p> <p>Computer Output: Output Fundamentals, Hardcopy Output Devices, Impact Printers, Non-Impact Printers, Plotters, Computer output Microfilm/Microfiche (COM) systems, Softcopy Output Devices, Cathode Ray Tube, Flat Screen Technologies, Projectors, Speakers.</p>					
UNIT 3	Basic Components and Storage	04 hours			
<p>Central Processing Unit: The Microprocessor, control unit, A.L.U., Registers, Buses, Main Memory, Main Memory (RAM) for microcomputers, Read Only Memory(ROM).</p> <p>Storage Devices: Storage Fundamentals, Primary and Secondary Storage, Data Storage and Retrieval Methods — Sequential, Direct & Indexed Sequential, Tape Storage and Retrieval Methods Tape</p>					

storage Devices, characteristics and limitations, Direct access Storage and Microcomputers – Hard Disks, Disk Cartridges, Direct Access Storage Devices for large Computer systems, Mass storage systems and Optical Disks, CD ROM.

UNIT 4 Computer Software and Storage 04 hours

System Software: System software Vs. Application Software, Types of System Software, Introduction and Types of Operating Systems. Boot Loader, Diagnostic Programs, BIOS, Utility Programs.

Application Software: Microcomputer Software, Interacting with the System, Trends in PC software, Types of Application Software, Difference between Program and Packages. Computer Languages: Definition, Generations of computer languages, Types of Languages, Language Processors: Assembler, Interpreter, Compiler, Linker and Loader. Programming constructs, Algorithm & flowchart.

UNIT 5 Introduction to MS-DOS & Windows 04 hours

Introduction to DOS: History and versions of DOS. Fundamentals of DOS: Physical Structure of the Disk, Compatibility of drives, Disks & DOS versions, Preparing Disks for use, Device Names. Getting Started with DOS: Booting Process (DOS, Windows, Unix), System Files and Command.com, Internal DOS Files & Directories, Elementary External DOS Commands, Creating a Batch Files, Additional Commands.

Total Lecture hours 20 hours

Text Book(s)

- 1 | Computer Fundamentals, P. K. Sinha, BPB Publications, 2003 Sixth Edition.
- 2 | Introduction to Information Technology, V. Rajaraman, PHI, 2013. Second Edition.

Reference Books

Fundamental of Information Technology, Chetan Shrivastava, Kalyani Publishers. 3rd edition (2009), reprinted in 2014

Course Designed By: Dr.P.VIJAYAKUMAR

Web link: https://onlinecourses.swayam2.ac.in/ini25_ge11/preview?utm_source=chatgpt.com

Mapping with programme outcomes:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	L	M	S	-	-	-
CO2	L	L	M	-	-	-
CO3	M	L	L	S	-	-
CO4	L	L	M	M	-	-
CO5	M	L	L	M	S	-
CO6	S	M	L	L	M	-

S- Strong; M-Medium; L-Low

Course code		TITLE OF THE COURSE	L	T	P	C
Core paper		INTRODUCTION TO MULTIMEDIA	4	-	-	4
Course Objectives						
<ol style="list-style-type: none"> 1. Provide fundamental knowledge of multimedia systems, including hardware, software, operating systems, and communication technologies. 2. Develop skills in content creation and distribution using desktop publishing tools, animation techniques, and social networking platforms. 3. Explain the artistic and scientific principles involved in audio, image, video, photography, and printing technologies. 4. Introduce students to audio-video programme production techniques, editing, compositing, and web design and publishing. 5. Create awareness of media management, marketing, economics, ownership, government policies, and career opportunities in multimedia. 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to						
1	Explain the basic components and working of multimedia hardware, software, operating systems, and communication systems.					K1,K2
2	Apply content development tools such as desktop publishing, 2D/3D animation, special effects, and social media platforms for multimedia content creation and distribution					K1/K2
3	Understand and analyze the technical and artistic aspects of audio, image, video, photography, and printing technologies					K2/K3
4	Demonstrate knowledge of programme production workflows, including audio-video production, editing, compositing, and web design and publishing.					K2/K3
5	Assess the media industry structure, management practices, economics, ownership patterns, and career opportunities in the multimedia field.					K3/K4
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create						
UNIT 1	INTRODUCTION TO MULTIMEDIA					04 hours
Multimedia Hardware, Multimedia Software, Multimedia operating systems, Multimedia communication systems						
UNIT 2	CONTENT DEVELOPMENT AND DISTRIBUTION					04 hours
Desktop publishing (Coral Draw, Photoshop, Page maker), Multimedia Animation & Special effects (2D/3D animation, Flash), Social Networking & Publishing (Blogging, Facebook, Youtube, Instagram, etc.), Content Distribution Systems (CD/DVD, Internet, Radio, Television)						
UNIT 3	ARTS & SCIENCE OF MULTIMEDIA					04 hours
Audio fundamentals (Audio quality, formats and devices), Understanding Image and Video (Resolution, Color, Video standards, formats), Film and Digital photography (technology, techniques, composition & lighting etc.), Introduction to Printing technology						
UNIT 4	PROGRAMME PRODUCTION TECHNIQUES					04 hours
The Media Industry: Structure and Strategies, Audio-Video programme production (Concept to Mastering), Compositing and Audio-Video Editing, Web Design and Publishing (Web design and development)						
UNIT 5	MEDIA MANAGEMENT & MARKETING					04 hours

Ownership of Media, Media as Business & Media Economics, Income sources of Different Media, Government Policies for Media Ownership, Career avenues in multimedia.

Total Lecture hours

20 hours

Text Book(s)

- 1 Tay Vaughan – Multimedia: Making It Work, 1st Edition, 1993
- 2 Ralf Steinmetz & Klara Nahrstedt – Multimedia: Computing, Communications & Applications, 2012
- 3 Ze-Nian Li & Mark S. Drew – Fundamentals of Multimedia (Springer), 2021

Reference Books

1. John F. Koegel Buford – Multimedia Systems, 1st Edition, 2004
2. Adobe Official Tutorials (Photoshop, Premiere Pro, Audition)
3. Blender 3D – Official Documentation

Web link: <https://www.mheducation.com>

<https://www.pearson.com>

<https://www.blender.org/support/tutorials>

<https://helpx.adobe.com/learn.html>

Course Designed By: Dr.P.VIJAYAKUMAR

Mapping with programme outcomes:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	M	M	L
CO2	S	M	M	M	M	L
CO3	M	M	S	S	M	L
CO4	M	M	S	S	M	L
CO5	M	M	S	S	S	L
CO6	M	M	S	S	S	M

S- Strong; M-Medium; L-Low

Course code		TITLE OF THE COURSE	L	T	P	C
Core paper		2D ANIMATION	4	-	-	4
Course Objectives						
<ol style="list-style-type: none"> 1. Provide basic understanding of multimedia concepts, components, and system architecture. 2. Introduce various multimedia input/output devices and hardware requirements. 3. Teach the fundamentals of text, image, and graphic design principles. 4. Explain audio, video, and animation concepts along with editing techniques. 5. Familiarize students with multimedia applications, authoring tools, and development processes. 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to						
1	Describe the basic concepts, elements, and architecture of multimedia systems. (K2)					K2
2	Identify multimedia input/output devices and specify hardware requirements					K1/K2
3	Apply basic text, image, and graphic editing/design techniques.					K3
4	Analyze audio, video, and animation concepts, formats, and editing techniques					K4
5	Develop simple multimedia applications using authoring tools and understand multimedia project development steps. (K3/K4)					K3/K4
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create						
UNIT 1	INTRODUCTION TO MULTIMEDIA					04 hours
Definition and Concepts of Multimedia-Multimedia System and its Components-Elements of Multimedia: Text, Graphics, Audio, Video, Animation-Multimedia Applications: Education, Entertainment, Business, Training, etc.-Multimedia System Architecture-Multimedia Communication Models-Advantages and Disadvantages of Multimedia.						
UNIT 2	MULTIMEDIA INPUT AND OUTPUT DEVICES					04 hours
Input Devices: Keyboard, Mouse, Scanners, Digital Cameras, Microphones-Output Devices: Monitors, Printers, Speakers, Projectors-Storage Devices: CD, DVD, Blu-ray, Pen Drives, External Hard Disks-Multimedia Hardware Requirements-Sound Cards, Graphic Cards, and Video Capture Devices.						
UNIT 3	TEXT, IMAGE AND GRAPHICS					04 hours
Text: Font, Typeface, Size, Style, Color, Text Effects-Image: Types of Images – Bitmap and Vector-Image File Formats: BMP, GIF, JPEG, PNG, TIFF-Image Editing Tools and Techniques (Photoshop or GIMP basics)-Graphics Design Principles-Color Models – RGB, CMYK, HSB						
UNIT 4	AUDIO, VIDEO AND ANIMATION					04 hours
Audio: Digital Audio Concepts, Sampling, MIDI, Audio Formats (MP3, WAV, AAC)-Video: Video Signals, Frame Rate, Resolution, Video Formats (AVI, MP4, MOV)-Video Editing and Compression Techniques-Basics of Animation – Keyframe, Tweening, Morphing-2D and 3D Animation Concepts-Tools for Audio/Video/Animation (Audacity, Premiere Pro, Flash, Blender)						
UNIT 5	MULTIMEDIA APPLICATIONS AND TOOLS					04 hours
Multimedia Authoring Tools – Types and Features-Authoring Tools: Adobe Director, Flash, PowerPoint, Authorware-Steps in Multimedia Project Development-Multimedia Design and Production Process-Multimedia and the Internet – Web Multimedia-Virtual Reality and Augmented Reality Basics-Future Trends in Multimedia.						

		Total Lecture hours	20 hours
Text Book(s)			
1	Multimedia: Computing, Communications & Applications – Ralf Steinmetz & Klara		
2	Nahrstedt, Ist Edition, 2005		
3	Fundamentals of Multimedia – Ze-Nian Li & Mark S. Drew, The original Pearson Prentice		
4	Hall edition, 2004, Ist Edition Multimedia Systems – John F. Koegel Buford, 3 rd Edition, 2004 Multimedia Fundamentals: Media Coding and Content Processing – R. Steinmetz & K. Nahrstedt, 2 nd Edition, 2002		
Reference Books			
1. Digital Image Processing – Rafael C. Gonzalez & Richard Woods, 4 th Edition, 2018			
2. Audio and Video Systems – R.G. Gupta, Ist Edition, 2004-2005			
3. Multimedia Making It Work – Tay Vaughan McGraw-Hill, 8 th Edition, 2001			
4. Adobe Photoshop Classroom in a Book – Conrad Chavez, 2022			
5. The Animator's Survival Kit – Richard Williams, Ist Edition, 2001			
Course Designed By: Dr.P.VIJAYAKUMAR			
Web link: https://www.pearson.com/en-us/subject-catalog/p/multimedia/P200000002350 https://link.springer.com/book/10.1007/978-3-319-05290-8 https://www.pearson.com/us/higher-education/program/Buford-Multimedia-Systems/PGM311788.html			
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]			

Mapping with programme outcomes:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	L	M	S	L	L	L
CO2	L	L	M	S	L	L
CO3	M	L	L	M	S	L
CO4	M	M	L	L	S	L
CO5	S	M	L	L	M	S

S- Strong; M-Medium; L-Low

Course code	TITLE OF THE COURSE	L	T	P	C
Core paper	3D ANIMATION	4	-	-	4
Course Objectives					
The main objective of this course is to provide students with foundational knowledge and practical skills in 3D animation, including modeling, texturing, lighting, rigging, animation, rendering, and compositing, using industry-standard software and techniques. Students will gain hands-on experience to create basic 3D assets and short animations suitable for academic and professional portfolios.					
Expected Course Outcomes:					
On the successful completion of the course, student will be able to					
1	Understand the evolution, concepts, tools, and applications of 3D animation.	K1/K2			
2	Apply various 3D modeling techniques to build props, environments, and simple characters.	K3			
3	Perform UV mapping, apply textures, materials, and lighting to create realistic 3D scenes.	K3/K4			
4	Demonstrate rigging and animation principles to animate objects and characters.	K3/K4			
5	Render, composite, edit, and export a final animated sequence or demo reel	K4/K5			
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create					
UNIT 1	INTRODUCTION TO 3D ANIMATION	04 hours			
Definition and Evolution of 3D Animation-Difference between 2D and 3D Animation-Applications of 3D Animation – Films, Games, Architecture, Education, Advertising-Stages of 3D Animation Production:-Pre-production, Production, Post-production-Overview of 3D Software: Autodesk Maya, Blender, 3ds Max, Cinema 4D-File Formats used in 3D Animation (.obj, .fbx, .blend, .mb)					
UNIT 2	MODELING TECHNIQUES	04 hours			
Introduction to 3D Modeling-Types of Modeling: Polygonal, NURBS, and Subdivision Surface Modeling-Basic Modeling Tools and Functions (Extrude, Bevel, Merge, Smooth, etc.)-Modeling Props, Environments, and Simple Characters-Topology and Edge Flow Concepts-Hands-on Practice: Create Basic Objects and a Simple Character Model					
UNIT 3	TEXTURING, LIGHTING, AND MATERIALS	04 hours			
Understanding UV Mapping and Unwrapping-Appling Textures and Shaders-Material Properties – Reflection, Transparency, Specularity, Bump Maps-Lighting Types: Point, Spot, Directional, Area, and Global Illumination-Setting up Light and Shadow Effects-Introduction to Rendering Engines (Cycles, Arnold, V-Ray)-Practical: Create a Textured and Lighted Scene					
UNIT 4	RIGGING AND ANIMATION	04 hours			
Basics of Rigging – Bones, Joints, IK and FK Systems-Character Setup and Skinning-Animation Principles (Squash and Stretch, Timing, Anticipation, etc.)-Keyframe Animation and Timeline Control-Path Animation and Camera Animation-Motion Capture Basics-Practice: Create a Simple Walk Cycle or Object Animation					
UNIT 5	RENDERING AND COMPOSITING	04 hours			
Rendering Techniques and Settings-Introduction to Compositing and Post-Production-Camera Angles and Scene Composition-Adding Effects (Depth of Field, Motion Blur)-Exporting Animation Projects-Video Editing and Sound Sync Basics-Creating a Final Showreel / Demo Reel-Current Trends in 3D Animation (AR/VR, Real-Time Rendering, AI in Animation)					
Total Lecture hours					20 hours

Text Book(s)	
1	3D Modeling & Animation: A Primer by Magesh Chandramouli, Ist Edition,2021
2	3D Modeling, Animation, and Rendering: An Illustrated Lexicon by Michael E. Mortenson,Ist Edition 2010
	3D Animation Essentials by Andy Beane,Ist Edition 2010
Reference Books	
1. Character Rigging and Advanced Animation by Purushothaman Raju (for Autodesk 3ds Max),2018-2022	
2.Blender Mastery: A Complete Guide to 3D Animation by Clarke Sutton,Ist Edition,2021	
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]	
https://docs.blender.org/manual/en/latest	
https://www.autodesk.com/education/edu-software/overview	
https://www.autodesk.com/education/edu-software/overview	
https://www.maxon.net/en/learn	
https://www.animationmentor.com/blog/	
https://www.chaos.com/learn	
Course Designed By: Dr.P.VIJAYAKUMAR	

Mapping with programme outcomes:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	L	M	L	L
CO2	S	S	S	M	L	L
CO3	S	M	S	S	M	L
CO4	M	S	S	S	M	L
CO5	M	S	S	S	S	M

S- Strong; M-Medium; L-Low

Paper V

Animation Practical

2D animation

1. Drawing fundamentals using lines
2. Sketching of cartoon characters
3. 2D Logo designing
4. Storyboarding of a 30 seconds film
5. Portfolio making of an organization

3D Animation

1. Exploring the Interface of 3D application & Basic Modelling
2. Create different types of Materials and create a Shading
3. Create a simple walk cycle using the character rigs
4. Create a composition and Light set up
5. Create a Fluid simulation & rendering

A purple scroll graphic with a dark purple border and a lighter purple fill. The scroll is unrolled, showing a white background in the center. The text "SEMESTER - II" is written in a white, serif font in the center of the scroll.

SEMESTER - II

SEMESTER II

Course code		TITLE OF THE COURSE	L	T	P	C
Core paper		AUDIO VIDEO EDITING	4	-	-	4
Pre-requisite		Basic computer operation skills and familiarity with multimedia file formats.	Syllabus Version		1	
Course Objectives						
<ol style="list-style-type: none"> 1. Introduce the fundamentals of audio and video production and the stages involved in creating media content. 2. Familiarize students with audio recording techniques, microphones, DAWs, and essential audio editing tools. 3. Provide knowledge of basic video editing principles, transitions, color correction, and timeline management. 4. Train students in advanced audio/video editing techniques including multi-cam editing, motion graphics, VFX, and chroma key. 5. Equip learners with skills in rendering, exporting, project workflow, ethical practices, and preparing a professional showreel. 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to						
1	Explain the basics of audio/video production, stages of production, and common file formats/codecs.					K2
2	Demonstrate understanding of sound theory, microphones, DAWs, and perform basic audio editing and recording.					K3
3	Apply video editing principles such as continuity, transitions, trimming, titles, and basic color correction.					K3
4	Analyze and perform advanced tasks like multi-cam editing, VFX basics, motion graphics, keyframing, and chroma keying.					K4
5	Produce final media outputs with proper rendering, compression, workflow management, and compile a demo reel following ethical standards.					K3/K4
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create						
UNIT 1	INTRODUCTION TO AUDIO AND VIDEO PRODUCTION					04 hours
Fundamentals of Audio and Video-Types of Video Production – Film, Television, Web, and Social Media-Stages of Production: Pre-production, Production, and Post-production-Role of an Editor in the Production Process-Introduction to Editing Software (Adobe Premiere Pro, Final Cut Pro, DaVinci Resolve, Audacity)-File Formats and Codecs (MP3, WAV, AVI, MP4, MOV, MKV)						
UNIT 2	AUDIO FUNDAMENTALS AND RECORDING					04 hours
Sound Theory – Frequency, Amplitude, Pitch, Decibel-Types of Microphones and Their Uses Audio Recording Techniques (Indoor and Outdoor)-Audio File Formats and Sampling- Introduction to Digital Audio Workstations (DAWs)-Audio Editing Basics – Cut, Copy, Paste, Fade, Normalize, Equalization-Noise Reduction and Audio Effects (Reverb, Echo, Delay)						
UNIT 3	VIDEO EDITING BASICS					04 hours
Principles of Video Editing – Continuity, Rhythm, and Pacing-Types of Cuts and Transitions						

Video Timeline and Track Management-Importing and Organizing Footage-Trimming, Splitting, and Joining Clips-Adding Titles, Captions, and Subtitles-Color Correction and Grading Basics		
UNIT 4	ADVANCED AUDIO AND VIDEO EDITING	04 hours
Syncing Audio and Video-Multi-Camera Editing-Advanced Color Correction and LUTs-Motion Graphics and Visual Effects (VFX) Basics-Keyframing and Animation in Editing Software-Chroma Key (Green Screen) Editing-Mixing Background Music, Narration, and Sound Effects		
UNIT 5	FINAL OUTPUT AND PROJECT	04 hours
Rendering and Exporting – Formats and Settings for Web, TV, and Film-Compression Techniques and File Optimization-Project File Management and Backup-Editing Workflow and Best Practices-Creating a Showreel / Demo Reel-Copyrights, Licensing, and Ethical Issues in Editing-Industry Trends in Audio and Video Production		
Total Lecture hours		20 hours
Text Book(s)		
1	Producing Great Sound for Film and Video: Expert Tips from Preproduction to Final Mix by Jay Rose, 4 th Edition,2015	
2	Audio Production Techniques for Video by David Miles Huber, 1st Edition,1987	
3	Video Production Handbook by Jim Owens (6th Edition) 2017	
Reference Books		
1.Video Production Techniques: Theory and Practice from Concept to Screen by Donald L. Diefenbach,2 nd Edition,2020		
2.In the Blink of an Eye: A Perspective on Film Editing by Walter Murch,2 nd Edition,1992.		
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]		
https://helpx.adobe.com/premiere-pro/tutorials.html		
https://www.blackmagicdesign.com/products/davinciresolve/training		
https://manual.audacityteam.org/		
https://www.soundonsound.com/techniques		
https://www.studiobinder.com/blog/types-of-film-cuts		
Course Designed By: Dr.P.VIJAYAKUMAR		

Mapping with programme outcomes:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	L	M	S	L	L	L
CO2	L	L	L	S	L	L
CO3	M	L	L	M	S	L
CO4	M	L	L	L	M	L
CO5	S	M	L	L	L	S

S- Strong; M-Medium; L-Low

Course code		TITLE OF THE COURSE	L	T	P	C
Core paper		GRAPHICS DESIGNING	4	-	-	4
Pre-requisite	Basic knowledge of computers and familiarity with digital drawing or image editing tools.	Syllabus Version	1			
Course Objectives						
<ol style="list-style-type: none"> 1. Introduce students to the fundamentals of graphic design, including elements, principles, types, and the design process. 2. Teach color theory, typography, and their practical application in visual communication. 3. Provide hands-on experience in digital illustration and image editing using tools like Adobe Photoshop and Illustrator. 4. Develop skills in page layout, composition, and desktop publishing for print and digital media. 5. Enable students to create branding materials, prepare final output for print/web, and compile a professional portfolio. 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to						
1	Understand basic concepts, elements, principles, and types of graphic design.					K1/K2
2	Apply color theory and typography principles effectively in design projects					K3
3	Create digital illustrations and edit images using raster and vector graphics tools.					K3
4	Design layouts and compositions for print and digital media using DTP tools.					K3/K4
5	Develop branding materials, prepare files for output, and compile a professional design portfolio.					K3/K4
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create						
UNIT 1	INTRODUCTION TO GRAPHIC DESIGN					04 hours
Definition and Scope of Graphic Design-Elements of Design – Line, Shape, Color, Texture, Space, Form, Value-Principles of Design – Balance, Contrast, Emphasis, Rhythm, Unity, Proportion-Types of Graphic Design – Print, Digital, Branding, Advertising, Motion-Graphics-Design Process and Creative Thinking-Role of Graphic Designer in Media and Animation						
UNIT 2	COLOR THEORY AND TYPOGRAPHY					04 hours
Basics of Color: Hue, Saturation, Brightness-Color Models – RGB, CMYK, HSB, Pantone System-Psychology of Colors in Design-Introduction to Typography – Typefaces, Fonts, and Legibility-Font Classifications – Serif, Sans-serif, Script, Display-Text Alignment, Hierarchy, and Layout Design-Creating Effective Title and Logo Texts						
UNIT 3	DIGITAL ILLUSTRATION AND IMAGE EDITING					04 hours
Introduction to Raster and Vector Graphics-Tools and Techniques in Adobe Photoshop & Illustrator-Image Editing – Cropping, Retouching, Color Correction, Masking-Drawing and Shaping Tools – Pen Tool, Path, Layers-Creating Illustrations, Icons, and Logos-Image File Formats – JPEG, PNG, TIFF, PSD, AI, EPS-Hands-on Practice: Create a Poster or Logo Design.						
UNIT 4	PAGE LAYOUT AND COMPOSITION					04 hours
Understanding Layout Design and Visual Hierarchy-Grids, Margins, and Alignment Principles-Designing Brochures, Flyers, and Banners-Composition Techniques for Print and Digital Media-Introduction to Desktop Publishing (DTP) Tools – CorelDRAW, InDesign-Combining Text, Image, and Graphics for Layout Design-Hands-on Practice: Create a Magazine Cover or Advertisement						
UNIT 5	BRANDING, PORTFOLIO AND OUTPUT					04 hours
Logo Design and Brand Identity Development-Designing Business Cards, Posters, Packaging						

Preparing Files for Print and Web Output-Exporting in Different Formats (PDF, PNG, JPG, SVG)-
Portfolio Design and Presentation-Copyrights and Ethics in Design-Current Trends in Graphic Design
(UI/UX, Minimalism, AI Tools)

Total Lecture hours

20 hours

Text Book(s)

- 1 Graphic Design School: The Principles and Practice of Graphic Design by David Dabner, Sandra Stewart, Abbie Vickress, 7th edition 2020
- 2 The Elements of Graphic Design by Alex W. White, 3rd edition, 2022
- 3 Thinking with Type by Ellen Lupton, 3rd edition, 2024

Reference Books

1. Color Design Workbook: A Real-World Guide to Using Color in Graphic Design by Adams Morioka & Terry Stone. Rockport Publishers, **2006**
2. Logo Design Love: A Guide to Creating Iconic Brand Identities by David Airey, 1st edition 2008
3. The Graphic Design Idea Book by Steven Heller & Gail Anderson, 2016

Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]

- <https://www.interaction-design.org/literature/topics/graphic-design>
<https://www.interaction-design.org/literature/topics/typography>
<https://helpx.adobe.com/photoshop/tutorials.html>
<https://helpx.adobe.com/indesign/tutorials.html>
<https://www.creativebloq.com>

Course Designed By: Dr.P.VIJAYAKUMAR

Mapping with programme outcomes:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	L	M	L	L
CO2	M	M	M	S	M	L
CO3	S	M	S	S	M	L
CO4	M	S	S	S	M	L
CO5	M	S	S	S	S	M

S- Strong; M-Medium; L-Low

Course code	TITLE OF THE COURSE			L	T	P	C
Core paper	PHOTOSHOP			4	-	-	4
Pre-requisite	Basic computer skills and familiarity with image files and digital graphics.			Syllabus Version		1	
Course Objectives							
<ol style="list-style-type: none"> 1. Introduce students to raster graphics and the fundamentals of Adobe Photoshop. 2. Develop skills in basic and advanced image editing, retouching, and color correction techniques. 3. Teach students to work effectively with text, shapes, layers, masks, and effects for creative design. 4. Enable students to create digital artwork, composite images, and apply artistic filters and visual effects. 5. Train students to design professional graphics for print and web and compile a mini-portfolio using real-world design projects. 							
Expected Course Outcomes:							
On the successful completion of the course, student will be able to							
1	Understand raster graphics, Photoshop interface, tools, layers, and file formats.					K1/K2	
2	Apply image editing, retouching, tone correction, and color correction techniques.					K3	
3	Create and manipulate text, shapes, paths, masks, and typography effects.					K3	
4	Produce digital art, composite images, and special visual effects using advanced Photoshop features.					K3/K4	
5	Design professional print and digital materials and prepare optimized outputs for web/print with a portfolio.					K4/K5	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create							
UNIT 1	INTRODUCTION TO PHOTOSHOP			04 hours			
Introduction to Raster Graphics-Overview of Adobe Photoshop Interface-Understanding File Formats – PSD, JPEG, PNG, TIFF, GIF-Creating and Managing Documents-Tools and Panels Overview-Working with Selections – Marquee, Lasso, Magic Wand, Quick Selection Tools-Layers: Creating, Arranging, and Managing Layers-Saving and Exporting Files							
UNIT 2	IMAGE EDITING AND COLOR CORRECTION			04 hours			
Cropping, Resizing, and Straightening Images-Adjusting Brightness, Contrast,Hue/Saturation, and Levels-Using Curves for Tone Control-Retouching Tools – Clone Stamp, Healing Brush, Patch, Spot Healing-Removing Backgrounds and Unwanted Objects-Converting to Black & White, Sepia, and Duotone Effects-Using Adjustment Layers and Filters							
UNIT 3	WORKING WITH TEXT AND SHAPES			04 hours			
Adding and Formatting Text-Warp Text and Text Effects-Layer Styles – Drop Shadow, Stroke, Bevel, Emboss, Gradient Overlay-Creating and Editing Shapes-Using Pen Tool and Paths-Appling Layer Masks and Clipping Masks-Creating Creative Typography Effects							
UNIT 4	DIGITAL ART, COMPOSITING AND EFFECTS			04 hours			
Blending Images Using Layer Modes-Working with Smart Objects-Creating Double Exposure and Collage Effects-Appling Filters (Blur, Sharpen, Distort, Artistic, etc.) Using the Filter Gallery-Digital Painting Basics – Brush Tool, Custom Brushes, and Textures- Creating Special Effects – Glow, Fire, Water, Smoke, etc.							
UNIT 5	PROJECTS AND OUTPUT			04 hours			

Creating Posters, Banners, Brochures, and Advertisements-Designing Logos and Social Media Graphics-Image Optimization for Web and Print-Export Settings (Resolution, File Type, Color Mode)-Creating and Presenting a Mini Project / Portfolio-Copyright and Ethical Use of Digital Images-Latest Trends in Digital Image Editing

Total Lecture hours

20 hours

Text Book(s)

- 1 Adobe Photoshop Classroom in a Book (Latest Version), By Conrad Chavez & Andrew
- 2 Faulkner, Published by Adobe Press / Pearson August 26, 2022.
- 3 Photoshop for Dummies, By Peter Bauer,3rd edition,2021
Adobe Photoshop: Visual QuickStart Guide, 1st edition,2022

Reference Books

1. The Photoshop Workbook: Professional Retouching and Compositing Tips,By Glyn Dewis,1st Edition,2014/2015.
2. Adobe Photoshop CC Digital Classroom,2018-2020
3. The Adobe Photoshop Book for Digital Photographers,By Scott Kelby,2014
4. Digital Image Editing & Special Effects,By Jay Dickman & Jay Kinghorn,1989

Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]

- <https://www.adobe.com/in/products/photoshop.html>
<https://www.amazon.in/Adobe-Photoshop-Classroom-Book-2023/dp/0137964431>
<https://www.amazon.in/Photoshop-Dummies-Peter-Bauer/dp/1119418110>
<https://www.amazon.in/Adobe-Photoshop-Visual-QuickStart-Weinmann/dp/0134288610>

Course Designed By: Dr.P.VIJAYAKUMAR

Mapping with programme outcomes:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	L	M	L	L
CO2	S	S	M	S	M	L
CO3	M	M	S	S	M	L
CO4	S	M	S	S	M	L
CO5	M	S	S	S	S	M

S- Strong; M-Medium; L-Low

Course code		TITLE OF THE COURSE	L	T	P	C
Core paper		CORELDRAW	4	-	-	4
Pre-requisite	Basic computer skills and understanding of vector graphics and design concepts.	Syllabus Version			1	
Course Objectives						
<ol style="list-style-type: none"> 1. Understand the fundamental concepts of vector graphics and CorelDRAW interface. 2. Develop skills in creating, editing, and managing vector shapes and objects. 3. Enhance proficiency in text handling, typography, and logo creation. 4. Apply design principles to create print and digital media layouts. 5. Prepare students to execute complete design projects and understand printing standards. 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to						
1	Describe the basics of vector graphics, CorelDRAW features, and workspace operations.					K1/K2
2	Create and manipulate shapes, objects, curves, and apply transformations.					K3
3	Apply advanced text formatting, typography techniques, and create professional logo designs.					K3
4	Design effective layouts for posters, brochures, flyers, and multipage documents					K3/K4
5	Prepare artworks for printing and digital output, export using suitable formats, and develop a design portfolio.					K4/K5
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create						
UNIT 1	INTRODUCTION TO CORELDRAW					04 hours
Introduction to Vector Graphics-Features and Applications of CorelDRAW-Understanding the CorelDRAW Interface-Creating and Managing Documents-Page Setup and Layout Options-Drawing Basic Shapes – Rectangle, Ellipse, Polygon, Star, Spiral-Using Pick, Shape, Zoom, Freehand, and Smart Tools-Saving, Opening, and Exporting Files (CDR, PDF, AI, EPS, PNG, JPG)						
UNIT 2	WORKING WITH OBJECTS AND SHAPES					04 hours
Selecting, Moving, Copying, and Transforming Objects-Grouping, Aligning, and Ordering Objects-Working with Curves – Bezier, Pen, and Shape Tools-Combining, Trimming, and Welding Objects-Using Envelopes, Blends, and Contours-Working with Color Palettes and Fills-Outlines, Strokes, and Transparency Effects						
UNIT 3	TEXT AND TYPOGRAPHY DESIGN					04 hours
Creating and Editing Text – Artistic and Paragraph Text-Formatting Text – Fonts, Alignment, Spacing, Indents-Text on Path and Envelope Text Effects-Working with Drop Caps and Bulleted Lists-Applying Text Effects – Shadows, Extrusion, and Perspective-Creating Logos, Title Designs, and Typographic Art-Font Management and Conversion to Curves.						
UNIT 4	LAYOUT DESIGN AND GRAPHIC COMPOSITION					04 hours
Page Setup for Print Media (Posters, Flyers, Brochures, Cards)-Using Guidelines, Grids, and Snapping-Importing and Editing Bitmap Images-Working with Clipart and Symbols-Creating Backgrounds, Borders, and Patterns-Using PowerClip and Interactive Tools- Designing Multi-page Layouts (e.g., Magazines, Catalogs)						
UNIT 5	LAYOUT DESIGN AND GRAPHIC COMPOSITION					04 hours

Photoshop and CorelDraw lab

Photoshop

1. Design a brochure for an institution
2. Create 3D text, Effect action in photoshop
3. Design an Identity card
4. Design an Image using marquee & Lasso tools
5. Design an image using Different selection tools
6. Implement different type of filter an image
7. Merge two images in photoshop
8. Design a seasonal greeting card
9. Convert black and white image into a colour image
10. Design a image using clone and pattern stamp tool
11. Crop and transform image
12. Design a web page poster

CorelDraw

1. Design Geometric fashion mannequin
2. Design a logo
3. Design a college pamphlet
4. Design a part invitation card
5. Design a page frame by inserting and image and object